



INTERNATIONAL SOCIETY of NEUROBIOLOGY
& PSYCHOPHARMACOLOGY

Co-sponsored by  WPA



Hellenic Psychiatric Association

2nd Congress on Evidence Based Mental Health: From research to clinical practice



June 28th - July 1st, 2018

Kavala

Lucy Hotel

www.psychiatry.gr

Accredited with 22 CME Credits
by the World Psychiatric Association

Final Program & Abstract Book



**2nd Congress on
Evidence Based Mental Health:
From research to clinical practice**

**June 28th - July 1st, 2018
Kavala - Greece**





Dear colleagues,

It's a great pleasure to invite you to the **2nd International Congress on Evidence Based Mental Health** which will take place in Kavala, Greece, on June 28th- July 1st 2018. After the great success of the 1st Congress which was held in 2016, this second Congress again aims at being valuable for the clinicians who fight daily in the front line for the treatment of real-world patients. In this frame, our goal is to provide a global and comprehensive update of the newest developments in Psychiatry and the allied sciences in a manner, which will be both focused and enriched. The rule is to avoid content-free eloquence and authority and to face hard questions on the base of research findings.

Many worldwide experts have been invited to share with us their knowledge and experience once again with the support and guidance of the World Psychiatric Association and under the Auspices of the Hellenic Psychiatric Association. With the challenges the world is facing today, advanced education and training is the only way to the future. Teaching clinical usefulness and application of new knowledge and informed treatment with a truly multidisciplinary approach is the central axis of the meeting and although the congress will embrace high tech research concerning psychopathology, new treatment methods, genetics, molecular biology but also psychotherapy, it also aims on putting the emphasis on the human factor, both the therapist and the patient. Apart from the humanistic tradition of Psychiatry and life sciences, the continuous and unconditional investment on the high level training of professionals and education of patients and their families, emerged as a significant challenge during the last few decades.

Medical scientists and public health policy makers are increasingly concerned that the scientific discoveries are failing to be translated efficiently into tangible human benefit. Today, in an all the more complex and technologically advanced environment, the human factor emerges again as the most valuable one, the factor that determines the final outcome. This congress specifically focuses on the ultimate aim: that is to empower and eventually free patients and their families from the burden of mental disease and fighting for full remission and functional rehabilitation. It also includes the distinguished aim to spread high-level training to younger generations by including symposia organized by medical students and psychiatric residents from around the world. As hosts and organizers, we shall spare no effort in making your participation scientifically rewarding and meaningful and your stay in Kavala as enjoyable as possible.

Finally, professor Dimitris Dikeos will chair the poster award jury, while it is important to note that this year, again, after many years, there is the option to publish again the abstracts of the congress also in a supplement of the *Annals of General Psychiatry* (<https://annals-general-psychiatry.biomedcentral.com/>), a journal I am happy to serve as editor since 10 years. The supplement will be included in Scopus and will be edited by professor Athanasios Douzenis who also serves as section editor of the journal. This is an important development since it marks the long walk towards better meetings with higher standards, a trajectory recession temporarily intercepted.



Konstantinos N. Fountoulakis
Professor of Psychiatry, Aristotle University of Thessaloniki, Greece
Chair of the 2nd Congress on Evidence Based Mental Health



Friends and Colleagues,

I congratulate Dr Kostas Fountoulakis and colleagues on organizing the 2nd International Congress on Evidence Based Mental Health in the beautiful city of Kavala, and regret that I cannot join you. You are promised a fine scientific program, and I have no doubt that you will enjoy and appreciate the event.

The Congress theme of Evidence Based Mental Health is important for the advancement of psychiatry worldwide and the provision of quality care for all people with mental ill health, the prevention of mental illness in those at risk and the promotion of mental health in communities.

The reports from the congress will be interesting to all those working towards fulfilling the WPA Action Plan for this triennium: with its themes of strengthening the capacity of psychiatrists to work, in turn, with community and professional partners to build community capacity to respond to the mental health needs of young women and young men facing adversity.

I wish you a wonderful Congress!

Helen Herrman
President WPA

Main Topics of the Congress

The main topics of the Congress are the following:

- Animal Models
- Anxiety disorders
- Basic Neuroscience
- Behavioural disorders
- Bioethics
- Biological rhythms
- Biomedical Technology
- Childhood and adolescence disorders
- Clinical Psychiatry
- Clinical Psychopharmacology
- Clinical trials methodology
- Dementia
- Drug development
- Eating disorders
- Evidence-based psychiatry
- Experimental Psychopharmacology
- Forensic Psychiatry
- Health Economics and Quality of Life
- Information technology and neuroscience
- Learning abilities and disabilities
- Major disaster and mental health
- Memory and cognitive disorders
- Methodology in Psychiatric research
- Molecular Psychiatry
- Mood disorders
- Neural Networks
- Neuroimaging
- Neuropsychology
- Neurophysiology
- Neuropsychobiology
- Neuropsychoneuroendocrinology
- Non pharmacological biological therapies
- Nosology and classification
- Pharmacogenetics
- Psychiatric Genetics
- Psychogeriatrics
- Psychoimmunology
- Psychometrics
- Psychopharmacology
- Psychophysiology
- Psychosocial and other non-biological therapies and interventions
- Schizophrenia and other psychotic disorders
- Sexual behaviour and disorders
- Sleep
- Social Psychiatry
- Stress
- Substance abuse and dependence
- Suicide
- Systematic reviews and meta-analysis
- Transcultural Psychiatry
- Treatment guidelines
- Violence

Honorary Chair of the Congress: George P. Chrousos (Greece)

Executive Chair of the Congress: Konstantinos N. Fountoulakis (Greece)

Faculty

Chairman: Hagop S. Akiskal (USA)

Members:

Agorastos, A. (Germany)	Gorgoli, D. (Greece)	Pappa, A. (Greece)
Angeletti, G. (Italy)	Grammatikopoulos, I. (Greece)	Parlapani, E. (Greece)
Antoniou, I. (Greece)	Hakimi, M. (USA)	Pervanidou, P. (Greece)
Aricioglu, F. (Turkey)	Halaris, A. (USA)	Petrikis, P. (Greece)
Arisoy, O. (Turkey)	Hage, B. (USA)	Prochaska, D. (USA)
Athanasias, L. (Greece)	Johnson, K. (USA)	Ramnalis, A. (Greece)
Athanasidou, M. (Greece)	Karaoulanis, S. (Greece)	Rantis, K. (Greece)
Belzung, C. (France)	Kasper, S. (Austria)	Rehn, S. (Australia)
Boksay, J. E. I. (USA)	Kokras, N. (Greece)	Samakouri, M. (Greece)
Brakoulias, V. (Australia)	Konsta, A. (Greece)	Sani, G. (Italy)
Britton, B. (USA)	Kotsis, K. (Greece)	Sayed, A. (USA)
Chourdaki, E. (Greece)	Koukopoulos, A. (Italy)	Sereslis, K. (Greece)
Çolak, B. (Turkey)	Koupidis, S. (Greece)	Simos, Gr. (Greece)
Dalla, Ch. (Greece)	Malliaris, P. (Greece)	Simou, M. (Greece)
De Chiara, L. (Italy)	Manfredi, G. (Italy)	Skapinakis, P. (Greece)
Diakaki, K. (Greece)	Mavreas, V. (Greece)	Soldatos, C. (Greece)
Diakogiannis, I. (Greece)	Michopoulos, I. (Greece)	Sotiriou, M. (Greece)
Dikeos, D. (Greece)	Miller, R. (USA)	Sotiropoulou, E. (Greece)
Dimopoulou, M. (Greece)	Mintzas, M. (Greece)	Stefanis, N. (Greece)
Douzenis, A. (Greece)	Mitropoulos, G. (Greece)	Theleritis, Chr. (Greece)
Dragioti, E. (Sweden)	Mitrusias, A. (Greece)	Touloumis, Ch. (Greece)
Duman, B. (Turkey)	Möller, H.-J. (Germany)	Tsalamanios, Em. (Greece)
Efstathopoulos, E. (Greece)	Möller-Leimkühler, A-M. (Germany)	Tsapakis, Ev. (Greece)
Einat, H. (Israel)	Nestoris, Chr. (Greece)	Tsopelas, Ch. (Greece)
Eleftheriades, A. (Greece)	Nikolaidis, N. (Greece)	Tzeferakos, G. (Greece)
Erzin, G. (Turkey)	Nimatoudis, I. (Greece)	Venizelos, N. (Sweden)
Fokas, K. (Greece)	Ntetsika, Th. (Greece)	Vorvolakos, Th. (Greece)
Fotiadis, P. (Greece)	Oikonomou, Ach. (Greece)	Zikopoulou, O. (Greece)
Gatos Gatopoulos, A. (Greece)	Ozel-Kizil Erguvan, T. (Turkey)	
Giotakos, O. (Greece)	Panagiotidis, P. (Greece)	
Gonda, X. (Hungary)	Papadimitriou, P. (Greece)	

6th International Congress on
**Neurobiology,
Psychopharmacology
& Treatment Guidance**

ICNP2019

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June 27th-30th, 2019

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IN MEMORIAM



Ioannis Pavlidis
(1965 - 2018)



IN MEMORIAM



**Charalambos Ierodiakonou
(1928 - 2017)**



Scientific Program

Thursday, June 28th 2018

15.00 **Registrations**

15.30-16.15 **SYMPOSIUM
STRESS**

Chairpersons: **Konstantinos N. Fountoulakis** (Greece),
Panagiota Pervanidou (Greece)

Stress and mental disorder
Anna Eleftheriades (Greece)

Reflections of the concept of stress on popular culture
Theodora Ntetsika (Greece)

16.15-17.15 **SYMPOSIUM**

**IMPLICATIONS AND APPLICATIONS OF BIBLIOGRAPHY IN DAILY CLINICAL
PRACTICE**

Chairpersons: **Charalampos Touloumis** (Greece), **Christos Tsopeles** (Greece)

DSM-ICD diagnosis and the challenge of precision medicine
Georgios Mitropoulos (Greece)

Oxytocin in anxiety disorders
Angelica Gatos Gatopoulos (Greece)

Anxiety disorders. Novel molecules for augmentation
Panagiota Papadimitriou (Greece), **Christos Tsopeles** (Greece)

17.15-18.45 **SYMPOSIUM**

EVIDENCE-BASED TREATMENTS FOR OBSESSIVE COMPULSIVE DISORDER (OCD)

Chairpersons: **Gregoris Simos** (Greece), **Petros Skapinakis** (Greece)

The Evidence Base of medications and other biological treatments for OCD
Konstantinos Sereslis (Greece), **Nikolas Nikolaidis** (Greece)

The Evidence Base of Cognitive Behavior Therapy (OCD) for Obsessive-
Compulsive Disorder
Olga Zikopoulou (Greece), **Christoforos Nestoris** (Greece)

The Evidence Base of CBT and medication combination for the treatment of OCD
Meropi Simou (Greece), **Gregoris Simos** (Greece)



Thursday, June 28th 2018

18.45-20.15 **SYMPOSIUM**

BIPOLAR DISORDER AND ADHD - A PUZZLING AND FLIRTATIOUS RELATIONSHIP

Chairperson: **Evangelia Tsapakis** (Greece)

Comorbidity of adult ADHD in bipolar patients

Evangelia Tsapakis (Greece)

Differentiating ADHD from bipolar disorder using neuropsychology.

A case report

Kalliopi Diakaki (Greece)

Use of stimulants in bipolar depression: A meta-analysis

Michael Mintzas (Greece)

Adult ADHD Services in Jutland, Denmark

Evgenia Chourdaki (Greece)

20.15-21.00 **LECTURE**

Chairperson: **Konstantinos N. Fountoulakis** (Greece)

Pro-inflammatory cytokines and the neurotransmitter precursor's tyrosine and tryptophan in the pathogenesis of in schizophrenia, BD and MDD

Nikolaos Venizelos (Sweden)

21.30 **Dinner**



Friday, June 29th 2018

08.00-09.15 **SYMPOSIUM**

AGMATINERGIC TRANSMISSION: A NOVEL AND PROMISING DIAGNOSTIC BIOMARKERS AND THERAPEUTIC APPROACH

Chairperson: **Angelos Halaris** (USA)

Introduction

Angelos Halaris (USA)

New insight into the pathogenesis and treatment of depression: Agmatineric system
Feyza Aricioğlu (Turkey)

Alterations in arginine metabolism in response to quetiapine treatment in major depression

Ozden Arisoy (Turkey), **Angelos Halaris** (USA)

Lithium - Implications for neuropsychiatry and wellness

Orestis Giotakos (Greece)

09.15-10.00 **LECTURE**

Chairperson: **Angelos Halaris** (USA)

What can complexity and network analytics offer to Mind-Brain professionals?

Ioannis Antoniou (Greece)

10.00-10.45 **LECTURE**

Chairperson: **Maria Samakouri** (Greece)

Individual variability in mice' response to mood stabilizing drugs:

A hurdle or an advantage?

Haim Einat (Israel), **Catherine Belzung** (France)

10.45-12.00 **SYMPOSIUM**

THE IMPACT OF VIT D CSF LEVELS IN THE EXPRESSION OF COMT, ALDH1A1, MAO-A, MAO-B; FROM CLINICAL OBSERVATION TO MOLECULAR LEVEL

Chairperson: **Maria Samakouri** (Greece)

Improvement in the behaviour of psychotic inpatients, are Vit D levels connected?

Theofanis Vorvolakos (Greece)

Deficiency of Vit D levels in psychotic patients. Can this be important?

Maria Athanasiou (Greece)

Expression of COMT ALDH1A1, MAO-A, MAO-B in PC 12 molecular series in vitro. Experimental findings

Alexandros Mitrusias (Greece)

Interpretation of the experimental findings. Future perspectives for research and scientific collaboration

Aglaia Pappa (Greece)

*A collaboration within the Democritus University of Thrace
School of Health Sciences*



Friday, June 29th 2018

12.00-12.15 **Coffee Break**

12.15-13.30 **SYMPOSIUM**

METABOLIC AND ENDOCRINE DISTURBANCES IN PSYCHIATRIC AND RELATED DISORDERS

Chairperson: **Dimitris Dikeos** (Greece)

Metabolic disorders and sexual dysfunction in psychosis

Christos Theleritis (Greece)

Metabolic disturbance in depression

Evangelia Tsapakis (Greece)

Metabolic and endocrine consequences of sleep disorders

Dimitris Dikeos (Greece)

Metabolic and endocrine profile of eating disorders

Ioannis Michopoulos (Greece)

13.30-14.15 **SATELLITE SYMPOSIUM**

THE ROLE OF LONG ACTING TREATMENTS IN SCHIZOPHRENIA: TIME MATTERS

Chairperson: **Petros Fotiadis** (Greece)

In search of lost time

Petros Fotiadis (Greece)

Time regained

Panagiotis Panagiotidis (Greece)

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14.15-15.00 **Break**



Friday, June 29th 2018

15.00-16.15 **SYMPOSIUM**

NEUROENDOCRINOLOGY OF STRESS AND CONTEMPORARY DISORDERS

Chairperson: **George P. Chrousos** (Greece)

Neurocircuitry of stress and neuroplasticity indices: How males and females differ?

Christina Dalla (Greece)

Early life toxic stress and susceptibility to disease

Panagiota Pervanidou (Greece)

Stress and circadian system: Interaction and pathophysiology of disease development

Agorastos Agorastos (Germany)

Sex differences in stress response and depression

Nikolaos Kokras (Greece)

16.15-17.00 **LECTURE**

Chairperson: **Petros Skapinakis** (Greece)

Is male depression underestimated and undertreated?

Anna-Maria Möller-Leimkühler (Germany)

17.00-18.15 **SYMPOSIUM**

EARLY INTERVENTION IN PSYCHOSIS: INTERNATIONAL AND HELLENIC EXPERIENCE

Chairpersons: **Venetsanos Mavreas** (Greece), **Nikolaos Stefanis** (Greece)

The emerging paradigm of early intervention in psychosis & results of the Athens First Episode Psychosis Study

Nikolaos Stefanis (Greece)

The early intervention in psychosis service in Ioannina

Petros Petrikis (Greece)

Psychotherapeutic cognitive-behavioral interventions in first episode psychosis

Gregoris Simos (Greece)

Efficiency and effectiveness of services for early intervention in psychosis

Venetsanos Mavreas (Greece)

18.15-18.45 **Coffee Break**

Friday, June 29th 2018

18.45-19.30 **DEBATE**

LONG ACTING THERAPIES AND FIRST EPISODE PSYCHOSIS

Chairpersons: **Ioannis Michopoulos** (Greece), **Athanasios Douzenis** (Greece)

For

George Tzeferakos (Greece)

Against

Christos Tsopelas (Greece)

Comments: **Charalampos Touloumis** (Greece)

19.30-20.30 **SYMPOSIUM**

ASPECTS IN PSYCHOSIS

Chairperson: **Konstantinos G. Fokas** (Greece)

Schizophrenia and neurodevelopment

Eleni Parlapani (Greece)

Psychosis: Interpersonal and sexual relationships

Loukas Athanasiadis (Greece)

Psychotic disorders in old age

Anastasia Konsta (Greece)

20.30-21.15 **LECTURE**

Chairperson: **Konstantinos G. Fokas** (Greece)

Association between variation in the GABAergic receptors, stress and multiple endophenotypes of suicide: New targets for intervention?

Xenia Gonda (Hungary)

21.30 **Dinner**



Saturday June 30th 2018

08.00-09.15 **SYMPOSIUM**

BIOMARKERS AND ENDOPHENOTYPES IN PSYCHOSIS

Chairperson: **Erguvan Tugba Ozel-Kizil** (Turkey)

The endophenotype and biomarker concepts in affective and non-affective psychoses. Social cognitive dysfunction as an endophenotype in psychoses
Erguvan Tugba Ozel-Kizil (Turkey)

Can facial expressions have endophenotypic aspects in psychotic patients
Burçin Çolak (Turkey)

Biochemical biomarkers in psychoses
Gamze Erzin (Turkey)

Functional near infrared spectroscopy (fNIRS) as a potential biomarker in psychoses
Berker Duman (Turkey)

09.15-10.00 **LECTURE**

Chairperson: **Ioannis Nimatoudis** (Greece)

Telepathy: Science fiction or scientific reality?
Can emotional connectedness be identified using advanced neuroimaging techniques?
Efstathios P. Efstathopoulos (Greece)

10.00-10.45 **LECTURE**

Chairperson: **Vlasios Brakoulias** (Australia)

Critical appraisal of psychotherapies in meta-analyses of RCTs for anxiety-related disorders
Elena Dragioti (Sweden)

Saturday June 30th 2018

10.45-12.00 **SYMPOSIUM**

TRANSLATING EVIDENCE TO CLINICAL PRACTICE IN OBSESSIVE - COMPULSIVE DISORDER (OCD)

Chairperson: **Vlasios Brakoulias** (Australia)

Pharmacological and psychotherapeutic interventions in the management of OCD in adults: Is there evidence of differential efficacy?

Petros Skapinakis (Greece)

Family accommodation in youth obsessive compulsive disorder

Konstantinos Kotsis (Greece)

Management of OCD in youth

Emmanouil Tsalamanios (Greece)

Examining the role of repetitive transcranial magnetic stimulation (RTMS) for the treatment of obsessive-compulsive disorder (OCD) - A meta-analysis

Vlasios Brakoulias (Australia), **Simone Rehn** (Australia)

12.00-12.15 **Coffee Break**

12.15-13.30 **SYMPOSIUM**

PROMISING BIOMARKERS FOR INTRODUCTION INTO PSYCHIATRIC PRACTICE

Chairperson: **Angelos Halaris** (USA)

C-reactive protein: Are we ready to accept it as a diagnostic marker of inflammation in psychiatric disorders?

Danika Prochaska (USA), **Angelos Halaris** (USA)

Modulation of the inflammatory response exerts beneficial effects on anger in treatment-resistant bipolar depression

Katherine B. Johnson (USA), **Aaima Sayed** (USA), **Michael Hakimi** (USA), **Angelos Halaris** (USA)

Low cardiac vagal tone via frequency analysis of heart rate variability differentiates bipolar from major depression

Briana Britton (USA), **Brandon Hage** (USA), **Angelos Halaris** (USA)

Stratification and outcome prediction of depressed patients using panels of inflammation and kynurenine biomarkers

Angelos Halaris (USA)

Saturday June 30th 2018

13.30-14.15 **SATELLITE LECTURE**

Chairperson: **Ioannis Nimatoudis** (Greece)

Successful treatment: Locking neurobiological targets for the treatment of depression with trazodone

Konstantinos N. Fountoulakis (Greece)

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14.15-14.30 **Coffee Break**

14.30-15.00 **LECTURE**

Chairperson: **Konstantinos N. Fountoulakis** (Greece)

The Social Solidarity has person: "Health for All"

Eleni Sotiropoulou (Greece)

15.00-15.45 **LECTURE**

Chairperson: **Angelos Halaris** (USA)

The role and practical application of pharmacogenomic testing in outpatient psychiatric and collaborative primary care settings

Katherine B. Johnson (USA), **Robert B. Miller** (USA)

15.45-16.30 **LECTURE**

Chairperson: **Loukas Athanasiadis** (Greece)

Effect of comorbid diseases on cognitive decline & dementia prevention

Istvan J.E. Boksay (USA)

16.30-17.15 **LECTURE**

Chairperson: **Ioannis Diakogiannis** (Greece)

Esketamine in rapid response and long-term treatment of resistant depression

Siegfried Kasper (Austria)

Saturday June 30th 2018

17.15-18.30 **SYMPOSIUM**

MIXED DEPRESSION RATING SCALE: A NEW TOOL FOR AN OLD CLINICAL DILEMMA

Chairpersons: **Giovanni Manfredi** (Italy), **Gloria Angeletti** (Italy)

Agitated/Mixed depression: The clinical controversy
Gabriele Sani (Italy)

KMDRS: A new tool for an old syndrome
Alexia Koukopoulos (Italy)

KMDRS and the assessment of the postpartum depression
Lavinia De Chiara (Italy)

18.30-18.45 **Coffee Break**

18.45-19.30 **LECTURE**

Chairperson: **Ioannis Nimatoudis** (Greece)

What can we learn from a naturalistic long-term study on depression
Hans-Jürgen Möller (Germany)

19.30-20.30 **EXCHANGE OF VIEWS**

PRO AND CON OF USEFULNESS OF ANTIPSYCHOTIC TREATMENT IN SCHIZOPHRENIA: EXCHANGE OF VIEWS

Chairpersons: **Venetsanos Mavreas** (Greece), **Ioannis Nimatoudis** (Greece)

Konstantinos N. Fountoulakis (Greece)

Nikolaos Stefanis (Greece)

Commentators: **Hans-Jürgen Möller** (Germany),
Siegfried Kasper (Austria),
Angelos Halaris (USA),
Dimitris Dikeos (Greece)

20.30-21.15 **LECTURE**

Chairpersons: **Konstantinos N. Fountoulakis** (Greece),
Constantinos Soldatos (Greece)

The biologic basis of stress and its management
George P. Chrousos (Greece)

21.30 **President's dinner & Awards ceremony**

Sunday, July 1st 2018

09.00-09.45 **SYMPOSIUM**

EVIDENCE BASED PSYCHIATRY AND SUBSTANCE USE DISORDERS

Chairperson: **Charalampos Touloumis** (Greece)

Cannabis use disorder: In search of evidence-based treatment guidelines
Konstantinos Rantis (Greece)

Alcohol use and abuse: From social stigma to evidence based psychiatric practice
Panagiotis Panagiotidis (Greece)

09.45-11.00 **SYMPOSIUM**

EVIDENCE-BASED COMMUNITY PSYCHIATRY INTERVENTIONS: THE PARADIGM OF SOCIAL COOPERATIVES OF LIMITED LIABILITY

Chairperson: **Anastasia Konsta** (Greece)

The psychiatric reform in primary care: The impact of Social Cooperative of Limited Liability Imathias “Desmos”
Ilias Grammatikopoulos (Greece)

Evidence-based community interventions: Myth or reality?
Sotirios Koupidis (Greece)

Management or social coherence is the best practice for evidence-based mental health interventions for SCOLL?
Maria Dimopoulou (Greece)

Social entrepreneurship and school meals. The case of Kavala, Greece
Michael Sotiriou (Greece)

11.00-12.15 **SYMPOSIUM**

THE IMPORTANCE OF FUNCTIONING IN MAJOR PSYCHIATRIC DISORDERS: SCHIZOPHRENIA, BIPOLAR DISORDER, MAJOR DEPRESSION, SUBSTANCE ABUSE

Chairpersons: **Ioannis Nimatoudis** (Greece), **Petros Fotiadis** (Greece)

Schizophrenia
Petros Fotiadis (Greece)

Bipolar disorder
Konstantinos Rantis (Greece)

Major depression
Anestis Ramnalis (Greece)

Substance abuse
Panagiotis Panagiotidis (Greece)

Sunday, July 1st 2018

12.15-13.30 **SYMPOSIUM**

PSYCHIATRY, TECHNOLOGIES AND SOCIAL MEDIA: CHALLENGES AND PERSPECTIVES

Chairpersons: **Charalampos Touloumis** (Greece), **Achilleas Oikonomou** (Greece)

How technology affects the human brain: Neurobiological data from recent studies

Dimitra Gorgoli (Greece)

The beneficial effect of technology on psychiatric practice

Sokratis Karaoulanis (Greece)

Technology and Psychiatry: Negative aspects of a flourishing relationship

Panagiotis Malliaris (Greece)

Psychiatry and social media: Open discussion

Achilleas Oikonomou (Greece)

13.30-14.00 **Closing**



Kostas N. Fountoulakis

Bipolar Disorder

An Evidence-Based Guide
to Manic Depression



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General Information

Congress Venue

Lucy hotel, Kavala, Greece

(Akti Kalamitsas, 65404 Kavala, Greece, Tel: +30 2510 600060, www.lucyhotel.gr)

Access to the Congress Venue

Kavala can be reached by arriving at Thessaloniki International airport “Macedonia” and then by car or by public bus transportation (<http://www.ktelkavalas.gr/>). The hotel is located 155 km approximately from the airport.

Official Language

English is the official language of the Congress.

All printed material and poster presentations will be in English.

CME Accreditation

The congress has been accredited with **22 World Psychiatric Association Educational credits** for the main Congress Program.

Certificate of Attendance

Certificates of attendance can be received from the registration desk on Sunday July 1st 2018. Please note that a barcode system will be used and in order to obtain CME credits you must complete 60% participation of the scientific program.

E-Posters

All E-posters will be presented electronically and no hardcopies will be handed. The E-posters will be available to delegates throughout the Congress in the exhibition area.

Poster Awards

The International Society on Neurobiology and Psychopharmacology announces 5 awards for the 5 best posters which will be presented during the 2018 Congress. The winners will receive an honorary diploma.

All submitted posters are considered candidates for the awards, unless otherwise stated by the author(s). Professor Dimitris Dikeos will be the Chair of the Poster Award Jury.

Abstract Book

The scientific program will be available online (pdf format). The abstract book will be published as a hard copy and will be available online. The full posters will be available online (pdf format).

Exhibition

Within the Congress area there will be an exhibition of medical equipment and pharmaceutical products.

Presentations

Available audiovisual equipment for all presentations will be through power point presentation. For power point presentations, your presence to the “technical reception desk” is required one hour prior to the time of your presentation in order to check the compatibility of your cd or usb stick. Use of personal computers will not be permitted.

Registration Fees

TYPE OF REGISTRATION	GROUP A countries	GROUP B countries	GROUP C countries	GROUP D countries
Specialists	200€	150€	100€	Free*
Residents	150€	75€	50€	Free*
Other mental health professionals	50€	Free*	Free*	Free*
Students*	Free*	Free*	Free*	Free*

* It applies only to the undergraduate students and not to the postgraduate students.

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All the scientific proceedings including book of abstracts will be available for free online in pdf format.

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Participants who wish to register on-site are advised to arrive early. On-site registration will be processed on a first-come, first-served basis. Priority will be given to pre-registered delegates. Depending on the number of onsite registered delegates, availability of congress bags may be limited.

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Delegates are obliged to show their congress badge at the entrance of Congress Halls for their attendance time to be registered.

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Taxis are available in front of the airport as well as the hotel entrance.

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Climate

Kavala in June is splendid since the weather is quite warm. The average temperature during June is 20°C -30°C or 68°F -86°F.

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PROCEEDINGS

Thursday, June 28th 2018

15.30-16.15 **SYMPOSIUM**
STRESS

Chairpersons: **Konstantinos N. Fountoulakis** (Greece),
Panagiota Pervanidou (Greece)

Stress and mental disorder

Anna Eleftheriades

3rd year Medical Student, National and Kapodistrian University of Athens, Greece

Stress is a state of threatened homeostasis, and also a biological and psychological response to intrinsic or extrinsic adverse forces, which are called stressors. Stress activates an intricate repertoire of physiologic and behavioral responses aiming to maintain the optimal body equilibrium. Key components of the stress system are the hypothalamic-pituitary-adrenal (HPA) axis and the autonomic nervous system (ANS), which interact with other, and through which the brain regulates the complex, adaptive responses of an organism to threatening stimuli. The ANS is the primary mechanism in control of the fight-or-flight response, which occurs after a threat to survival. Reactions to stress are associated with enhanced secretion of a number of hormones including glucocorticoids and catecholamines. The prolonged, excessive or deficient response of the Stress System to stress, however, may lead to a state of cacostasis, which is associated with physical and mental health problems. Abnormalities in stress-system mediators have been reported in behavioral and psychiatric disorders, such as anxiety, depression, posttraumatic stress disorder, eating disorders etc. Stress exposures during critical periods of development - fetal life, childhood and adolescence- may have permanent negative effects, altering brain structures and functions.

Reflections of the concept of stress on popular culture

Theodora Ntetsika

5th year Medical Student, University of Ioannina, Greece

Many of the social sciences, such as anthropology, criminology, sociology, psychology and psychiatry, have the unusual advantage of offering an explicit, formal, “scientific” explanation for certain phenomena, such as stress, while at the same time studying the layman’s implicit, informal, “non-scientific” explanation for the same phenomenon. Lay theories have been conceptualised by Furnham (1988) as the common sense explanations people provide for aspects of social behaviour. Their function is to establish cause-and effect relationships which “enables one to apportion blame, praise or responsibility”. Research that has examined lay representations of miscellaneous psychological phenomena suggests that they are not naive and deterministic beliefs but complex and multidimensional. Regarding to the concept of stress, it is well understood that is not only of academic research: its increasing salience in modern Western so-

ciety as a metaphor for human misfortune, dissatisfaction and suffering has been documented. Barley and Knight (1992) argue that the rise in popularity of stress among the general public is largely attributable to its broad-based explanatory value, as it can be invoked to account for a variety of negative environmental factors, feeling states, physical sensations and cognitions. Although stress has now become part of the everyday language, little is known about lay representations of the concept. What do people actually mean when they say that they are stressed? Acquiring that type of knowledge may offer the potential of an insight into how people make sense of their stress and wellbeing and, therefore, guiding the measurement and management of this stress.

16.15-17.15 **SYMPOSIUM**

IMPLICATIONS AND APPLICATIONS OF BIBLIOGRAPHY IN DAILY CLINICAL PRACTICE

Chairpersons: **Charalampos Touloumis** (Greece), **Christos Tsopeles** (Greece)

DSM-ICD diagnosis and the challenge of precision medicine

Georgios Mitropoulos

Consultant Psychiatrist, Psychiatric Hospital of Attiki, Greece

Criticism towards DSM-ICD diagnosis traditionally regards such problems as hyponarrativity, biologism, “death of phenomenology”, and a questionably valid overfragmentation of diagnosis among others. Lately, criticism has shifted to such issues as lack of validity, having failed to adopt a dimensional stance, not adequately relying on genetics and neurobiology, and impeding research into the etiopathogenesis of mental disorders. The former problems seem to derive from the fact that the operationalist criteria have been uncritically accepted as the ultimate authority in diagnosis, instead of being merely guides, as intended explicitly; the latter problems have been made more evident since the emergence of the American RDoC research initiative, which not only points to an alternative, more valid, classification of mental disorders, but also aspires to signal a move of psychiatry towards precision medicine. We examine the historical and epistemological context of the emergence of DSM, and its remarkable achievement in terms of diagnostic reliability as well as clinical utility. Then we consider the potential of the new era of genetics, neurobiology and analysis of the “big data” for generating a novel approach to psychiatric diagnosis and classification. We also discuss the particularity of the psychiatric object and the clinical significance of the categorical approach to diagnosis. We conclude that the DSM-ICD approach continues to have a place in psychiatry as a bridge/interface between clinic and research data, as a common clinical language, and as an epistemic hub.

Oxytocin in anxiety disorders

Angelica Gatos Gatopoulos

Psychiatry Resident, Psychiatry Hospital of Attika, Greece

Anxiety disorders, such as generalized anxiety disorder (GAD), posttraumatic stress disorder (PTSD), and social anxiety disorder (SAD), are among the most common psychiatric illnesses with a lifetime prevalence of approximately 30%. In addition to the classical neurotransmitters, neuropeptides represent an important class of modulators for affective behaviors and associated disorders, such as anxiety disorders. There is a large body of evidence suggesting that brain neuropeptides participate in stress physiology and may have clinical relevance. The neuropeptide oxytocin (OXT) has been revealed as having a profound anxiolytic effect at the brain, along with its prosocial and reproductive effects. Animal and human studies support the hypothesis of an imbalance of the endogenous brain OXT system, as a consequence of chronic OXT treatment resulting in a dose-dependent reduction in OXT receptor availability and increased anxiety, in the etiology of anxiety disorders. Due to the high prevalence of anxiety disorders and yet limited treatment options, there is a clear need for more effective therapeutics.

Anxiety disorders. Novel molecules for augmentation

Panagiota Papadimitriou¹, Christos Tsopelas²

¹Resident in Adult General Psychiatry, 5th Department, Psychiatric Hospital of Attika, Greece

²Consultant in Adult General Psychiatry, Psychiatric Hospital of Attika, Greece

Anxiety disorders are a highly prevalent and disabling class of psychiatric disorders. Researchers are focused on new directions in neurobiological research and implications for the development of novel psychopharmacological treatments. Neuroanatomical and neuroimaging research in anxiety disorders focus on the role of the amygdala, the reciprocal connections between the amygdala and prefrontal cortex, and, most recently, alterations in interoceptive processing by the anterior insula. Anxiety disorders are characterized by alterations in a diverse range of neurochemical systems, suggesting ample novel targets for drug therapies. Corticotropin-releasing factor (CRF) concentrations are elevated in a subset of anxiety disorders, which suggests the potential utility of CRF receptor antagonists. Pharmacological blockade of the memory-enhancing effects of stress hormones such as glucocorticoids and noradrenaline holds promise as a preventative approach for trauma-related anxiety. The glutamatergic system has been largely overlooked as a potential pharmacological target, although convergent preclinical, neuroimaging, and early clinical findings suggest that glutamate receptor antagonists may have potent anxiolytic effects. The neuropeptides substance P, neuropeptide Y, arginine-vasopressin, pituitary adenylate-cyclase activating polypeptide, neuropeptide S and galanin are each implicated in anxiety pathways, and neuropeptide analogs or antagonists show early promise as augmentation treatment in already existing treatment of anxiety disorders. Each of these active areas of research holds promise for expanding and improving evidence-based treatment options for individuals suffering with clinical anxiety.

17.15-18.45 **SYMPOSIUM**
EVIDENCE-BASED TREATMENTS FOR OBSESSIVE COMPULSIVE DISORDER (OCD)

Chairpersons: **Gregoris Simos** (Greece), **Petros Skapinakis** (Greece)

The Evidence Base of medications and other biological treatments for OCD

Konstantinos Sereslis¹, Nikolas Nikolaidis²

¹*Resident in Psychiatry, Greece*

²*Psychiatrist, Head of the educational program for CBT, 2nd Psychiatric Clinic, Medical School of the Aristotle University of Thessaloniki, Greece*

Obsessive Compulsive Disorder (OCD) is often a chronic and severe mental disorder that requires evidence-based treatment. Cognitive Behavior Therapy (CBT) or a serotonin reuptake inhibitor (SSRIs or clomipramine) are considered as first-line treatments for OCD.

This presentation reviews current evidence of medication therapy for OCD. SSRIs are the first choice medication, while clomipramine, although as efficacious as the SSRIs, remains as a second choice due to its proportionally higher incidence of side-effects and potential for disastrous consequences in overdose.

We present efficacy studies of the SSRIs, and review guidelines for choice of appropriate compound, and the management of issues, like length of treatment, suggested daily dose, comorbidities, and side effects. We also examine pros and cons of medication treatment for OCD, and also explore existing options in treatment-resistant or treatment-refractory cases, when managing patients who remain symptomatic after receiving an adequate trial on an SSRI.

Changing the SSRI and/ or augmenting the SSRIs strategies are options for the medication resistant patient. Augmentation with antipsychotics, stimulants, anticonvulsants, as well as other agents (e.g. D-Cycloserine) is the next part of this presentation, since we examine evidence of less well studied medication agents.

Finally, we briefly review the evidence for other non-medication biological treatments, like Transcranial Magnetic Stimulation or Deep Brain Stimulation.

The Evidence Base of Cognitive Behavior Therapy (OCD) for Obsessive-Compulsive Disorder

Olga Zikopoulou¹, Christoforos Nestoris²

¹*Psychologist, Greece*

²*Psychiatrist - Psychotherapist, Thessaloniki, Greece*

According to WHO obsessive-compulsive disorder (OCD) is ranked among the 10 most debilitating disorders. Untreated OCD tends to be chronic, causing extensive disability in many aspects

of functioning and quality of life.

Since 1966, with the introduction of exposure and ritual prevention, Cognitive Behavior Therapy (CBT) has been enriched with new theories about the development and maintenance of OCD symptoms and now it is recommended as the treatment of choice for OCD.

This presentation will discuss updated research data concerning the efficacy of CBT for the treatment of obsessive-compulsive symptoms. The main part of the presentation will be devoted to recent studies, reviews and meta-analyses that examine the efficacy of CBT during the last decade. Also, there will be an emphasis on the possible moderators that may be associated with treatment outcome. Research data support that increased anxiety, severity of symptoms, and certain subtypes of OCD symptoms may affect the treatment outcome.

There will also be a discussion about mechanisms of change. More specifically, the method of exposure and response prevention, as well as the role of maladaptive beliefs and schemas will be commended with an emphasis on their short- and long-term effectiveness and their implications in clinical practice.

The Evidence Base of CBT and medication combination for the treatment of OCD

Meropi Simou¹, Gregoris Simos²

¹Psychologist, Greece

²Professor of Psychopathology, Univesity of Macedonia, Greece

Both CBT and pharmacotherapy have strong evidence-based support for their clinical efficacy in OCD. Nevertheless, whatever treatment OCD patients take, there are usually symptoms remaining at post-treatment; it is estimated that around 20% of patients do not respond to available pharmacological and psychological treatments. Patients receiving either one of the two expert consensus treatments of choice for OCD, are still symptomatic at post-treatment, and although the majority of them are considered treatment responders, they do not achieve full remission of symptoms.

Taking the above into consideration, one will wonder whether combining medication with CBT will be more efficacious than either treatment alone. Many mental health professionals believe that combining CBT with pharmacotherapy will maximize treatment outcome. Unfortunately, very few studies have tested this idea. Unfortunately too, a few studies examining combination therapy for OCD have generally found that at post-treatment and follow-up there was no demonstrable advantage or disadvantage of combined treatment over intensive CBT delivered alone. Another small amount of evidence suggests that combined treatment may have some advantage over medications alone. This second evidence supports the idea of adding CBT to the treatment of patients who initially received medications alone. CBT and medication combination therapy is also useful to the management of any comorbid conditions (e.g major depression) that are known to negatively impact CBT, to those severe OCD cases, as well as to those patients with a sub-optimal response or those who are considered to be medication therapy resistant.

18.45-20.15 **SYMPOSIUM**
BIPOLAR DISORDER AND ADHD – A PUZZLING AND FLIRTATIOUS
RELATIONSHIP

Chairperson: **Evangelia Tsapakis** (Greece)

Comorbidity of adult ADHD in bipolar patients

Evangelia Tsapakis

Psychiatrist, Visiting Research Associate, Institute of Psychiatry, King's College London and Harvard Medical School, Boston, Director, Private Mental Health Unit, Heraklion, Crete, Greece

In adults, bipolar illness and ADHD relate to each other in a challenging way, appreciated by both clinicians and basic scientists. Comorbidity is commonplace, presents at the more severe end of the spectrum enhancing poor prognosis and negative treatment outcomes. Onset of symptoms is usually earlier, with shorter normothymic periods and increased prevalence of drugs and alcohol use. In addition, mood stabilisers are not as effective in the comorbid population as they are in bipolar patients without ADHD. Here, an update of the current understanding for this comorbid condition is presented, along with the assessment tools currently used to diagnose it. Evidence-based guidelines will also be presented and discussed.

Differentiating ADHD from bipolar disorder using neuropsychology. **A case report.**

Kalliopi Diakaki

"Agios Charalambos" Mental Health Clinic, Crete, Greece

A 21 year-old male student was admitted to our clinic in 2016 with a history of insomnia, extreme mood swings, racing thoughts and risky behavior for the last 2 years. He also complained of attention and memory problems. A working diagnosis of bipolar disorder was made and he was started on olanzapine monotherapy with the subsequent addition of valproate. Medication was well tolerated and the doses were gradually increased to 10 mg and 1000 mg nocte respectively. The patient, however, responded partially as he continued to complain of what he called 'difficulties in concentrating'. He was subsequently referred for neuropsychological evaluation, which revealed serious impairment in retrieval and learning attributed mainly to auditory and visual attention impairments. Careful examination for attention-deficit hyperkinetic disorder (ADHD) in childhood or adulthood suggested a current diagnosis of ADHD. Olanzapine was gradually discontinued and atomoxetine up to a dosage of 80 mg daily was added to valproate 1000 mg nocte. One year following initiation of atomoxetine, the patient reported significant improvement in sleep, concentration and memory. He has been able to concentrate in classes and to revise for his end-of-year examinations. On examination, he was found to be stable and euthymic. Repeat neuropsychological assessment showed improvement in both auditory and visual attention domains.

This case presentation highlights the importance of diagnostically differentiating comorbid

bipolar disorder from ADHD. In addition, the usefulness of neuropsychological testing as an add-on diagnostic tool is underlined, in order for a well-informed treatment plan for optimal recovery and rehabilitation to be implemented.

Use of stimulants in bipolar depression: A meta-analysis

Michael Mintzas

Rural Community Primary Healthcare Physician, Amfikleia, Greece

Objectives: Summarize the efficacy and safety of adjunctive psychostimulants [methylphenidate, armodafinil, modafinil, lisdexamfetamine] in the treatment of bipolar disorder.

Methods: Systematic review searching PubMed, Scopus and ClinicalTrials for double-blind, randomized, placebo-controlled studies of an adjunctive psychostimulant in bipolar disorder, published until October 2017. Further search was done using the bibliography of the selected studies as a source.

Results: We included 9 studies. Of these, 3 concerned methylphenidate, 4 concerned armodafinil, 1 concerned modafinil, and 1 concerned lisdexamfetamine. 6 were targeting bipolar depression, 1 was targeting acute mania, and 2 were targeting both depression and mania. The 2 studies targeting both depression and mania were aimed at children and adolescents with co-morbid ADHD. Of the studies targeting bipolar depression, 5 yielded positive results and 1 negative. The study targeting acute mania yielded negative results, while the studies targeting both depression and mania yielded mixed results. No major adverse effects were reported.

Conclusion: Psychostimulants are promising adjunctive agents in the treatment of depressive symptoms in patients with bipolar disorder. However, further research is warranted in order to reach definitive conclusions.

Adult ADHD Services in Jutland, Denmark

Evgenia Chourdaki

Head of Psychiatric Dept. of General Hospital of Heraklio "Venizeleio", Greece

ADHD is a lifetime condition, even though symptoms can change through a person's life, at least in terms of what others can observe. So ADHD diagnosis requires an integrated diagnostic and therapeutic process to increase the functionality of these patients in different areas, as personal development, family, work, community participation.

We are trying to present the diagnostic and treatment health system in adult patients with ADHD in Jytland DK. In order to achieve a precise diagnosis and counseling, there are national guidelines that are followed by health professionals. Patient's diagnostic investigation and treatment process takes place on multiple levels including the general practitioner, the private psychiatrist, the psychiatric hospital departments and the community.

This ensures a more accurate diagnosis and provides high quality in multidimensional treatment and support services to ADHD patients.

If the diagnosis of ADHD is under consideration, the patient is referred first to the general practitioner and then if the criteria are met to a private psychiatrist or hospital unit, where a 7-hour diagnostic package is offered. There is a protocol for determining the treatment and the patient continues follow-up by the general practitioner.

At the same time, the patient has the option to choose short psychotherapy or psycho-education in an individual or group context. Family therapy and partners' psychoeducation are provided. An important role in the treatment of ADHD patients is played by the community. A person assumes the role of coacher. There are special educational programs for work which can help patients in finding a job. Throughout the treatment plan, the club of people with ADHD plays a central role.

The establishment of rules, strict criteria for admission to treatment, experts' meetings in Denmark is an example for designing a network of health care services which can be provided to patients with ADHD in our country.

20.15-21.00 **LECTURE**

Chairperson: **Konstantinos N. Fountoulakis** (Greece)

Pro-inflammatory cytokines and the neurotransmitter precursor's tyrosine and tryptophan in the pathogenesis of in schizophrenia, BD and MDD

Nikolaos Venizelos

Active Professor Emeritus and Head of the Neuropsychiatric Research Laboratory & Biobank, School of Medical Sciences, Örebro University, Sweden

Background: Proinflammatory cytokines and oxidative stress responses have been extensively implicated in the pathophysiology of schizophrenia, major depressive disorder (MDD) and bipolar disorder (BD). In addition, disturbed transport of neurotransmitter precursor's tyrosine and tryptophan has been demonstrated in different studies in fibroblast from neuropsychiatric patients. The disturbed tyrosine and tryptophan transport could be one of the possible explanations for altered neurotransmission in these disorders.

However, the role of proinflammatory cytokines, oxidative stress, and the reasons for disturbed transport of neurotransmitter precursor's in neuropsychiatric disorders are still not evaluated. The aim of this presentation is to evaluate and discuss the role of proinflammatory cytokines and oxidative stress, in the availability of the neurotransmitter precursor's tyrosine and tryptophan in the pathogenesis of in schizophrenia, BD and MDD.

Methods: Fibroblasts from healthy control were treated with proinflammatory cytokines (IL-1 β , IFN- γ , IL-6, TNF- α), and their combinations and oxidative stress and then analyze the uptake



tyrosine and tryptophan compared to untreated controls.

Result: Proinflammatory cytokines and oxidative stress were decreased the transport of the neurotransmitter precursor's amino acids up to 47 %, respective 33%

Conclusion: The results of this study indicate that proinflammatory cytokines and oxidative stress regulate the availability of the neurotransmitter precursor's amino acids, which can lead to disturbed neurotransmission, attributed to the symptoms of many neuropsychiatric disorders. The functionality of the amino acids transporter could be used as a potential biomarkers that can contribute to more accurate diagnosis of major psychiatric disorders and thereby to a more adequate personalized medication

Friday, June 29th 2018

08.00-09.15 **SYMPOSIUM**
AGMATINERGIC TRANSMISSION: A NOVEL AND PROMISING DIANOSTIC BIOMARKERS AND THERAPEUTIC APPROACH
Chairperson: **Angelos Halaris (USA)**

New insight into the pathogenesis and treatment of depression: Agmatinergic system

Feyza Aricioğlu

Professor of Pharmacology, Marmara University, School of Pharmacy, Department of Pharmacology and Psychopharmacology Research Unit, Haydarpaşa, Istanbul, Turkey

At present, the pathophysiology of many psychiatric disorders is still not fully understood. Current treatment approaches that have been used in psychiatric disorders for many years and usually have a single mechanism-based effect, such as monoamines, are inadequate to control disease symptoms and produce remission. Patients who do not respond to the current treatment options in the majority of psychiatric disorders, mainly disease entities, such as depression, affecting 10% of the population and treatment resistance cases constitute about 1/3 of them. Recent studies indicate that an endogenous molecule in the brain might be a modulator in depression. Agmatine is the decarboxylation product of L-arginine by the enzyme arginine decarboxylase. It binds with high affinity to alpha 2-adrenoceptors and imidazoline binding sites, inhibits N-methyl-D-aspartate (NMDA) receptors and competitively inhibits nitric oxide synthase. Antidepressant properties of agmatine are well-documented in various models of depression in preclinical studies. In behavioral experiments, an anti-immobility effect of agmatine was demonstrated in the tail suspension and the forced-swim tests. In addition to various animal models of stress and depression, agmatine's antidepressant properties were further studied in rodents. Therefore, agmatine was proposed to be an 'endogenous antidepressant'. The antidepressant activity of agmatine involves a variety of molecular transduction mechanisms. These include antagonism of NMDA receptors, activation of AMPA receptors and mechanistic target of rapamycin signaling, inhibition of nitric oxide synthase, activation of serotonin receptors. Recently exogenously administered agmatine has been shown to reverse increases in neuroinflammatory/proinflammatory cytokines, uncontrolled astrocyte/glia activity, and decreased production of neurotrophic factors in the etiopathology of depression. Current findings imply that agmatine may play a prominent role of in the management of depression.

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Alterations in arginine metabolism in response to quetiapine treatment in major depression

Ozden Arisoy¹, Angelos Halaris²

¹Associate Professor of Psychiatry, Department of Psychiatry, Abant Izzet Baysal University, Turkey

²Professor of Psychiatry, Chairman of the Department of Psychiatry, Loyola University, Stritch School of Medicine, Chicago, USA

Introduction and objective: Studies have revealed an antidepressant and anxiolytic effect of agmatine. Possible mechanisms by which agmatine may exert these effects are inhibition of the inducible form of nitric oxide synthase (iNOS) during various stages of inflammation and inhibition of NMDA receptors. Also because arginine decarboxylase which produces agmatine is enriched in macrophages, agmatine has been proposed to be an endogenous anti-inflammatory agent. Since, major depressive disorder (MDD) is increasingly recognized to be a pro-inflammatory disorder, it is hypothesized that there may be alterations in agmatine levels in MDD. The present study sought to determine whether MDD is associated with altered levels of agmatine and/or other metabolites of arginine metabolism, and whether antidepressant treatment might have any effects on these levels.

Method: High Performance Liquid Chromatography (HPLC) was used to measure arginine metabolites, lysine and cytokines in the plasma of MDD patients and HC's both at baseline, and only in MDD patients after 12 weeks of treatment with Quetiapine which has a completely different mechanism of therapeutic action than standard antidepressants. Recurrent MDD patients, 21-65 yrs of age, with a minimum HAMD score of 18 were included while patients with heart disease, hypertension, lipid dysregulation, diabetes, drug use within 3 months, and/or presence of other DSM-IV Axis I diagnosis were excluded. Age-sex matched HC's were recruited from the community. Fasting blood was drawn between 8:30 and 11:00 AM. Questionnaires and blood drawing was repeated at 8 and 12 weeks of treatment.

Results: Mean age of MDD patients was 43.3 years; 55.3% were female and 44.7% were male. There was a significant improvement ($p < 0.005$) in HAMD, HAMA, BDI, BAI and PSS14 from baseline to week-12 with a mean dose of Quetiapine 176.8 mg. At week 12, all patients were in remission. CRP ($p = 0.0005$) and TNF-alpha ($p = 0.002$) were higher in MDD patients vs controls at baseline. Putrescine and ADMA were higher ($P = 0.005$) while Ornithine ($p = 0.002$) and Agmatine ($p = 0.003$) were lower in MDD patients vs HC's at baseline. At week 12, only ADMA was lower ($p = 0.0005$) and Agmatine was slightly higher in MDD patients vs HC's ($p = 0.058$). None of the arginine metabolites including agmatine changed significantly over the course of treatment in MD patients. Agmatine was negatively correlated with HAMD17 score at baseline ($r = -0.413$, $p = 0.056$) and with HAMD21 score at week 12 ($r = -0.556$, $p = 0.048$) in MDD patients. Baseline HAMD17 score was positively correlated with Putrescine in MDD patients ($r = 0.549$, $p = 0.052$) while baseline HAMA score was negatively correlated with Putrescine ($r = -0.418$, $p = 0.053$) and Arginine ($r = -0.457$, $p = 0.053$).

Conclusion: Higher CRP and TNF-alpha levels are consistent with a pro-inflammatory state in

depressed patients. Higher level of agmatine and lower level of putrescine and their correlation with depression severity at baseline in MDD patients may suggest a compensatory increase against inflammation in MDD patients.

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Lithium - Implications for neuropsychiatry and wellness

Orestis Giotakos

Psychiatrist, Greece

Lithium is ubiquitous in the environment and probably an essential trace nutrient. The biochemical mechanisms of action of lithium appear to be multifactorial and are intercorrelated with the functions of several enzymes, hormones and vitamins, as well as with growth and transforming. The guidelines of major psychiatric association name lithium as a first-line therapy for bipolar disorder. Some studies have shown an association between low lithium intakes from water supplies and suicidality, as well as criminality. Other studies have shown that trace levels of lithium have neuroprotective abilities or improvements in mood and cognitive function. In animals, lithium upregulates neurotrophins, including brain-derived neurotrophic factor, nerve growth factor, neurotrophin-3, as well as receptors to these growth factors in brain. Lithium has been reported to be beneficial in animal models of brain injury, stroke, amyotrophic lateral sclerosis, spinal cord injury, and degenerative diseases. A wide range of intracellular responses may be secondary to the inhibition of glycogen synthase kinase-3 beta and inositol monophosphatase by lithium. In humans, lithium treatment has been associated with humoral and structural evidence of neuroprotection, such as increased expression of anti-apoptotic genes, inhibition of cellular oxidative stress, synthesis of brain-derived neurotrophic factor, cortical thickening, increased grey matter density, and hippocampal enlargement. Many findings pose the question of whether the prospect of adding lithium to drinking water is realistic, weighing the benefits and potential risks. From the origin of life, lithium was in the environment, interacting with all of the biological molecules that life invented. Biological evolution had to accommodate to the presence of lithium to survive. In the competition for survival, those entities that best minimized lithium toxicity and maximized the benefits of lithium action had an edge in the competition to survive and reproduce.

09.15-10.00 **LECTURE**

Chairperson: **Angelos Halaris** (USA)

What can complexity and network analytics offer to Mind-Brain professionals?

Ioannis Antoniou

Co-founder and Director of the Inter-Faculty Graduate Studies Program on “Complexity and Networks” of the Aristotle University of Thessaloniki, Greece

Complexity is the analysis of emerging functionalities and structures due to high interdependencies. Network Analytics is the natural mathematical language and the statistical toolbox for the quantitative assessment of processes conditioned by relations and interdependencies. What is possible to achieve presently?

- (1) the relevant networks (Connectomics) can be constructed from data (EEG, fMRI)
- (2) from the constructed networks we can estimate: 2.1) the roles of units (individuals, neurons, groups or collections) can be easily and reliably assessed (hubs-authorities, regulators, communicators, intermediaries, accessibility), 2.2) the effective analysis of the network into interacting and mutually conditioning modules, 2.3) network features: the distribution of activities of interest, vulnerability-robustness, agility, synchronization, performance, interoperability, influence,
- (3) several intervention and control strategies have been explored.

We shall review the main results of the application of Network Analytics to real Brain Networks and we shall explore their added value and the possibility to have reliable signatures of Mind-Brain Functionalities and eventually diagnostic tools.

10.00-10.45 **LECTURE**

Chairperson: **Maria Samakouri** (Greece)

Individual variability in mice’ response to mood stabilizing drugs: A hurdle or an advantage?

Haim Einat¹, Catherine Belzung²

¹Professor at the School of Behavioral Sciences, Tel Aviv-Yaffo Academic College, Israel, Adjunct Professor at the Dept. of Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Israel and in the College of Pharmacy at the University of Minnesota, USA

²Senior Professor at Institut Universitaire de France, France

Individual variability in response to mood stabilizing drugs pose a significant hurdle in the treatment of patients. There is a well-known heterogeneity in the response of patients to treatment and many patients are partial or non-responders. Differences in response might be related to genetics but to date specific findings are inconclusive. Accordingly, animal models may be one important venue to advance the study of individual variability in response to drugs.

Individual variability in animal models is well noted in all contexts of research and had been studies mostly in the context of animal physiology and ecology. Yet, in studies related to disease

and treatment individual variability is usually treated as a limiting factor and is dealt with by standardization and by increasing the number of animals per group. Although the general tendency is to try and overcome variability, it is also possible to utilize heterogeneity in animals to explore the biology of individual variability in humans.

In that context, initial work in our laboratory clearly demonstrates the heterogeneity in mice response to both induction procedures for models and for the response to lithium for both of depression and mania. Our data show that similar to humans, the response of mice to environmental interventions is variable. Moreover, similar to patients, a portion of the mice show strong response to lithium, another sub-group shows intermediate response and a third sub-group shows no response to chronic lithium administration. These diverse effects are demonstrated in both ICR and black Swiss mice.

Current work in the lab is aimed at exploring physiological, biochemical and molecular correlations to the behavioral responses to lithium. Such correlations may support the attempts to predict response in models and possibly in patients and advance the development of personalized medicine in bipolar disorder.

10.45-12.00 **SYMPOSIUM**

THE IMPACT OF VIT D CSF LEVELS IN THE EXPRESSION OF COMT, ALDH1A1, MAO-A, MAO-B; FROM CLINICAL OBSERVATION TO MOLECULAR LEVEL

Chairperson: **Maria Samakouri** (Greece)

*A collaboration within the Democritus University of Thrace
School of Health Sciences*

Improvement in the behaviour of psychotic inpatients, are Vit D levels connected?

Theofanis Vorvolakos

Assistant Professor of Psychiatry, Democritus University of Thrace, Greece

The role of Vit D and the other neurosteroid factors in psychosis is widely argued during the last years.

Two schizophrenic inpatients in our department, one newly diagnosed and one more chronic demonstrated severe behavioral symptoms especially agitation that made it difficult for the clinical staff to handle. During the routine check up extremely low levels of Vit D was revealed in both cases.

Patients were treated with Vit D P.O. with a dose of around 4000 Units per day and until their Vit D levels in the blood reach a concentration within the normal limits. Their psychotic symptoms and their behavior showed significant improvement. The improvement was demonstrated in HONos scale.

Despite the fact that there might be confounders and that this observation was made only in a

couple of cases, we concluded that the role of Vit D levels in psychosis deserves more attention and needs further investigation.

After initial literature review that supported our observations we collaborated with the Molecular Biology and Genetics department of our school in order to perform a preliminary basic research regarding the role of Vit D in neural dopamine metabolism.

Deficiency of Vit D levels in psychotic patients. Can this be important?

Maria Athanasiou

Psychiatrist, Greece

Vitamin D or calciferol, is a fat-soluble vitamin. It is known as a sunshine vitamin. It consists of a group of fat-soluble compounds (more than ten), the most important of which are, vitamin D2 or ergocalciferol and vitamin D3 or cholecalciferol. Vitamin D is produced endogenously in the skin from sun exposure sunlight (UVB) or obtained from food groups, supplements but is also widely used for the treatment and prevention of hypovitaminosis D (mainly D2). Vitamin D deficiency has been recognized as a pandemic with a myriad of health consequences. It has been associated with mental disorders and derives from decreased sun exposure but it is also associated with other factors.

Vitamin D, in its biologically active form 1, 25(OH)₂ D, exhibits hormonal activity because it shares common features with steroid hormones. In the liver and kidneys, the biologically inactive circulating form of Vitamin D [25 (OH) D] bound to the vitamin D receptor (VDR), after 2 hydroxylations, is converted to its biologically active form 1,25-dihydroxyvitamin D [1,25(OH)₂ D] which is responsible for the biological actions of vitamin D.

Over the past 25 years, a number of reports have suggested that Vitamin D has been expanded beyond its effects on calcium metabolism, and research evidence in the last 10 years indicates its function as a potent neurosteroid. In particular, vitamin D, with its most correct conceptual use as a hormone, has been thought to affect brain growth due to its antioxidant activity and its effect: a) on cell differentiation b) on cytokine regulation c) neurotransmitter synthesis d) expression of neurotrophic factor (BDNF) e) and expression of genes / proteins involved in differentiation, metabolism and neuronal structure.

In addition to its neuroprotective action, the growing literature of recent years associates its deficiency with psychotic disorders and manifestations. This association is reinforced by pre-clinical indications which point out the role of vitamin D deficiency in dopaminergic activity as well as in neuronal differentiation and cerebral structure and function. Vitamin D is a new field of research, regarding psychotic disorders and manifestations. From the literature review is indicated that clinician should take into consideration vitamin D status.



Expression of COMT ALDH1A1, MAO-A, MAO-B in PC 12 molecular series in vitro. Experimental findings

Alexandros Mitrusias

Molecular Biology Student, Democritus University of Thrace, Greece

The experimental process (materials, steps and reason for conducting each sub-process) that was carried out to conduct the research is mentioned. In particular, the cell-splitting process is carried out to stabilize and normalize the growth rate of cells when their density in the flask reaches approximately 70% -100%. Moreover, the process of clotting the cells into 100 Petri dishes, which targets both the counting of cells and the procedure of the effect of vitamin D on PC-12 cells, is reported. Then, the procedure of “pickling” the cells that have undergone the above effect is performed so that they are placed in small falcons to effect the extraction of RNA from the cells. This process aims to extract the mRNA from the genes expressed in our cells in order to synthesize the cDNA and perform quantitative analysis of gene expression via real-time PCR. However, in between the procedures of RNA extractions and cDNA synthesis, NanoDrop quality control has been mediated to help us understand whether RNA extraction has been substantiated as it gives us information about the concentration of mRNA in each of the falcons used (information very important to determine, as well, the amounts of water we need in cDNA synthesis). We also mention the reason why we chose real-time PCR procedure, the characteristics of this reaction, and the steps taken to complete the process.

Finally, the expressions of the four genes is presented quantitatively, in the form of graphs, (at all the concentrations of vitamin D used in the effects) as well as the photographic material from the electronic microscopes of the affected cells (at the various concentrations and in different ZOOMs) so that we have both quantitative results as well as morphological, developmental and plipteal information for these cells.

Interpretation of the experimental findings. Future perspectives for research and scientific collaboration

Aglaia Pappa

Associate Professor of Molecular Physiology, Democritus University of Thrace, Greece

Vitamin D is the key ingredient of the effects on the experimental procedures we described above. For that reason we first mention its peculiarities, with particular emphasis on the crucial role it plays in brain development as well as the onset of disorders, possibly due to its lack. In addition, the properties and characteristics that have been a key determinant of the PC-12 cell line are highlighted. Plus, the genes studied in this procedure (COMT, MAO-a, MAO-b, ALDH1A1) are described.

The results are in accordance with the current literature. Genes have their optimum expression in the normal concentrations. Vit D seems also to promote PC-12 diferenciacion.

However modest the results of this experiment might be there interesting especially for clinicians who might acquire deeper knowledge for the role of Vit D in dopamine metabolism.

It is also to our view quite satisfactory the fact that there was fruitful collaboration between the Department of Medicine and the Department of Molecular Biology and Genetics with in the context of School of Medical Sciences of Democritus University of Thrace. This collaboration can work as pilot collaboration that can lead to further joint research work we beneficiary effects for all the involved parties.

12.15-13.30 **SYMPOSIUM**
METABOLIC AND ENDOCRINE DISTURBANCES IN PSYCHIATRIC AND RELATED DISORDERS
Chairperson: **Dimitris Dikeos** (Greece)

Metabolic disorders and sexual dysfunction in psychosis

Christos Theleritis¹, Stefania Bonaccorso², Robin M. Murray²

*¹Clinical Research Associate, University of Athens Medical School, 1st Psychiatry Dpt., Eginition Hospital, Consultant in Psychiatry in SOPSI Day Community Center and Guest House, Greece
Visiting Senior Researcher, Dept. Psychosis Studies, Institute of Psychiatry, King's College London, UK*

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The impact of metabolic disorders (MD) in patients with psychosis is well established. This may be due to the disease itself and its association with a sedentary life-style, as well as with drug treatment via serotonergic or prolactin pathways. Sexual dysfunction (SD) is also a common finding in patients with schizophrenia but its relationship to MD remains unclear. To investigate the association between SD and MD in a cohort of patients with first episode psychosis (FEP) the Sexual Function Questionnaire (SFQ) was administered, while also anthropometric measures, including weight, BMI, waist, waist-hip ratio were investigated. Cholesterol, triglyceride, low-density lipoprotein (LDL) and high-density lipoprotein (HDL) cholesterol, and total cholesterol-HDL ratio were also assessed as well as, in male patients, leptin and testosterone. A total of 116 patients (61 males and 55 females) were included. Sexual dysfunction was found in both female and male patients with FEP; however, in males SD is associated with increased BMI, higher leptin levels, higher waist-hip ratio and lower testosterone levels, and in female patients with lipid abnormalities. Those findings claim the implementation of national policies that can lead to healthier diets and more active lifestyles among patients with psychosis.



Metabolic disturbance in depression

Evangelia Tsapakis

Psychiatrist, Visiting Research Associate, Institute of Psychiatry, King's College London and Harvard Medical School, Boston, Director, Private Mental Health Unit, Heraklion, Crete, Greece

In what way does depression affect metabolism? What is the current understanding of changes in the metabolism of depressed individuals? Is antidepressant response linked to metabolism? Do metabolic abnormalities inform the management of treatment-refractory depression? Is there a relationship between depression and the metabolic syndrome? These are only a few of the questions this presentation will be addressing, reviewing data from recent basic science and clinical research.

Metabolic and endocrine consequences of sleep disorders

Dimitris Dikeos

Professor of Psychiatry, Medical School, National and Kapodistrian University, Athens, Greece

Sleep disorders are quite common and have substantial prevalence all over the world. Insomnia and hypersomnia are often comorbid with diabetes and various cardiovascular disorders. The time of appearance of each pathology points to a causal effect of sleep disorders on the metabolic/endocrine disturbance, or at least to a common underlying process of which sleep disorder is a much earlier manifestation. For insomnia, recent evidence suggests that only the type with objective reduction of sleeping time has metabolic consequences, while this is not the case for just subjective insomnia nor for sleeping time being reduced without the presence of insomnia complaints. For hypersomnia, the most common cause is obstructive sleep apnoea syndrome, the metabolic consequences of which are attributed to the low oxygen saturation and hypercapnia during sleep; however, hypersomnia itself may be involved, since the presence of diabetes or cardiovascular disease is associated with the persistence of daytime sleepiness even after the successful treatment of sleep apnoeas by C-PAP. Furthermore, population studies have shown that the sheer presence of hyperomnolence, irrespective of its cause, is also associated with higher general mortality, mainly due to stroke or cardiovascular disease. As regards parasomnias, restless legs syndrome and periodic leg movement syndrome have comorbidity with iron deficiency, kidney disease and diabetes, although the metabolic disorder seems to be the cause rather than the consequence of the sleep disorder.

Metabolic and endocrine profile of eating disorders

Ioannis Michopoulos

Psychiatrist, Associate Professor of Psychiatry, School of Medicine, National and Kapodistrian University of Athens, Greece

Anorexia nervosa (AN) has a great deal of somatic symptoms. Most of the endocrine disturbances and the metabolic complications of AN are due to starvation and represent appropri-

ate metabolic adaptation of the body to food restriction and negative energy balance. In a starving patient, a lowered metabolic rate, increased cortisol, increased growth hormone level and reduced fertility are all appropriate adaptations to an abnormal and highly stressful state. Typical endocrine manifestations of AN include hypogonadotropic hypogonadism and hypercortisolemia. Hypogonadotropic hypogonadism results to low estrogen levels and amenorrhea. Osteoporosis results as a long-term consequence of amenorrhea. Hypoglycemia is the first consequence of low metabolic rate and low-calorie consumption. A constant finding in AN is hypothyroidism, with lower active hormone levels and elevated rT3. Due to low metabolic rate and low body fat, patients with AN present hypothermia. Due to abnormal metabolic paths of lipids, patients have hypercholesterolemia. Finally, reduced levels of leptin are found.

13.30-14.15 **SATELLITE SYMPOSIUM**
THE ROLE OF LONG ACTING TREATMENTS IN SCHIZOPHRENIA: TIME MATTERS
Chairperson: **Petros Fotiadis** (Greece)

In search of lost time

Petros Fotiadis

Consultant with the rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece

Time regained

Panagiotis Panagiotidis

Consultant, Psychiatric Dept., 424 Military Hospital, Thessaloniki, Greece

The satellite symposium “The role of long acting treatments in schizophrenia: Time matters” has as a focus the concept of time in schizophrenia.

Consequently, Dr. Fotiadis will perform a small introductory talk discussing topics such as the effect of duration of untreated psychosis, the importance of early treatment initiation on influencing prognosis in schizophrenia as well as the impact of continuous treatment on patient survival.

The main speaker of the symposium Dr. Panagiotidis, will then examine the effect of pharmacokinetic aspects of long acting treatments on both rapid onset of action but also duration of action and their link to effectiveness, thus highlighting how timely and sustained pharmacological treatment can allow for psychosocial interventions and facilitate the road to recovery. Finally, to further aid medical education on the newest long acting treatments, a clinical case of a schizophrenia patient receiving Paliperidone Palmitate 3 Monthly will be presented.

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15.00-16.15 **SYMPOSIUM**
NEUROENDOCRINOLOGY OF STRESS AND CONTEMPORARY DISORDERS
Chairperson: **George P. Chrousos** (Greece)

Neurocircuitry of stress and neuroplasticity indices: How males and females differ?

Christina Dalla

*Assistant Professor of Psychopharmacology, President of the Hellenic Society for Neuroscience
Dept. of Pharmacology, Medical School, National & Kapodistrian University of Athens, Greece*

Stress exposure affects neuroplasticity, including serotonergic activity, spine density, dendrite length and adult neurogenesis in brain regions, such as the hippocampus and the prefrontal cortex. Moreover, recent theories link psychiatric disorders, such as anxiety and depression with neuroplasticity and neurochemical changes. Herein, we provide evidence from our group showing sex differences in the response of different brain areas and neural circuits in models of stress and depression. Our findings show that depressive-like symptomatology in the forced swim test (FST) is more evident in females than in males, accompanied by decreased serotonergic turnover ratio in the female hippocampus. Similar findings are obtained with the chronic mild stress (CMS) model of depression, where females exhibit reduced serotonergic activity in the hippocampus. Furthermore, in the learned helplessness model pronounced sex differences in the manifestation of behavior exist and consequently sex differences in adult hippocampal neurogenesis are also evident. Lesion and inactivation studies have also shown that the integrity of the circuit hippocampus - prefrontal cortex (PFC) is necessary for the expression of passive (depressive) behaviors in the FST in both sexes. Moreover, when nucleus reuniens (RE) is lesioned, male rats do not exhibit a reduction in anhedonic behavior, evident as decreased sucrose intake. Also, the CMS-induced alterations in neuroplasticity indices, such as decreased spine density and dendritic neuronal length in the PFC and the hippocampus are prevented in lesioned male rats. Our findings uncover that the communication of PFC and hippocampus, depending on RE, is required for the stress response and the appearance of depressive-like behavior in both sexes.

Early life toxic stress and susceptibility to disease

Panagiota Pervanidou

Assistant Professor of Developmental & Behavioral Pediatrics, Head of the Center of Developmental & Behavioral Pediatrics, First Department of Pediatrics, University of Athens, School of Medicine, "Aghia Sophia" Children's Hospital, Athens, Greece

The term "early adversity" expressed also as "early life toxic stress" has been used to describe a broad spectrum of negative experiences during childhood and adolescence, and more recently, also during fetal life. These adverse exposures may include chronic and complex stressors, such as physical and/or emotional maltreatment, socio-economic disadvantages or witnessing familial violence but also single acute stressors, such as natural catastrophes, accidents, vio-



lent attacks or terrorism. Epidemiological studies support a higher risk for psychiatric disorders (anxiety, depression and posttraumatic stress disorder) in individuals with adverse exposures during early life. Furthermore, childhood adverse experiences have been also related to physical health conditions, such as cardiovascular and metabolic diseases and chronic inflammatory and pain syndromes.

Stress is generally associated with acute activation of the hypothalamic-pituitary-adrenal (H.P.A.) axis and the arousal/sympathetic nervous system, as evidenced, in most studies, by elevated cortisol and catecholamine concentrations in the periphery. Stress-related neuroendocrine alterations in response to early adversity include hyper- or hypo-activation of the stress system and may persist or worsen in later life, acting as biological vulnerability factors for the development of later disease. The condition of chronic hyper- or hypo-activation of mediators of the stress system represents dyshomeostasis, also called allostasis or cacostasis, which is related to further morbidity, such as obesity and the metabolic syndrome, diabetes mellitus type 2, atherosclerosis, osteoporosis, and immune dysfunction. A key effect of stress during fetal life, childhood, and adolescence is that it programs the developing brain, especially brain structures involved in stress reactions, such as the prefrontal cortex, the hippocampus, and the amygdala, to hyper- or hypo-react to ensuing stressors. The understanding of the pathways linking early life stress to later disease could provide new insights into the pathophysiology of contemporary disorders.

Stress and circadian system: Interaction and pathophysiology of disease development

Agorastos Agorastos

Associate Professor, Dept. of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf, Germany

The human circadian system (CS) is an integrative system of complicated circadian hierarchy which enables the temporal organization and coordination of physiological processes and rhythmic changes to promote homeostasis and environmental adaptation. Hypothalamic-pituitary-adrenal (HPA) axis activity is closely linked to the CS and characterized by circadian rhythmicity. Through various pathways, the central circadian system synchronizes hypothalamic neuroendocrine neurons, influences adrenal sensitivity to adrenocorticotrophic hormone (ACTH), stimulates circadian glucocorticoid (GC) hormone secretion and interacts with the peripheral rhythm of the adrenal gland, thus, confirming an influence of the CS on GC responsiveness. GC pathways (e.g. acetylation of GR, GR translocation to the nuclei and transcriptional activity, GC toxicity and sensitivity, etc.) display clear circadian patterns, moderated by melatonin, while sleep deprivation affects the response to stress through altered GC signalling. In addition, central and peripheral circadian rhythmicity also modulates ANS control through projections to pre-autonomic neurons of the hypothalamus and is essential for the physiologic autonomic diurnal fluctuations seen in humans. Chronic circadian disruption may gradually change the fundamental properties of brain systems regulating neuroendocrine, immune and autonomic stress systems and may play a central role in the development of further stress-related disorders. Sleep deprivation, which is tightly associated with chronodisruption, has been repeatedly associated with various HPA-axis dysregulations such as flattened amplitude of cortisol rhythm,

decreased cortisol awakening response and reactivity, increased but also decreased diurnal cortisol levels and higher CRH levels. In addition, sleep deprivation is related with increases in autonomic sympatho-adrenal activity and blunting of cardiovascular autonomic rhythmicity and autonomic responsiveness, thus constituting a major cardiovascular risk factor. Chrono-disruption may, thus, sensitize individuals to stress and increase vulnerability for stress-related disorders. Numerous human and animal studies suggest that physical and psychological stress affects the CS directly and indirectly through influence on sleep physiology. Acute and chronic stress exposure may thus cause both immediate and long-lasting circadian dysregulation which may, in turn, enhance maladaptive stress regulation.

Sex differences in stress response and depression

Nikolaos Kokras

Post-Doc Clinical & Research Associate, Departments of Psychiatry & Pharmacology, Medical School, National & Kapodistrian University of Athens, Greece

Clinical data on gender differences in depression and response to antidepressant therapy are contradictory and not well thought out. Preclinical studies, based on experimental depression models, have the potential to contribute to the improvement of clinical studies. Studies focusing on phenotype, endophenotype of depression and response to antidepressant therapy reveal methodological problems and confounding factors that may affect the quality of clinical data. For example, in preclinical studies, behavioral indicators are adapted to both sexes in order to properly investigate transcendental differences. This is not, however, taken into account in clinical trials which use scales that have not been well-adapted for potential sex differences. Another phenomenon not taken into account in human studies is that often the sex differences observed in the behavior of the animals and the neurobiological substrate are attenuated or eliminated by the administration of antidepressant drugs. Finally, sex differences should be taken into account in all studies seeking to look for biomarkers in depression and antidepressant treatment. In conclusion, preclinical data on gender differences can greatly contribute to improving the design and quality of clinical studies, promote our understanding of depression and assist the discovery of new antidepressants.

16.15-17.00 **LECTURE**

Chairperson: **Petros Skapinakis** (Greece)

Is male depression underestimated and undertreated?

Anna-Maria Möller-Leimkühler

Professor of Psychiatry, Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University Munich, German

Studies concerning the potential impact of gender on health have been mainly focused on women while neglecting men, especially with respect to disorders with a higher prevalence in

females. Within mental health, depression is seen as a predominantly female disorder with a double to three fold prevalence compared with men. However, regarding the gender paradox in depression and suicide in men (suicide rate in men three times higher) the question arises whether depression in men is underestimated and undertreated, and which factors contribute to this underestimation. Research referring to gender and coping indicate that men tend to engage in a range of externalising behaviours in response to negative emotional states. Such externalising behaviours (including irritability, anger and aggression, substance misuse and impeded help seeking) have been supposed to reflect a male sub-type of depression that is partly inconsistent with current diagnostic criteria, resulting in impeded detection and treatment rates of depressed men. There is increasing evidence for a male-type depression from international studies. Male specific biological factors, traditional masculinity norms and a gender bias in depression diagnosis may best explain underdiagnosis and undertreatment in men.

17.00-18.15 **SYMPOSIUM**

EARLY INTERVENTION IN PSYCHOSIS: INTERNATIONAL AND HELLENIC EXPERIENCE

Chairpersons: **Venetsanos Mavreas** (Greece), **Nikolaos Stefanis** (Greece)

The emerging paradigm of early intervention in psychosis & results of the Athens First Episode Psychosis Study

Nikolaos Stefanis

Professor of Psychiatry, National and Kapodistrian University of Athens Medical School (NK-UAMS) and Vice-Director of the University Mental Health Research Institute in Greece

We will highlight the need for a novel national strategic approach to the management of psychotic disorders in accordance with the international principles of early intervention. Even though outpatient treatment is considered adequate, there is an urgent need to adopt an early and more comprehensive and effective intervention strategy for young patients with psychosis and their families whose clinical and personal needs are clearly not met by the existing infrastructure of our mental health services. This can be accomplished by the legislation and implementation within the national health system of EIP services which on the one hand actively engage community organizations with the purpose of early identification of cases, reduction of the duration of untreated psychosis and on the other, offer assertive community-based support and treatment based on a multi-disciplinary community team model. The effectiveness of EIP services is supported by evidence provided by 9 international RCTs. However, in contrast to Northern European countries, Southern European countries have not yet incorporated EIP services in their national health systems. From a financial perspective, EIP services seem to be cost-effective, since the economic burden is compensated in the long term through their qualitative benefits. In Greece, specialized services for those young, afflicted for the first time by the most serious of mental disorders are non-existent. We will present preliminary results from the Multilevel Athens First Episode Psychosis study (n=130) in terms of diagnosis, early clinical and functional remission rates and early response to medication.

The early intervention in psychosis service in Ioannina

Petros Petrikis

Assistant Professor of Psychiatry, University of Ioannina, Greece

The Early Intervention in Psychosis Unit, section of the Department of Psychiatry of the University Hospital-Ioannina was established in 2010 and is specialized in coping with newly diagnosed First Episode Patients with psychosis (FEPs) and their relatives, their treatment and follow-up. From January 2013 until April 2018 we have assessed and treated 130 FEPs (82 men and 48 women). Mean age was 28,97 (SD: 0.6) years and the Duration of Untreated Psychosis (DUP) was 10.32 (SD 9.47) years.

The patients' psychopathology was evaluated using the Positive And Negative Syndrome Scale (PANSS) before the initiation of antipsychotic medication and the day of discharge from the Hospital (Before treatment: PANSS-p: 35.8(4.3), PANSS-n:13.9 (7.5), PANSS-g: 26.8(3.1). After treatment: PANSS-p: 7.3(0.4), PANSS-n:23.8(8.4), PANSS-g: 17.6(1.8).

The Wechsler Adult Intelligence Scale (WAIS)-Greek version was used to assess the presence of mental retardation as soon as their clinical condition allowed. In our patient group the mean IQ was 109.6 (8.36).

Almost one third of the FEPs (48 out of 130) were at the time of admission students or graduates from University Schools or Technological Educational Schools.

Most admissions were performed under the Act of Mental Health Law (90 out of 130) and we had 25 re-admissions due to relapse. The mean hospitalization time was 25 (12) days.

We follow-up 100 outpatients overall twice monthly. Twenty of them receive clozapine and 12 receive Long Acting Injectables.

Psychotherapeutic cognitive-behavioral interventions in first episode psychosis

Gregoris Simos

Professor of Psychopathology, University of Macedonia, Greece

Cognitive Behavior Therapy (CBT) has been the psychological treatment of choice for a variety of mental health disorders. CBT has also been found to be more efficacious than Treatment as Usual (TAU) for psychotic disorders, especially schizophrenia. Various aspects of a psychotic disorder (e.g. acute phase, positive or negative symptoms) seem to respond favorably to the combination of antipsychotic medication and CBT. Since interventions for first episode or early psychosis have attracted the interest of researchers and clinicians, research on the utility of CBT for such conditions has also grown. Relevant treatment trials have shown that CBT plus TAU results in minimal to moderate advantages compared to TAU. Although CBT does not influence rates of relapse or readmission, CBT interventions have beneficial effects on rate of recovery, improvements in the severity of certain symptoms (e.g. auditory hallucinations and hopelessness) and quality of life. Taking these findings into consideration, recent research trials focus on more specific targets, like comorbid depression and social anxiety, with still preliminary, but good and promising results.

Efficiency and effectiveness of services for early intervention in psychosis

Venetsanos Mavreas

Professor of Psychiatry, University of Ioannina Medical School, Director of the Department of Psychiatry, University Hospital of Ioannina, Greece

Chronic psychoses, especially schizophrenia, have serious long-term consequences for health, both mental and physical, quality of life and social integration and social participation of patients in all domains of daily living. It has been established that patients who contact mental health services at a later stage of the development of their illness, having a longer DUP (Duration of Untreated Psychosis), experience worse outcomes in terms of higher rates of relapses, admissions, psychotic symptomatology, disablement and social functioning and lower levels quality of life, in comparison to those who contact mental health services at an earlier stage of the illness. Specific community-based services have been introduced since the early nineties, in order to shorten DUP in patients in the first episode of psychosis and offer multimodal interventions including both psychiatric (assessment of psychopathology and early detection of psychosis, antipsychotic medication and follow-up), psychotherapeutic and social and rehabilitation services, tailored to the each patient's needs, aiming at improving outcomes at the levels of psychopathology and general functioning both for the patient and his family. These services are offered in an assertive manner, for a specific time period of 3-5 years, considered as critical. Until today, services of this kind have been developed in many countries, in some covering most of the country (e.g. UK, Australia). Initial community trials have proven them to be efficient in improving outcomes in terms of psychopathology, functioning and quality of life, patients' satisfaction and reducing usage of inpatient services. Subsequent results in the following years have shown specific services for first episode patients to be effective and superior to standard care. Specific questions still remain regarding the necessary interventions at each stage of the illness, the possibility of delivering services for early psychosis outside the stand alone specific centres and the necessary changes in generic mental health services who are to take care of patients after the prescribed period of treatment by the special services.

18.45-19.30 **DEBATE**

LONG ACTING THERAPIES AND FIRST EPISODE PSYCHOSIS

Chairpersons: **Ioannis Michopoulos** (Greece), **Athanasios Douzenis** (Greece)

For

George Tzeferakos

Psychiatrist, Scientific Associate, Forensic Psychiatric Unit-Depot Outpatient Clinic, 2nd Department of Psychiatry, University of Athens, Greece

Clinical and psychosocial deterioration associated with schizophrenia occurs within the first few years following the onset of the illness. Therefore, to improve the long-term prognosis, it is important to provide schizophrenia patients with intensive treatment following their first episode. Relapse is highly associated with partial medication adherence or nonadherence in patients with first-episode schizophrenia. Recent studies suggest that long-acting injectable (LAI) antip-

psychotics compared with oral antipsychotics are more effective for medication adherence and relapse prevention. Psychiatrists, however, seem to conservatively use depot formulations and mostly introduce them after several episodes. It is important to analyze and combat the reasons for this hesitation that deprives our patients from an effective and vital intervention

Against

Christos Tsopelas

Consultant in Adult General Psychiatry, Psychiatric Hospital of Attica, Greece

Following the onset of the schizophrenia, in the first five years period, clinical and psychosocial deterioration is happening. Given the good response of the positive symptoms of the disorder in antipsychotic medication, the main issue that hampers psychosocial recovery in the “normalization” of the patients are negative symptoms. The current medication have minimal effect in negative symptoms which mainly respond to good therapeutical relationship between doctor and patient and the efforts/care of the multidisciplinary team. The administration of monthly Long Acting Agents cannot act as a substitute of the former care. In order to improve long-term prognosis, it is important to provide patients with schizophrenia intensive overall treatment following their first episode. Partial medication adherence or non adherence in patients with first-episode schizophrenia is happening even in patients in Long Acting Agents. For those with first-episode schizophrenia showing a positive outcome, the respect of autonomy and self determination obliges us to respect their decisions about the treatment of their disorder. If given all relevant information they choose to reduce medication or stay on per-os administration we have no choice but to respect their opinion. Psychiatrists seem to use depot formulations and mostly introduce them after several episodes. Not many individuals prefer injections and depot formulations, and also they perceive the administration of an injectable treatment means a more severe condition, with respect to the psychiatric disorder. Further studies are needed to investigate the appropriate use of Long Acting Agents in patients with first-episode schizophrenia.

19.30-20.30 **SYMPOSIUM**

ASPECTS IN PSYCHOSIS

Chairperson: **Konstantinos G. Fokas** (Greece)

Schizophrenia and neurodevelopment

Eleni Parlapani

Assistant Professor in Psychiatry, 1st University Psychiatric Clinic, General Hospital Papageorgiou, Thessaloniki, Greece

Schizophrenia is considered a syndrome. Therefore, its pathophysiology has not been fully elucidated yet.

Neuroimaging studies in schizophrenia revealed brain structure abnormalities, such as de-

creased gray matter volume in frontal, temporal and parietal cortex, reduced white matter volume, as well as increased lateral ventricular volume. Still, it was not clear whether these brain structure abnormalities constitute a plausible cause of psychotic symptoms. They could as well reflect progressive brain changes following disorder's onset, or an antipsychotic medication effect.

In order to clarify whether structural brain changes were of neurodevelopmental or neurodegenerative origin, research focused on patients with first episode psychosis, as well as individuals at high-risk for psychosis. It was shown that structural brain alterations are present before symptom onset. For instance, it was shown that individuals at high-risk had reduced hippocampal and thalamic volumes compared with healthy controls. As a result, neuroimaging studies supported the neurodevelopmental hypothesis of schizophrenia. According to this hypothesis, schizophrenia's symptoms are attributed to brain developmental abnormalities, which occur long before disorder's onset. Genetic, perinatal, as well as environmental factors may be associated with disruption of neurodevelopment, leading to abnormal brain morphology. Risk factors may affect neurodevelopment at different developmental stages.

Still, there are several issues that remain unclear, such as the association between brain abnormalities and specific genetic factors. Furthermore, the association between specific brain area abnormalities and types of symptoms warrants further research.

Psychosis: Interpersonal and sexual relationships

Loukas Athanasiadis

Associate Professor in Psychiatry-Psychosexuality, Aristotle University of Thessaloniki, Medical School, 1st Psychiatric Department, Papageorgiou General Hospital, Thessaloniki, Greece

Psychosis, in particular schizophrenia, may exercise a detrimental effect on normal sexuality of the patient/partner and on interpersonal and marital relationships. Low libido, sexual arousal difficulties and other sexual dysfunctions are common. The presenting difficulties may be the result of psychosis per se, somatic/psychogenic comorbidity, medication side effects (sexual/non sexual, psychiatric/non psychiatric) psycho-social and interpersonal factors, drug/alcohol/other dependence problems, or the result of an interaction between multiple aetiological factors. Psychiatric comorbidity is common and may cause additional problems. Interpersonal difficulties may also inhibit proper sexual function.

Sexual dysfunction as a result of antipsychotic and other type of medication is common and may jeopardize adherence to therapy, especially in younger patients. Several approaches may be used in order to prevent or reverse sexual difficulties. A multidimensional and flexible approach is needed, as a component of the overall treatment plan.



Psychotic disorders in old age

Anastasia Konsta

Assistant Professor of Psychiatry and Psychogeriatrics, First Psychiatric Department, Aristotle University of Thessaloniki, Papageorgiou General Hospital, Greece

Psychoses that have a first onset in late life may be classified into Late Onset Schizophrenia (onset after forty years of age) and Very Late Onset Schizophrenia- like psychosis (onset after age sixty). There is a strong predominance of females, suggesting vulnerability in women for first onset of a psychotic illness in late life. Late onset schizophrenia is marked by higher rates of delusional symptoms and lower rates of negative symptoms. Very Late Onset Schizophrenia-like psychosis is a heterogeneous entity with varied etiology. Cognitive impairment is part of the clinical characteristics in early and late onset schizophrenia. Atypical antipsychotics are the drugs of choice. Psychosocial treatments have an important place as an adjunctive treatment for older adults with psychotic disorders.

20.30-21.15 **LECTURE**

Chairperson: **Konstantinos G. Fokas** (Greece)

Association between variation in the GABAergic receptors, stress and multiple endophenotypes of suicide: New targets for intervention?

Xenia Gonda

Clinical Psychologist and Pharmacist, Associate Professor, Department of Clinical and Theoretical Mental Health, Semmelweis University, Budapest

Until recently the GABA system has been less investigated in association with suicidal behaviour, although newer genetic and postmortem studies report some but controversial associations. The GABA system, however, is associated with several important endophenotypes of suicidal behaviour, and understanding the role of GABAergic variation in these associated psychological phenomena and symptoms may help identify newer targets for identifying those at risk, as well as for screening and intervention. The presentation will discuss the latest results concerning the role of the GABA system in suicide as well as our novel results in a large European sample concerning association of a GABAA receptor variant and multiple converging suicidal endophenotypes, thus drawing us closer to outlining a complex model for the role of the GABAergic system in suicidal behaviour.

Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

Saturday June 30th 2018

08.00-09.15 **SYMPOSIUM**
BIOMARKERS AND ENDOPHENOTYPES IN PSYCHOSIS
Chairperson: **Erguvan Tugba Ozel-Kizil** (Turkey)

The endophenotype and biomarker concepts in affective and non-affective psychoses. Social cognitive dysfunction as an endophenotype in psychoses

Erguvan Tugba Ozel-Kizil

Professor of Psychiatry, Department of Psychiatry, Ankara University School of Medicine, Turkey

Social cognition can be defined as the ability to make sense of other people's behaviours through understanding their thoughts and intentions, to foresee their behaviours and to interact with complex social environments. Social cognitive dysfunction is one of the core deficits in psychotic disorders and attenuated forms of these deficits are also observed in healthy relatives of the patients. There are several measures of social cognition like the theory of mind, social perception, social knowledge, attributional bias and emotional processing. Although there are methodological problems, previous meta-analytic studies point out to a medium-high effect size for emotion recognition and theory of mind deficits in schizophrenia (Chan et.al. 2010, Kohler et. al., 2009; Sprong et. al. 2007, Bora et. al. 2009). In this presentation, mainly theory of mind deficits in both affective and non-affective psychoses will be addressed in the light of the current literature and the studies of the presenter.

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Can facial expressions have endophenotypic aspects in psychotic patients

Burçin Çolak

Psychiatrist, Department of Psychiatry, Ankara University School of Medicine, Turkey

Searching for biomarkers is a hot topic for researchers when the heterogeneity of clinical presentations of psychotic disorders are considered. From an evolutionary and ethological point of view, non-verbal behaviors and affective states of psychotic patients should further be explored.

Facial expressions can be important for non-verbal behaviors and affective states in psychosis. Plenty of evidence suggest that schizophrenia show characteristic facial activities, such as reduced levels of facial expressivity compared with healthy controls in reaction to emotional stimuli, during social interactions, and/or as a result of the effects of medication.

Evidence suggest that simple categorisations of facial expressions are vague. Disorders which have some common pathways such as obsessive compulsive disorder and schizophrenia can have similar result on facial expression. Physiological or neural data seems to have more predictive value for categorisation in psychosis compared with autonomic responses or facial expressions. However, computational psychiatry with its machine learning approaches can have some promising values for psychotic patients when assessing facial expressions may be combined with some other autonomic parameters. Combining facial expression tools such as facial action coding systems(FACS) with machine learning approaches can be helpful when assessing facial expression in psychotic patients. In this presentation, facial expression and its methodological considerations will be addressed for further research inquiry of the presenter.

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Biochemical biomarkers in psychoses

Gamze Erzin

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There are several definitions of “biological markers” or “biomarkers” in the literature. The National Institutes of Health (NIH) Biomarkers Definitions Working Group, which was constituted

in 1998, published the following definition of biomarker in 2001: “a characteristic that is objectively measured and evaluated as an indicator of normal biological processes, pathogenic processes, or pharmacologic responses to a therapeutic intervention” [1]. The economic investments and academic efforts were highly focused on the identification of valuable biomarkers for the most health impacting medical conditions due to the fact that biomarkers can play a crucial role in allowing and improving drug development progression [2]. Various studies have been published in recent years that claim the finding of a particular biomarker for the identification of the “high-risk state” to develop psychosis, first psychotic episode, as well as the prognosis of the individual response to antipsychotics [3]. In this presentation, we discuss peripheral biochemical markers that have potential role in development of psychosis and treatment of its symptoms in consideration of the literature.

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Functional near infrared spectroscopy (fNIRS) as a potential biomarker in psychoses

Berker Duman

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Previous studies on first-episode psychosis and ultra-high risk for psychosis have suggested that neurobiological alterations emerge even before the onset of psychosis. Structural neuroimaging studies have well established the neuroanatomical changes such as ventricular enlargement, decrease in gray mater, white matter and brain volumes. Functional neuroimaging studies revealed alterations both in default mode networks and task related networks in schizophrenia. Functional neuroimaging techniques are promising for identification of biomarkers for the diagnosis and treatment of schizophrenia. Functional Near Infrared Spectroscopy (fNIRS) is a novel optical neuromonitoring method with its own advantages and limitations. fNIRS system is small, simple, portable, safe. It has very good temporal resolution. In comparison to fMRI it has poor spatial resolution and also fNIRS can measure brain activity of only superficial cortex. However, fNIRS can measure relative concentrations of Hb levels not the absolute values. fNIRS researchers of psychosis focused on hemodynamic changes primarily in prefrontal cortex and temporal lobe during neurocognitive tasks. In this presentation, fNIRS which is a novel neuroimaging tool will be discussed in psychosis research as a potential biomarker with findings from our laboratory and literature.

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09.15-10.00 LECTURE

Chairperson: **Ioannis Nimatoudis** (Greece)

Telepathy: Science fiction or scientific reality? Can emotional connectedness be identified using advanced neuroimaging techniques?

Efstathios P. Efstathopoulos

Professor of Medical and Radiation Physics, Head of Medical Physics Unit, 2nd Department of Radiology, "Attikon" University Hospital in Medical School, National and Kapodistrian University of Athens (NKUA), Greece

Emotional connectedness, shared empathy, and physiological reaction in genetically related individuals have been reported in the literature. Efforts have been made to explain this phenomenon with reference to several hypotheses, including genetic kinship, social bonding, and quantum entanglement.

The aim of our case study was to investigate possible emotional connectedness between monozygotic twins by means of functional brain activity.

We included two healthy male monozygotic twins of 15 years old who claimed some kind of specific abilities including emotional connectedness. Twin2 was underwent MRI using a T2* gradient echo planar imaging sequence, while twin1 participated in an experimental setup

which included visual and acoustic conditions, without MRI. Both conditions provoked intense emotions in predetermined periods in Twin 1, while Twin2 was calm in MRI suite. None of them knew anything about the scope of the procedure. Functional MRI data processing was carried out using FEAT (fMRI Expert Analysis Tool), part of FSL. We found increased activation in left orbitofrontal gyrus (visual condition) and left cingulum and left precentral gyrus (acoustic condition) in Twin2.

We replicate brain anatomical areas that have been activated in other studies that examined emotional connectedness between physically and sensory isolated subjects who do or do not share the same genetical background.

In conclusion, our findings show emotional connectedness between a pair of monozygotic twins using fMRI. We acknowledge that our findings cannot be directly generalized due to the inclusion of a single pair of twins. Thus, further studies are needed to investigate if this is a generalized and systematic phenomenon or a random finding.

10.00-10.45 **LECTURE**

Chairperson: **Vlasios Brakoulias** (Australia)

Critical appraisal of psychotherapies in meta-analyses of RCTs for anxiety-related disorders

Elena Dragioti

Psychologist PhD, Senior Lecturer, Department of Medical and Health Sciences, Linköping University, Sweden

Objective: To map and evaluate the evidence across meta-analyses of randomised controlled trials (RCTs) of psychotherapies for anxiety-related disorders outcomes.

Methods: We identified 51 eligible meta-analyses, including 63 associations that synthesized data from 1415 RCTs via a systematic search from inception to December 2016 in the PubMed, PsycINFO, and Cochrane Database of Systematic Reviews. We calculated summary effects using random-effects models and we assessed between-study heterogeneity. We estimated whether large studies had significantly more conservative results compared to smaller studies (small-study effects) and whether the observed positive studies were more than expected by chance. Finally, we assessed the credibility of the evidence using several criteria.

Results: Fifty-three (84%) associations were significant at p -value ≤ 0.05 and almost all ($n=52$) favored psychotherapy. Large and very large heterogeneity was observed in 37 (59%) associations. Evidence for small-study effects was found in 20 (32%) associations, while 28 (44%) associations had evidence of excess of significant findings. Only 7 (0.1%) associations provided convincing evidence that psychotherapy is effective. These pertained to cognitive behavioral therapy ($n=5$), meditation therapy ($n=1$), and eye movement desensitization and reprocessing ($n=1$).

Conclusions: While almost 84% associations of anxiety-related disorders outcomes reported a nominally statistically significant finding favoring psychotherapy, only a few meta-analyses provided convincing evidence without biases.

10.45-12.00 **SYMPOSIUM**
TRANSLATING EVIDENCE TO CLINICAL PRACTICE IN OBSESSIVE - COMPULSIVE DISORDER (OCD)
Chairperson: **Vlasios Brakoulias** (Australia)

Pharmacological and psychotherapeutic interventions in the management of OCD in adults: Is there evidence of differential efficacy?

Petros Skapinakis

Assistant Professor of Psychiatry, School of Medicine, University of Ioannina, Greece

Background: The aim of the present session will be to summarize the results of the published systematic reviews/meta-analyses of the randomized controlled trials that have investigated the differential effectiveness of pharmacological and psychotherapeutic interventions for the treatment of obsessive compulsive disorder (OCD) in adults.

Methods: Medline, Cochrane database, and the register of controlled trials maintained by the Cochrane Collaboration Depression, Anxiety & Neurosis Group (CCDAN) will be searched for relevant systematic reviews and/or meta-analyses.

Results: Meta-analyses of Randomized Controlled Trials (RCTs) have confirmed the efficacy of clomipramine and six SSRIs (fluvoxamine, fluoxetine, paroxetine, sertraline, citalopram and escitalopram) and three types of psychotherapeutic interventions based on cognitive or cognitive-behavioural principles (cognitive therapy, Cognitive Behavioural Therapy, exposure and response prevention). There is also positive evidence for some SNRIs (Venlafaxine). Several other antidepressants and psychotherapeutic interventions have been tried but the evidence supporting their use is not convincing. A previously reported finding that clomipramine was superior to other serotonergic medications has not been confirmed from a recently conducted network meta-analysis. Efficacy of psychotherapeutic interventions has been reported as superior compared to drug interventions both in traditional and network meta-analyses. Severe limitations however exist in the design of such trials that may have resulted in an overestimation of their effect size. The most important limitation is that most psychotherapeutic interventions have been tried in patients who were on stable doses of serotonergic antidepressants.

Conclusions: Given the current evidence it is difficult to establish a clear hierarchy of efficacy between psychotherapeutic and pharmacological interventions in the management of OCD in adults. Although there is a general consensus that psychotherapeutic interventions are more efficacious, the majority of the studies were not designed to test this specific hypothesis and future studies should try to address this issue more explicitly.

Family accommodation in youth obsessive compulsive disorder

Konstantinos Kotsis

Psychiatrist, Greek National Health System, General Hospital's Child and Adolescent Psychiatry Department, Greece

Background: Obsessive compulsive disorder (OCD) is a highly impairing disorder affecting 1-2% of youth, with impairment referring not only to youths but also to their families. Evidence suggests that despite the efficacy of the available treatments (CBT, SSRI's) up to 40% of cases do not meet recovery criteria, with family accommodation being one of the factors that might impact the course of the disorder. Family accommodation refers to the modifications that a family member makes to its own behavior in order to help a relative to overcome distress related to OCD symptoms.

Objectives: To review the literature in relation to family accommodation for youth with OCD.

Methods: Narrative literature review.

Results: Studies have shown that up to 90% of parents, report accommodation and the majority of them accommodate to some extent almost every day. The most common forms of accommodation in youth OCD are reassurance and awaiting completion of rituals. Moreover, the majority of studies revealed significant correlation between family accommodation and OCD symptom severity as well as negative correlation with children's and family's functioning.

Conclusions: In clinical practice, it is useful to evaluate and measure family accommodation as it seems that can influence outcome. Finally, Randomized Controlled Trials studying interventions which focus on family accommodation should be designed in order to determine their efficacy.

Management of OCD in youth

Emmanouil Tsalamaniotis

Child and Adolescent Psychiatrist, Assistant Clinical Director, Greek National Health System, Asklepieio General Hospital, Child and Adolescent Psychiatry Department, Greece

Background: Obsessive-compulsive disorder (OCD) is not rare in youth and epidemiological studies reveal a lifetime prevalence of up to 2.9%. In many cases OCD disrupts severely the social and school functioning causing significant disability. Therefore, early effective management can lead to greater treatment gains and return to normal functioning.

Objectives: To present an overview of evidence based management strategies for youth with OCD.

Methods: A literature review will be presented with reference to clinical practice.

Results: The most widely studied treatments are Cognitive Behavioral Therapy (CBT) and medi-

cations. CBT is considered as the first line treatment for most children and adolescents with exposure and response prevention as the most systematically studied with various response rates across studies. As far as medications are concerned, studies have shown that up to 50% of drug-naïve patients will experience a reduction of up to 40% severity in symptoms. All SSRI's have comparable response rates with clomipramine being superior, but taking into account its side effect profile, it is not considered as first line treatment. However, up to 50% of OCD patients will not respond to SSRI's. Because polypharmacy is better to be avoided, especially in young children, it is important to try different agents before augmentation. Augmentation with atypical antipsychotics remains controversial as well as other strategies including novel agents such as N-acetylcysteine or glutamate modulators. Moreover, day treatment or hospitalization may be beneficial in special circumstances such as safety concerns.

Conclusions: Despite the range of effective treatments available, when working with youth the physician's therapeutic relationship and the therapeutic alliance with the parents is considered the first step for successful management.

Examining the role of repetitive transcranial magnetic stimulation (RTMS) for the treatment of obsessive-compulsive disorder (OCD) - A meta-analysis

Vlasios Brakoulias¹, Simone Rehn^{1,2}

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²Research Assistant, Australia

Background: There have been several randomised controlled trials attempting to determine whether repetitive transcranial magnetic stimulation (rTMS) can help treat OCD. Some have reported that rTMS is effective, whereas others have not.

Objectives: To present and discuss a meta-analysis of randomized controlled trials to date with regards to the treatment of OCD with rTMS with a specific aim of attempting to determine the factors that may be associated with a positive treatment response.

Methods: After a systematic literature review, results of treatment trials using rTMS for OCD were subjected to meta-analysis. In order to determine specific factors that may have influenced success rates, studies were analysed according to high or low frequency rTMS, anatomical sites of stimulation and length of follow-up.

Results: There have been 18 randomised controlled trials attempting to determine whether repetitive transcranial stimulation (rTMS) can help treat OCD. Overall, they showed a modest effect in reducing Y-BOCS scores with an odd ratio of treatment response of 0.23 (95%CI=0.12-0.43, $p<0.001$). Low frequency (<1Hz) rTMS appeared more effective than high frequency (>5Hz) rTMS. Stimulation of the supplementary motor area appeared more effective than stimulation over the dorsolateral prefrontal cortex. Results were better at three months follow-up than at 4 weeks follow-up. There was no publication bias.

Conclusions: The use of rTMS as an adjunctive treatment for OCD requires further investigation with this meta-analysis indicating that the low frequency rTMS and stimulation of the supplementary motor area might be more effective strategies. The study also suggests that a longer follow up period, e.g. three months after treatment might be better for patients with OCD.

12.15-13.30 **SYMPOSIUM**

PROMISING BIOMARKERS FOR INTRODUCTION INTO PSYCHIATRIC PRACTICE

Chairperson: **Angelos Halaris (USA)**

C-reactive protein: Are we ready to accept it as a diagnostic marker of inflammation in psychiatric disorders?

Danika Prochaska¹, Angelos Halaris²

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²*Professor of Psychiatry, Chairman of the Department of Psychiatry, Loyola University, Stritch School of Medicine, Chicago, USA*

According to the National Institute of Mental Health, in 2012 16 million United States adults experienced an episode of depression. Major Depressive Disorder (MDD) is one of the most prevalent psychiatric conditions and is associated with some of the highest levels of morbidity and mortality in mood disorders. From causation to treatment, research has sought to identify the mediators involved in MDD. Recently, our understanding of MDD has expanded to include the relationship between inflammation and depression. Inflammatory biomarkers, such as cytokines and C-Reactive Protein (hsCRP), have been shown to be elevated in MDD patients. This link between inflammation and MDD raises questions about causation as well as long-term consequences, notably atherosclerosis and cardiovascular disease. If compounds, such as hsCRP, can be proven to be specific and valid biomarkers of MDD, then new avenues for diagnosis and treatment that uniquely target inflammation hold great promise. hsCRP is a member of the pentraxin protein family, a group of acute phase reactants involved in immune response. hsCRP is a short-chain pentraxin produced in the liver and upregulated by cytokines during early inflammation. In contrast to hsCRP, Pentraxin 3 (PTX-3) is the only identified long-chain pentraxin and it is produced locally by neutrophils and macrophages. While there is extensive literature on the role of hsCRP in MDD, there is little information on the potential role of PTX-3 in MDD. The objective of this study was to assess whether PTX-3 is significantly elevated in patients with MDD and whether this inflammatory biomarker changes with antidepressant treatment. We measured PTX-3 levels in MDD patients and compared it to age/sex-matched healthy controls at baseline, as well as at specific intervals throughout treatment. Additionally, we assessed whether PTX-3 levels were correlated with hsCRP, which has previously been shown to be elevated in MDD.

Modulation of the inflammatory response exerts beneficial effects on anger in treatment-resistant bipolar depression

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Emotions motivate behavior and have a profound impact on health and psychological well-being. It therefore seems essential to explore and evaluate a person's emotions when diagnosing and treating patients. Anger is an intense emotional response that can be linked to pain and depression. Anger can worsen a person's emotional state and increase the severity of an individual's mood state, notably depression. Anger plays a prominent role in major depression, bipolar disorder and suicidality. The State-Trait Anger Expression Inventory (STAXI) assessment tool has proved useful for assessing the experience, expression, and control of anger in normal individuals, and in evaluating anger experienced by patients with a variety of psychological and medical disorders. Scientific evidence supports the hypothesis that immune system activation, reflected in its inflammatory response, contributes to the pathophysiology and phenomenology of bipolar disorder (BD). However, there is limited research showing a correlation between the treatment of BD utilizing anti-inflammatory approaches and its concurrent effects on anger, which prompted this investigation. This study introduced the idea of using a specific anti-inflammatory agent, celecoxib (CBX), along with escitalopram (ESC), a selective serotonin reuptake inhibitor (SSRI) to treat patients suffering from bipolar depression that were shown to be treatment resistant. We hypothesized that combination treatment would lead to a qualitatively and quantitatively augmented response in alleviating bipolar depression and that it would not only result in greater number of responders and remitters compared to ESC monotherapy, but it would also show a reduction of anger symptoms as assessed by STAXI from beginning to end of treatment. Anger paralleled the subjects' depressive symptoms from the start to the end of treatment. The addition of CBX helped reduce state anger by the end of treatment. There was no difference in trait anger for either treatment responders or non-responders. A positive strong correlation by the end of treatment suggested that when the subjects' depression lessened in severity, so did their anger.



Low cardiac vagal tone via frequency analysis of heart rate variability differentiates bipolar from major depression

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Major depressive disorder (MDD) and depression in bipolar disorder (BDD) generally have similar phenomenologies outside a manic episode and this leads to frequent misdiagnoses. Autonomic nervous system (ANS) dysregulation is associated with various depressive symptoms and inflammatory response disinhibition. The beat-to-beat pattern of heart rate (Heart Rate Variability, also known as HRV) provides a noninvasive portal to ANS function and has been proposed as a reliable index of resting cardiac vagal tone. Changes in inflammatory biomarkers may indicate inflammatory response disinhibition influenced by vagal mechanisms. We quantified HRV and measured inflammatory biomarkers in MDD and BDD patients in an effort to derive potential diagnostic criteria for MDD and BDD. Sixty-four MDD and thirty-seven BDD patients were enrolled. HRV was assessed and blood was drawn at baseline after washout of antidepressant medication and prior to initiation of study medication. MDD subjects had significantly higher baseline RSA ($p=0.05$) and LF-HRV ($p<0.01$) in comparison to BDD subjects. In comparison to MDD subjects, BDD subjects had significantly higher baseline levels of IL-10 ($p<0.01$) and MCP-1 ($p<0.01$). In the MDD group only, baseline LF-HRV was significantly positively correlated to baseline levels of IL-10 ($r=0.47$, $p<0.01$). We conclude that reduced vagal tone and higher levels of inflammatory biomarkers may distinguish BDD from MDD and reveal an underlying pathophysiology of depressive illness involving ANS dysfunction and immune response with associated chronic pro-inflammatory status.

Stratification and outcome prediction of depressed patients using panels of inflammation and kynurenine biomarkers

Angelos Halaris

Professor of Psychiatry, Chairman of the Department of Psychiatry, Loyola University, Stritch School of Medicine, Chicago, USA

Depressive disorders are highly heterogeneous disorders. This heterogeneity contributes greatly to diagnostic inaccuracies, a very low percentage of remitters after the initial antidepressant drug trial, and poor predictability of suicidality, treatment response and requirement for prolonged maintenance treatment. Males and females (20-65 years of age) meeting DSM-IV criteria for primary major depressive disorder (MDD) and were physically healthy were considered. Thirty patients met inclusion criteria and were enrolled. After baseline assessments they were started on escitalopram on an open label basis. Healthy control subjects were enrolled throughout the period the MDD subjects were recruited. Rating scales were used to assess depression,

state and trait anxiety, state and trait anger, stress perception, somatosensory amplification, quality of life. Inflammation biomarkers and growth factors were measured by “Evidence Investigator™” (Randox Technologies). Pentraxin-3 and hsCRP were measured by ELISA. Tryptophan and kynurenines were measured by HPLC. Quinolinic acid was analyzed using GCMS. SPSS version 20 was used for the analyses. Distributions for all biomarkers were analyzed for normality, skewedness, kurtosis, and homoscedasticity of the residuals prior to analysis. Biomarkers found to have skewed distributions were analyzed through non-parametric methods. We observed correlations between specific symptoms of MDD and some of the biomarkers studied. Depressed mood correlated significantly with IFN γ while weight loss correlated significantly with TNF α levels. QUIN correlated significantly with guilt and QUIN/3HK correlated significantly with guilt and psychomotor agitation. Pentaxin-3 correlated with anxiety. VEGF and hsCRP predicted treatment outcome. To our knowledge, this is the first report that in MDD patients correlations are observed between specific depressive symptom scores and inflammation, growth factors and kynurenine metabolites. These results once confirmed in a larger cohort can lead to patient stratification and predict treatment outcome.

13.30-14.15 **SATELLITE LECTURE**
Chairperson: **Ioannis Nimatoudis** (Greece)

Successful treatment: Locking neurobiological targets for the treatment of depression with trazodone

Konstantinos N. Fountoulakis

Professor of Psychiatry, Aristotle University of Thessaloniki, Greece

Chair of the 2nd International Congress on Evidence Based Mental Health

Depression is a highly devastating mental disorder associated with significant disability. Its neurobiological etiopathogenesis remains elusive but it has been established that treatment with antidepressants is efficacious in the alleviation of depressive symptoms. The problem is that according to the data the overall efficacy of treatment is lower than anticipated and better approaches are needed. Although our neurobiological understanding is limited it has been proven that serotonin activity is absolutely necessary for the treatment effect of all the agents currently in use. Trazodone is a Serotonin Antagonist-Reuptake Inhibitor (SARI) with high and proven efficacy (SMD=0.35) and a favorable side-effects profile especially concerning the lack of sexual dysfunction and normalization of sleep. Recently it has been embodied in the ‘Contramid’ vehicle which allows administration once per day.

Sponsored by  ANGELINI

14.30-15.00 **LECTURE**

Chairperson: **Konstantinos N. Fountoulakis** (Greece)

The Social Solidarity has person: “Health for All”

Eleni Sotiropoulou

President of volunteer program of “Health for All”, Greece

In a period of profound economic crisis, unemployment and social exclusion, the shift to methods and practices focused on the citizen, substantiated by research and international knowledge and corresponding to the preferences, desires and needs of the patients, is as imperative as ever.

In addition, the harmonious and effective function of multicultural societies, as is today the Greek society due to the large wave of incoming refugees and immigrants, are directly linked to the state’s readiness to ensure the equal treatment and protection of the members of all cultural groups, to provide equal opportunities and access to education, health and the labor market and to encourage them to participate actively in the economic, social and cultural life of the land.

The aim of the “Health for All” Action Plan is to increase the complementarity of relevant actions in the context of social solidarity, by ensuring all the necessary synergies with relevant bodies, by respecting the intercultural diversity, the views, preferences and desires of the recipients of the actions for vulnerable population groups, and also by maximizing the effectiveness of the interventions concerned, to the benefit of those in need.

These vulnerable population groups (the Roma, the residents of the highlands of Thrace / Pomaks, the underprivileged, the prisoners, the refugees) face cumulative problems of integration into the social and economic fabric of the country, as well as access to health and social care services. Any interventions aimed at removing these problems and at the equal participation of these groups of people should be focused on informing, assessing their health needs, medical care, rehabilitation and support, as well as on orienting them towards the health system’s services and social care.

It is well known that in modern societies, the phenomenon of social exclusion and marginalization threatens very large sections of the population. At the heart of this threat are, inter alia, the above-mentioned social groups. The rapid pace of social change as well as the economic crisis makes these population groups particularly vulnerable.

This particular project presents widespread social benefits at a low cost: it lies at the core of prevention policies, addresses the medical-social issue and saves resources for the Health and Social Care System, resources that, in another case, would have to be spent in multiple sums, in order to pay for hospitalization.

Within the framework of the action an integrated program of Primary Health Care is developed, which includes:

*Clinical pediatric examination, vaccinations and dental check-up for children, Gynecological examination: mammography - Pap test, adult clinical examination (pathological - endocrinological - cardiological examination, using a portable ultrasound machine for echocardiography).
*Recording of incidents that require immediate secondary care - their forwarding to Health Units.
* Creation of a computer database, recording info and vaccinations on a computer health card.
* Creation of a computer database for scientific data, based on the open data principle.
It is supported by a mobile gynecological unit, with a built-in mammogram, and transvaginal ultrasound

The program is under the auspices of

*** The UNESCO chair for adolescent medicine and health**
*** The National & Kapodistrian University of Athens and its dean Mr. A. Dimopoulos, who participates in the Central Scientific Committee of the program**

Support is also provided by:

- * The Ministry of Health
- * The Ministry of Labor, Social Insurance and Social Solidarity
- * The Central Health Council (KESY)
- * The National Committee on Vaccination
- * The Scientific bodies

15.00-15.45 **LECTURE**

Chairperson: **Angelos Halaris (USA)**

The role and practical application of pharmacogenomic testing in outpatient psychiatric and collaborative primary care settings

Katherine B. Johnson¹, Robert B. Miller²

¹Assistant Professor, Department of Psychiatry, Loyola University Health System, USA

²Associate Professor, Practicing Family Medicine physician, Loyola University Medical Center, Chicago, IL, USA

Pharmacogenomic testing is an innovative and highly promising tool for managing pharmacotherapy in the US. It is currently employed in multiple disciplines such as Oncology, Hematology, Pain Management, and Psychiatry. This test has the potential to be a particularly useful tool when choosing psychiatric medications. We often struggle with the “trial and error” of choosing the most appropriate pharmacotherapeutic agent for our patients, as our medication arsenal is mostly pluripotent. We know that genetics and epigenetics play a role in these illnesses as well as in medication responsiveness, but we also know that trauma, environment, and even individual experiences of a stimulus can cause differences across individuals at a neurochemical and neuroanatomical level, rendering medication response difficult to predict. What works well in one patient may work very differently in another, and medications within the same class can have very different efficacy and side effect profiles within the same patient. One tool for help-

ing to streamline and personalize this process is to employ pharmacogenomic testing. In this lecture, we will discuss the commercially available testing (with a focus on the combinatorial pharmacogenomic testing utilized by our institution). We will discuss the available data validating this tool and briefly discuss the process for generating the individual data. We will discuss the role of this test in clinical practice, with particular focus on the practicalities of use in an outpatient setting. We will also extensively discuss the limitations of this testing and the context in which it is best utilized. Additionally, as the majority of patients with mental health complaints present to primary care physicians initially, and as the US moves towards a more integrated and collaborative model of care between psychiatric specialists and primary care providers, we will discuss the role of this testing in a primary care setting and in a collaborative model. We will discuss utilization data gathered at our institution as well as the experience we have had of integrating this testing into the Family Medicine practice.

15.45-16.30 **LECTURE**

Chairperson: **Loukas Athanasiadis** (Greece)

Effect of comorbid diseases on cognitive decline & dementia prevention

Istvan J.E. Boksay

Clinical Professor of Psychiatry, Geriatric Psychiatrist, NYU, USA

Patients with mild to moderate dementia progress to end stage dementia faster if they have more medical conditions (MCs) at their baseline evaluation than those who have less MCs. Other recent studies have noted that cognitive function of elderly people with subjective cognitive impairment (SCI) is 5 times more likely to further decline than those without SCI.

Our aim was to determine 1) whether the prevalence of medical comorbidities contribute to more rapid decline in cognitive functioning and 2) whether the prevalence of medical conditions and the use of medications are different in patients with and without SCI.

Our preliminary evaluation shows that medical conditions markedly influence the decline of cognitive functioning even in the elderly with normal baseline cognitive function and elderly with SCI have significantly more MCs and take more medications than those without SCI.



16.30-17.15 **LECTURE**

Chairperson: **Ioannis Diakogiannis** (Greece)

Esketamine in rapid response and long-term treatment of resistant depression

Siegfried Kasper

Professor and Chair, Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Clinical trials demonstrated that ketamine exhibits rapid antidepressant efficacy when administered in subanesthetic dosages. We reviewed currently available literature investigating efficacy, response rates and safety profile.

Twelve clinical trials investigating unipolar depressed patients were included after systematic literature search. Additionally literature in bipolar patients was reviewed.

Antidepressant response rates on primary outcome measures after 24 hours were 61% (average). The average reduction of Hamilton Depression Rating Scale (HDRS) was 10.9 points, Beck Depression Inventory (BDI) 15.7 points and Montgomery-Asberg Depression Rating Scale (MADRS) 20.8 points. Ketamine was always superior to placebo. Most common side effects were dizziness, blurred vision, restlessness, nausea/vomiting and headache, which were all reversible. Relapse rates ranged between 60% and 92%. Based on these findings, a consent-form for clinical application and modification in local language is included as supplementary material.

Ketamine constitutes a novel, rapid and efficacious treatment option for patients suffering from treatment resistant depression and exhibits a rapid and significant anti-suicidal effect. New administration routes might serve as alternative to intravenous regimes for potential usage in outpatient settings. However, limited duration of treatment response with high relapse rates within the first month after treatment demand for developments to prolong ketamine's efficacy.

17.15-18.30 **SYMPOSIUM**

MIXED DEPRESSION RATING SCALE: A NEW TOOL FOR AN OLD CLINICAL DILEMMA

Chairpersons: **Giovanni Manfredi** (Italy), **Gloria Angeletti** (Italy)

Agitated/Mixed depression: The clinical controversy

Gabriele Sani

Associate Professor of Psychiatry, School of Medicine and Psychology of Sapienza University, Department of Neurosciences, Mental Health, and Sensory Functions (NESMOS) and Vice Director of the Psychiatry Residency Training Program, Rome, Italy

Many authors clearly described mixed states well before Kraepelin. Kraepelin conceptualized and described mixed states in a systematic way. In conceiving the manic-depressive mixed



states, Kraepelin started from the excitement or depression of the three domains of psychic life: the intellect (train of thought rather than its contents), mood, and volition, expressed in psychomotor activity. He made them the cornerstone of the manic-depressive entity.

Interest in mixed states was waning by the 1920s. The American Psychiatry Association, through the DSM system, placed the mixed states in a peripheral position. Now the DSM-5 proposed the “mixed features” which could be applied either to major depressive disorder or bipolar disorder. This is certainly a good position. The problem is that the so called overlapping symptoms, i.e. those symptoms that can be present both in depressive and (hypo)manic episodes, are, by definition, excluded from the mixed features.

In recent years, a growing number of psychiatrists have expressed disenchantment with the official view. In fact, symptoms like psychic and motor agitation, racing or crowded thoughts, irritability or unprovoked feelings of rage, talkativeness, mood lability and insomnia are clearly symptoms of nervous excitability and they constitute the essence of the mixed affective episode. Their exclusion, based on a theoretical choice and not on clear clinical evidence, makes the diagnosis of these patients difficult leading the clinicians to inadequate treatments.

The adverse response of these states to antidepressant drugs, above all the increase of agitation and of suicidality, makes a clear distinction between simple and mixed depression necessary and urgent. The suicidality induced by antidepressants is related to manifest or latent agitation. Latent agitated depression will be introduced. In mixed depression, treatment should initiate with anti-psychotics, anti-epileptics, lithium and benzodiazepines and when agitation has subsided, and if simple depression persists, antidepressants may be used cautiously. Electroconvulsive therapy is very effective throughout the course of agitated depression.

In our clinical practice, we have seen the 3rd and 4th criteria (namely, more talkative than usual or pressure to keep talking, and flight of ideas or subjective experience that thoughts are racing) frequently in mixed depression, but the other five criteria are extremely rare, if ever present.

On this topic of mixed features, DSM-5 is taking the psychiatric world down a path of less and less scientific evidence, and in this paper, we plan to show how this is the case, and how wrong the above definition is, and how harmful it will be to those unfortunate people who suffer from the mixed depression that DSMs III through 5 have refused to see.

KMDRS: A new tool for an old syndrome

Alexia Koukopoulos

Psychiatrist, Center for Prevention and Treatment of Women’s Mental Disorders, Sant’Andrea Hospital of Rome, Italy

Background: It has been proposed that the broad major depressive disorder (MDD) construct is heterogenous. Koukopoulos has provided diagnostic criteria for an important subtype within that construct, “mixed depression” (MxD), which encompasses clinical pictures characterized by marked psychomotor or inner excitation and rage/anger, along with severe depression. This

study provides psychometric validation for the first rating scale specifically designed to assess MxD, the Koukopoulos Mixed Depression Rating Scale (KMDRS).

Methods: 350 patients from the international mood network (IMN) completed three rating scales: the KMDRS, Montgomery-Asberg Depression Rating Scale (MADRS) and Young Mania Rating Scale (YMRS). KMDRS' psychometric properties assessed included Cronbach's alpha, inter-rater reliability, factor analysis, predictive validity, and Receiver Operator Curve analysis.

Results: Internal consistency (Cronbach's alpha= 0.76; 95% CI 0.57, 0.94) and interrater reliability ($\kappa = 0.73$) were adequate. Confirmatory factor analysis identified 2 components: anger and psychomotor excitation (80% of total variance). Good predictive validity was seen (C-statistic = 0.82). Severity cut-off scores identified were as follows: no (0-4), possible (5-9), mild (10-15), moderate (16-20) and severe (> 21) MxD.

KMDRS and the assessment of the postpartum depression

Lavinia De Chiara

Resident Psychiatrist, School of Medicine and Psychology, Sapienza University, Sant'Andrea Hospital, Rome, Italy

Most of the studies about mood disorders during perinatal period have focused almost exclusively on typical depression. Less attention has been paid to the mixed symptoms. There is a significant subpopulation of patients in pregnancy and postpartum with depressive symptoms who has been classified as non responder to first-line antidepressant treatments. They get nervous, irritable, demanding, with psychic agitation and racing thoughts. When these symptoms are misdiagnosed, treatment will probably not be optimal for that woman with possible severe consequences. Many studies in the literature now confirm that the use of antidepressants in this population could result in an emergence of manic or mixed symptoms and a higher risk of suicide.

The diagnostic evaluation of women with perinatal depression should include questions on mixed symptoms. Recognition and clinical diagnosis of perinatal mixed depression is an important prerequisite to offer them adequate treatment.

In our Center for Prevention and Treatment of Women's Mental Health at Sant'Andrea Hospital of Rome we carried out a perinatal evaluation for psychiatric disorders that included the whole mood disorders spectrum. From our results we found that in late pregnancy and early postpartum period often the excitatory symptoms present together with depressive symptoms and can create a mixed clinical picture characterized mainly by mood lability and irritability which can be accompanied by depressed or hypomanic mood or the alternation of the two. We used the Koukopoulos Mixed Depression Rating Scale" (KMDRS) to detect patients with perinatal Mixed Depression. We found the Koukopoulos Mixed Depression Rating Scale a very helpful tool among our perinatal women to detect mixed depressions and better address management decisions.

18.45-19.30 **LECTURE**

Chairperson: **Ioannis Nimatoudis** (Greece)

What can we learn from a naturalistic long-term study on depression

Hans-Jürgen Möller

Emeritus Professor of Psychiatry, Ludwig-Maximilians University, Munich, Germany

A naturalistic multicentre-study on 1014 major depressive episode (according to ICD -10) patients with a follow-up period of 4 years was performed as part of the German Research Network on Depression. The patients were treated according to the international guidelines, especially the WFSBP guidelines on depression. A large battery of observer and self-rating scales was applied. Some main results will be presented.

The patients were moderately or severely depressed at hospital admission. Most patients, a high percentage were characterized by psychiatric comorbidities, had already outpatient treated without sufficient success. About 50 % of all patients achieved remission, about 70% response at discharge. In the following years, during which the patients were treated predominantly as outpatients, the primary remission/non-remission rates were not stable, but in each follow-up year there were dynamic developments from remission to not remission and vice versa. A relevant sub-group fulfilled the criteria of a chronic depression in the sense of DSM-5. Predictors of short term and long-term improvement will be presented.

19.30-20.30 **EXCHANGE OF VIEWS**

PRO AND CON OF USEFULNESS OF ANTIPSYCHOTIC TREATMENT IN SCHIZOPHRENIA: EXCHANGE OF VIEWS

Chairpersons: **Venetsanos Mavreas** (Greece), **Ioannis Nimatoudis** (Greece)

Konstantinos N. Fountoulakis¹, Nikolaos Stefanis²

¹Professor of Psychiatry, Aristotle University of Thessaloniki, Greece

Chair of the 2nd International Congress on Evidence Based Mental Health

²Professor of Psychiatry, National and Kapodistrian University of Athens Medical School (NK-UAMS) and Vice-Director of the University Mental Health Research Institute in Greece

During the last few years there is an ongoing debate on the usefulness and the best way antipsychotics should be used for the treatment of patients with schizophrenia. Opinions vary from total rejection of antipsychotics as a treatment option to more classical approaches which consider continuous administration of antipsychotics to be the cornerstone of treatment. The issue is complicated by diverse theories on the etiopathogenesis of schizophrenia and other psychotic disorders. During the session there will be a comprehensive review of the relevant literature as well as an exchange of views on the issue. Arguments pro and con various specific questions will be expressed and discussed.

20.30-21.15 **LECTURE**

Chairpersons: **Konstantinos N. Fountoulakis** (Greece),
Constantinos Soldatos (Greece)

The biologic basis of stress and its management

George P. Chrousos

Professor of Pediatrics and Endocrinology, Chairman of the First Department of Pediatrics, National and Kapodistrian University, Athens School of Medicine, Athens, Greece

Stress is defined as the disturbance in the “dynamic balance” or “homeostasis” of a complex system, such as the human organism or society, “stressor” as the force that produces this disturbance, and “adaptive response” as the forces from within the complex system that strive to return homeostasis to normal. In the case of the human organism, the adaptive response is subserved by a specialized system in our brain and body, the “Stress System”, which is activated to help us deal with stress when a stressor of any kind exceeds a certain threshold.

In itself, stress that is dealt with efficiently by the adaptive response of a system is neutral or even potentially beneficial to that system, be that an organism or a society. In contrast, the dynamic state in which the adaptive response fails to fully reestablish homeostasis during stress, i.e., “dyshomeostasis”, or more correctly “cacostasis”, may have detrimental effects on the system. In human beings, the crucial beneficial hormones that are activated to reestablish homeostasis, the “homeostatic or stress mediators”, including corticotropin-releasing hormone (CRH), adrenaline, noradrenaline, cortisol and the inflammatory mediator interleukin-6, are also, paradoxically, responsible to a great extent for the damage the organism sustains when in cacostasis. These mediators may impair the physiology of our cells, disturb their metabolic activity, increase their inflammatory response and stimulate their oxidative functions, all potentially damaging changes, causing psychosomatic problems, including the common «medically unexplainable symptoms» (MUS), anxiety, depression, obesity, dysmetabolic changes all the way to metabolic syndrome, and osteoporosis, promoting atherosclerosis and cardiovascular disease and increasing the chance of the organism to be infected by certain microbes or get several types of cancer.

At this time, and despite the stupendous advances in hygiene and medicine, we believe that over 50 percent of the human disease burden is due to social inequality and chronic socio-economic distress, a result -to a great extent- of the ever increasing complexity and alienation in the modern world. We should note that the effects of prolonged distress go well beyond the causation of the chronic noncommunicable diseases mentioned above. Prolonged human cacostasis disturbs normal growth and development, causes emotional deprivation, upsets sleep, destroys family and social life, increases criminal behavior, multiplies violent accidents, and stimulates the abuse of and dependence on substances. Chronic distress also accelerates aging, reflected in decreasing chromosomal telomere length, increases frailty, and curtails healthy life expectancy.

Today, the presence of stress and cacostasis in an individual can be evaluated and graded. There are rational and proven methods to prevent and ameliorate distress that start from changes in lifestyle and using appropriate stress management methods, to cognitive and behavioral therapies, even to the use of appropriate medications. These medications function primarily by blocking stress and inflammatory mediators. The key issue is that nature is not destiny and psychological and somatic resilience to stress (hyperstasis) is attainable if we really strive for it.

Sunday, July 1st 2018

09.00-09.45 **SYMPOSIUM**
EVIDENCE BASED PSYCHIATRY AND SUBSTANCE USE DISORDERS
Chairperson: **Charalampos Touloumis** (Greece)

Cannabis use disorder: In search of evidence-based treatment guidelines

Konstantinos Rantis

Consultant Psychiatrist, Hellenic Armed Forces, Medical Corps (rank: Major), Psychiatric Clinic, Substance Abuse Department, 424 Military Hospital Greece

According to the World Health Association (WHO), cannabis is the most widely cultivated, trafficked and abused illicit drug, with an annual prevalence of 2.5% of world population consuming cannabis. Rates are higher in young people, with 15.2% of population aged 15-24 years in Europe having used any form of cannabis in the last year. Cannabis Use Disorder (CUD) is estimated to affect 1-2% of adults in the past year, while the lifetime prevalence is 4-8%.

Treatment of CUD includes management of acute intoxication, withdrawal and relapse prevention. Anxiolytics, antidepressants, antipsychotics, mood stabilizers, N-acetyl-cysteine, cannabinoid agonists and opioid antagonists have been studied, with some encouraging, yet inconclusive results. Evidence and levels of recommendation of these options are low. There are, however, reviewing articles in existing literature, suggesting psychopharmaceutical and/or psychotherapeutic treatment options.

In this presentation, we are reporting data from recent publications on CUD treatment.

Alcohol use and abuse: From social stigma to evidence based psychiatric practice

Panagiotis Panagiotidis

Postdoctoral Research Fellow in Psychiatry, 3rd Psychiatric Dept. University Hospital AHEPA, Thessaloniki, Greece

Remarkable progress has been made in the treatment of alcohol use disorders (AUDs) over the past 40 years. We have a better understanding of the natural history of heavy drinking and the development of dependence. We understand better the course of recovery and the risk factors and prognostic indicators for AUDs. Most importantly, we have made significant strides in the behavioral and pharmacological treatments available to people, and their families, who suffer from alcoholism. Research has been instrumental in advancing treatment, moving our understanding from anecdotal approaches to those that are based firmly on evidence, and from the moral model of disease to the biopsychosocial model of integrated treatment approach.

09.45-11.00 **SYMPOSIUM**
**EVIDENCE-BASED COMMUNITY PSYCHIATRY INTERVENTIONS: THE
PARADIGM OF SOCIAL COOPERATIVES OF LIMITED LIABILITY**
Chairperson: **Anastasia Konsta** (Greece)

The psychiatric reform in primary care: The impact of Social Cooperative of Limited Liability Imathias “Desmos”

Ilias Grammatikopoulos

Consultant Psychiatrist in Primary Health Care (PEDY), Greece

The socio-economic reintegration and vocational rehabilitation of mentally ill people, is the basic aim of the Social Cooperatives of Limited Liability, contributing in this way to their therapy and to the greatest possible extent to their economic self-sufficiency. In the era of economic crisis and memorandums, the psychiatric reform stayed behind once more and all the efforts of primary care reform haven't taken into account that the most vulnerable people reflecting the socio-economic crisis and poverty affected the most. Mental health prevention strategies should have been integrated in primary care, therefore, the role and the impact of SCoLL reflecting the need of primary care interventions promoting initiatives that take into account both therapeutical aspects and development of skills, should be in the first line of mental health policy. The development and modernization of mental health services, nowadays is mostly expressed in primary care by an SCoLL. In particular the paradigm of “Desmos” in Imathia, tries to establish a social cooperative in the community, as a social enterprise that provides the opportunity for their members to regain respect, to reduce stigma, to acquire “unused” skills and to gain new ones through on-the-job training in a “protective” environment. Promoting partnership relations between health stakeholders and facilitating a “bottom-up” approach, could ensure the viability of a SCoLL in this difficult economic environment, and place the social capital development in the frontline of the psychiatric reform in primary care.

Evidence-based community interventions: Myth or reality?

Sotirios Koupidis

Occupational Doctor, Greece

Background: Social Cooperatives of Limited liability (SCoLL) have been legislated by the 2716/99 Law, during which period, Greece experiences a concerted effort of Psychiatric Reform through the reconstruction of the provided mental health services. SCoLLs aim to represent and coordinate the social-economic and vocational integration for people with severe psychosocial problems. They also offer a supported employment environment, which has very important benefits in the rehabilitation process. Working in SCoLLs seems to offer positive effects regarding the development of people with mental health issues.

Objectives: The aim of the present study is to highlight the effect that work placement, as a community intervention, has on people with serious psychosocial problems. More specifically,

we examined the correlation between employment in SCoLLs and the effect it may have on important factors in the rehabilitation process, as well as overall mental well-being. Moreover, based on the indicator of reduction in need for mental health services (i.e. hospitalization), Mental Health well-being was improved.

Methods: In this quantitative research, the population group studied was 37 people with serious psychosocial problems that were employed for the Social Cooperative of Limited Liability of Corfu “New Horizons”. We studied four indicators:

- Total days of hospitalization
- Total days of involuntary hospitalization
- Number of hospitalizations
- Number of involuntary hospitalization
-

The study period of the above indices is twelve (12) years in total and is divided into six (6) years prior to the date of recruitment of each individual and six (6) years after the recruitment to the SCoLL of Corfu “New Horizons”

Results: For all the indicators studied, there was a significant reduction. More specifically, the differences between the six-year period before the beginning of work and the six-year period during which the participants worked in the framework of supported employment in the SCoLL of Corfu are as follows:

- Total days of hospitalization (-79.36%)
- Total days of involuntary hospitalization (-67%)
- Number of hospitalizations (-41.7%)
- Number of involuntary hospitalizations (-51.1%)

Conclusions: The Supported Employment model through SCoLL seems to help people with serious psychosocial problems to choose, acquire and maintain a job. The above model, which is supported by mental health professionals, proves a reduction in relapses and total days of hospitalization. In addition to the beneficial impact of work through SCoLLs to the person themselves and their families, there is also a significant decrease in demand for mental health services within psychiatric clinics.

Furthermore, we can support that there is a lower burden on prisons and judicial services because there is a significant reduction in involuntary hospitalizations. Finally, the employment of people with mental health problems through SCoLLs has led to increased employment rates, income, and a raise in insurance and tax contributions that demonstrate the positive effect of vocational interventions.

Management or social coherence is the best practice for evidence-based mental health interventions for SCOLL?

Maria Dimopoulou

Nurse, Head of Public Health Sector, General Hospital of Corfu, Greece

Introduction: The concept of Social Entrepreneurship is very popular in recent years as it is a serious effort to build a “Business Culture” with emphasis on Social Efficiency and less on Profitability. The organization and Management of a social enterprise, as a set of processes that ensure a group of people their organizational and social cohesion and their desired orientation towards a predetermined goal, are understood as an applied science and universal (ledger) phenomenon. They include functions such as activity planning, success of pursuits, proper use of resources and control of results. At the same time, Social Entrepreneurship presents a remarkable Social and Therapeutic Effect, measurable in a sense by the results of the implementation of Supported Employment.

Purpose: The purpose of the paper is to provide a critical analysis of social entrepreneurship and its social and therapeutic impact. Through the formulation of the individual and group objectives of a Social Cooperative, the conscious structure of roles and relationships and the satisfaction of the needs of the people who make it, their voluntary participation is ensured. Then, with the use of adequate and sufficient knowledge and experience, the presentation of the coordination of Business Practice with Therapeutic Optics is presented.

Methodology: Study and depiction of the Organizational Structure of the Social Cooperative and the Main Operations of Management, while recording the results of evaluations, both of the Satisfaction of human Resources and of the Employment Model by means of support and job-positioning services, for the acquisition and maintenance Employee (Individual Placement and Support (IPS) Service).

Results: The business and productive activities of the Social Cooperative are based on documented modern forms of organization and administration

1. design, implementation and operation of the production process (92 employees - 10 branches - 1 million euro turnover per year)
2. risk managing
3. undertaking entrepreneurship and exploiting technology (standardized recruitment procedures - employee support - development projects - social solidarity networks)
4. amortization and repayment of investment capital
5. safeguarding safety, quality and sustainable development.

The development of human capital through social cohesion is based on documented mental health interventions through analysis of indicators

1) motivation / satisfaction of employees

research to 19 employees

(good working conditions / 80%, good earnings / 67%, labor significance 84%, respect / 81%, good human relations / 82%, estimate / 70%, pride / 83%)

2) comparative assessment (start time - 6 months after)

research to 29 employees

a) days of relapse (start time 29/after 6 months 18),

b) counseling in hours (starting time 54/after 6 months 31)

c) days of absence from work for health reasons (start time 22/after 6 months 9)

Conclusions: Social Entrepreneurship is considered to be a critical parameter and good practice in tackling serious social problems such as inequality of access to the labor for people with severe psychosocial problems. By analyzing the two dimensions of the term, the 'Business Dimension', is a modern production model to combat unemployment and poverty and a functional component of the Economy. The "Social Dimension" defines the social orientation of the business with the emphasis on finding new opportunities of social value and a structural component of new innovative and bold projects that strengthen social structures and social cohesion.

Keywords: Social Entrepreneurship, Social Cohesion, Management, SCoLL

Social entrepreneurship and school meals. The case of Kavala, Greece

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A significant proportion of Europe's economy make profits for people other than investors or proprietors. This type of economy, known as "Social Economy", includes cooperatives, mutual societies, non-profit associations, foundations and social enterprises. Their main objective is to have a social, socio-economic or environmental impact for the general interest.

The Social Cooperative of Limited Liability of Kavala (KOI.S.P.E. Kavalas) was established in 2011 as a part of the Psychiatric Unit of the Kavala General Hospital, under the Greek Legislation prepared by the Ministries of Health, Labour, Social Security and Solidarity.

Food and good food practices basic needs of life. They are connected with our survival, our beliefs, our health, our impact on the natural world and they are an important facet of education. So, one of the projects completed during 2017 by KOI.S.P.E. Kavalas, was a crowdfunding pilot project, under the title: "School Meals in Primary Education". KOI.S.P.E. Kavalas prepared and served more than 1.100 fresh meals of Mediterranean diet every school day, for all the students, in nine primary schools at the Regional Unit of Kavala.

This study focuses: a) to find out if the school meals affect students food behavior and health; b) to examine how school meals affect Teaching and School Administration; c) to discuss how school meals correlate with classroom cohesion and culture and d) to discuss how school meals contribute to Local Economy. At the end of that project, positive results related to Educational Politics and Policy were noticed. We, also, conclude that free school meals programmes should continue and expand to more schools in the country, as part of the Social Economy Sector, and that further research in various aspects of this field is required.

11.00-12.15 **SYMPOSIUM**
**THE IMPORTANCE OF FUNCTIONING IN MAJOR PSYCHIATRIC DISORDERS:
SCHIZOPHRENIA, BIPOLAR DISORDER, MAJOR DEPRESSION, SUBSTANCE ABUSE**
Chairpersons: **Ioannis Nimatoudis** (Greece), **Petros Fotiadis** (Greece)

Schizophrenia

Petros Fotiadis

Consultant with the rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece

Schizophrenia is a severe mental disorder ranking among the top 20 leading causes of disability. Although the outcome of schizophrenia is not always as poor as believed in the past, functional recovery is observed in less than 15% of patients.

An impairment of real-life social functioning has widely been reported in patients with schizophrenia, even when clinical remission has been achieved. Negative symptoms, cognitive deficits and impairment of social cognition are the disease-related variables mainly associated to poor functional outcome.

Treatment goals of patients with schizophrenia have recently been raised - improvement and maintenance of functionality is nowadays in focus, in line with relapse prevention and long term symptom control.

There are evidence to support that social functioning can predict long-term outcomes in patients with schizophrenia.

Cognitive factors and functioning are at the top reasons for hospitalisation.

The impact of duration of untreated psychosis is more obvious on functioning. Integrated care, psychoeducation, provide additional benefits compared with medication alone.

Enhanced understanding of factors that hinder real-life functioning of people with schizophrenia is instrumental to design integrated and personalized treatment plans.

Bipolar disorder

Konstantinos Rantis

Consultant Psychiatrist, Hellenic Armed Forces, Medical Corps (rank: Major), Psychiatric Clinic, Substance Abuse Department, 424 Military Hospital Greece

Bipolar Disorder is among the 10 leading causes of disability worldwide. Furthermore a lot of patients report lower quality of life and general everyday functioning compared to the general

population, even when not in a mood episode, while low quality of life and functioning have been associated with increased inter-episode impulsivity, cognitive impairment, residual depressive and psychotic symptoms.

Clinicians, quite often tend to concentrate on recognizing the signs and treating the symptoms of mental disorders, overlooking the importance of functioning.

In this presentation, we will report data from functioning studies in patients with Bipolar Disorder, during episodes of mood disorder, or between episodes, as well as in relation to neurocognitive decline in chronic patients, and psychopharmaceutical treatment, underlining the need for the clinician's target to include, not only full symptom remission, but also the reinstatement of everyday functioning to as high levels as possible.

Major depression

Anestis Ramnalis

Consultant at the rank of Major, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece

Functional impairment contributes to significant disability and economic burden in major depressive disorder (MDD). Treatment response is measured by improvement in depressive symptoms, but functional improvement often lags behind symptomatic improvement. Residual deficits are associated with relapse of depressive symptoms.

Moreover depression is associated with social risk factors, social impairments and poor social functioning. We discuss the diagnostic specificity of these social deficit constructs for depression and in relation to depression severity.

At last we discuss about the relationship of cognitive impairment and persistent mood symptoms.

Substance abuse

Panagiotis Panagiotidis

Postdoctoral Research Fellow in Psychiatry, 3rd Psychiatric Dept. University Hospital AHEPA, Thessaloniki, Greece

Paradoxically, modern psychiatry has paid little attention to functioning and disability relative to other medical disciplines. On the other hand, psychiatric disability has historically been considered separate from the broader disability field and it has been measured differently than in other medical conditions. Substance use disorders (SUD) significantly impair individuals' physical health, mental health, occupational engagement and economic security, and social relationships, in addition to impacting those close to them and their communities, and these consequences often require years of assistance and treatment. If SUD are expected to be re-oc-

curing, the success of SUD treatment cannot be judged solely on abstinence from substances and the cessation of physiological symptoms, but also on improvements in health, functioning, social inclusion, and quality of life, all of which are impacted by cycles of substance use.

12.15-13.30 **SYMPOSIUM**

PSYCHIATRY, TECHNOLOGIES AND SOCIAL MEDIA: CHALLENGES AND PERSPECTIVES

Chairpersons: **Charalampos Touloumis** (Greece),
Achilleas Oikonomou (Greece)

How technology affects the human brain: Neurobiological data from recent studies

Dimitra Gorgoli

Consultant Psychiatrist, General Hospital of Nea Ionia “Konstantopouleio”, Greece

Recent neurobiological and neurophysiological studies have shown that there are certain prefrontal executive control functions, that are related to certain symptoms of the so called, Internet addiction. These studies have also revealed great similarities between “internet” regions and brain circuits that invoke problematic behavior in substance-related addiction/ pathological gambling.

Consequently, one of the most interesting questions raised, is whether these addiction-related areas, had this particular structure before or after the internet/gambling/substance abuse. Does the brain change over time, so that it learns to react to Internet/ gambling/substance, in a specific way and how do these brain reactions determine the loss of control over internet abuse?

What is found on these “internet brains”, is an overall change in the dopaminergic reward system, by frontal-guided changes of glutaminergic innervation of the nucleus accumbens and the related brain areas (Kalivas and Volkow, 2005). More specifically, the nucleus accumbens and some parts of the dorsal striatum, along with limbic and para-limbic regions (e.g., the orbitofrontal cortex), learn to habitually react on drug cues with craving (Bechara, 2005; Goldstein et al., 2009).

We conclude that prefrontal control processes are reduced in individuals who are addicted to the Internet and may be related to the patients’ loss of control over their Internet use. However, more studies on different types of Internet addiction (i.g. gaming, pornography, etc) are needed, in order to better understand common and specific neuropsychological and neural correlates of Internet addiction.



The beneficial effect of technology on psychiatric practice

Sokratis Karaoulanis

Consultant Psychiatrist, Psychiatric Clinic, University Hospital of Larissa, Greece

Background: Internet, mobile-based interventions and virtual reality provide a unique opportunity to deliver cost-effective, accessible, time-unlimited support to people with mental health problems. It is important to review the literature concerning this new field of practicing psychiatry.

Methods: Systematic review of peer-reviewed studies examining the usability, acceptability, feasibility, safety or efficacy of Internet or mobile-based interventions on people with psychiatric problems.

Results: New technology devices are becoming increasingly common among the adult population and have tremendous potential to advance clinical care. Technological applications have the potential to enhance clinical care at stages of treatment-from engaging patients in clinical care to facilitating adherence to practices and in maintaining treatment gains. Many psychiatric disorders like depression with or without suicidal ideation, bipolar disorder, substance use disorders and psychotic disorders are benefited from these methods. Virtual reality is one of the newest applications. It is used widely in anxiety disorders, like phobias and posttraumatic stress disorder, with promising results. Recently, it is used in psychosis as well.

Conclusions: Technology can be used in order to help other domains of science, like medicine. Psychiatry has the opportunity to treat many disorders in a better and easier way due to technology. But, the gold standard in psychiatry is the relationship between the patient and the therapist, which will never be substituted by technological devices.

Technology and Psychiatry: Negative aspects of a flourishing relationship

Panagiotis Malliaris

Clinical Psychiatrist, Head psychiatrist, 5th Department, Private Psychiatric Clinic "Ippokrateio Therapeutirio", Larissa, Greece

The incorporation of new technological application in all medical fields is a universal phenomenon that also affects Psychiatry. The use of online or mobile psychometric instruments, smartphone applications for depression management or smoking cessation, technologically advanced medication, like long acting injected antipsychotics, or even new forms of psychotherapy, like distance therapy or counseling, via Internet or mobile phone ("e-therapy") or virtually reality based therapy, are the new psychiatric trends.

Despite the undeniable progress in disease prevention, objectification of diagnosis and treatment options, technology does seem potentially dangerous or even harmful, under certain circumstances. Nevertheless, technology and especially internet, has already transformed the model of medical practice, since the easy access and abundance of the available, yet uncon-

firmed and unreliable information, has resulted in a transition from an 'informed patient' care to a 'patient (mis-)informed' care.

The aim of this presentation is to illuminate the "dark side" of technological aspects, concerning the clinical psychiatric practice and the negative consequences of this relationship, through the review of relevant research articles. In addition, we try to categorize the alternative novel presentations of psychopathological symptoms and their implications in the internet-context digital world of social media. Final attempt of our presentation is to familiarize the medical community with new forms of technologically related psychopathology, like on-line paraphilias, the proposed in DSM 5 Internet Gaming Disorder, or even cultural syndromes, like Hikikomori syndrome in Japan.

Psychiatry and social media: Open discussion

Achilleas Oikonomou

Psychiatrist-Psychotherapist, Greece

The connection between medicine and social media comprises a current and burning issue that is of interest for the medical community. These media such as facebook, instagram, twitter, etc. have offered new dimensions to the communication among doctors, patients and society. In the field of psychiatry the reality seems to be complicated and a lot of questions may arise concerning the safe and appropriate use of the social media. This presentation will try to investigate the views of psychiatrists regarding the social media and how these have affected their profession. The questions will be posed during the presentation to the participants with the aid of a suitable application.



E-POSTERS

P001 Improving the uptake of systematic reviews: a systematic review of intervention effectiveness and relevance

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Background: Little is known about the barriers, facilitators and interventions that impact on systematic review uptake. The objective of this study was to identify how uptake of systematic reviews can be improved across all medical disciplines including psychiatry.

Materials and methods: Studies were included if they addressed interventions enhancing the uptake of systematic reviews. Reports in any language were included. All decisionmakers were eligible. Studies could be randomised trials, cluster-randomised trials, controlled-clinical trials and before-and-after studies. We searched 19 databases including PubMed, EMBASE and The Cochrane Library, covering the full range of publication years from inception to December 2010. Two reviewers independently extracted data and assessed quality according to the Effective Practice and Organisation of Care criteria.

Results: 10 studies from 11 countries, containing 12 interventions met our criteria. Settings included a hospital, a government department and a medical school. Doctors, nurses, mid-wives, patients and programme managers were targeted. Six of the studies were geared to improving knowledge and attitudes while four targeted clinical practice. Three studies of low-to-moderate risk of bias, identified interventions that showed a statistically significant improvement: educational visits, short summaries of systematic reviews and targeted messaging. Promising interventions include e-learning, computer-based learning, inactive workshops, use of knowledge brokers and an e-registry of reviews. Juxtaposing barriers and facilitators alongside the identified interventions, it was clear that the three effective approaches addressed a wide range of barriers and facilitators.

Conclusions: Targeted messaging, educational visits and summaries are recommended to enhance systematic review uptake. Identified promising approaches need to be developed further. New strategies are required to encompass neglected barriers and facilitators. This review addressed effectiveness and also appropriateness of knowledge uptake strategies.

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P002 Personality traits and neurophysiological correlates affect gambling behavior in Parkinson's Disease

Michela Balconi, Laura Angioletti

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Background: Pathological Gambling (PG) in Parkinson's Disease (PD) manifests as a persistent gambling behavior, characterized by dysfunctional decision-making, emotional impairment and high-risk behaviors. The aim of this study the role of personality traits and prefrontal cortex activity in PD patients with or without PG.

Materials and methods: Hemodynamic cortical activity, measured by functional Near-Infrared Spectroscopy (fNIRS), and Iowa Gambling Task (IGT) performance were recorded in PD patients, divided into three groups according to their gambling status. The sample included PD patients, divided in three groups: PD patients with active gambling behavior (PDG); PD patients who remitted from PG (PDNG); and a control group (CG) composed by patients with PD only.

Results: Gambling behavior in PDG patients is strongly predictive of dysfunctional cognitive strategy; affecting anomalous cortical response with a left hemispheric unbalance in dorsal areas; and it is related to more reward sensitivity.

Conclusions: PDG patients differed from PDNG and CG from both behavioral and brain response to decision-making.

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P003 Development of psychiatric manifestations in Akt3-deficient mice

Guy Massicotte, Yan Bergeron, Eric Asselin, Michel Cyr

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Background: A family of serine/threonine kinases (protein kinase B (PKB/Akt)) has received extensive consideration in recent years for its possible involvement in psychiatric conditions. On that line, change in global Akt activity was documented after treatments with antidepressants, antipsychotics and mood stabilizers (1). So far, three distinctive isoforms of Akt were discovered in the brain (Akt1, Akt2 and Akt3) and, although Akt3 is the most expressed isoform, its role in cerebral functions is still unclear.

Materials and methods: In the present study, we investigated behavioral, electrophysiological (LTP) and biochemical consequences after genetic deletion of Akt3 in mice.

Results: Motor abilities, spatial navigation, recognition memory and LTP remain intact in the Akt3 knockout (KO) mice. However, the prepulse inhibition, three-chamber social, forced swim, tail suspension, open field, elevated plus maze and light-dark transition tests revealed an endophenotype reminiscent of psychiatric manifestations such as anxiety and depression. Biochemical investigations also revealed that Akt3 deletion was associated with reduced levels of phosphorylated glycogen synthase kinase-3 (GSK3) in several brain regions. Notably, chronic administration of lithium, a mood stabilizer, restored the decreased phosphorylated GSK3 levels and rescued the depressive and anxiety-like behaviors in the Akt3-deficient mice.

Conclusions: Collectively, our data suggest that Akt3 might be a critical molecule underlying psychiatric-related behaviors.

Acknowledgements: This work was partly supported by the Canadian Research Chair in Molecular Neuropharmacology (Michel Cyr).

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P004 Use of Clozapine for patients with Borderline Personality Disorder - review and clinical experience

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Background: The Borderline Personality Disorder is a mental disorder that can be very severe and affect the patient's affect, cognition and behavior among others. The guidelines focus on the psychosocial treatments whilst the use of medication is limited to certain symptoms and/or comorbidities.

Materials and methods: We reviewed two electronic data bases - Pubmed and GoogleScholar - using the key words "Clozapine" AND "borderline" OR "emotionally unstable". We also reviewed current patients on the Oswin Unit, a specialized forensic medium secure unit for personality disorders in the North East of England.

Results: We reviewed 20 papers on the topic. The lack of randomized clinical and meta-analyses was striking. The papers reported cases of patients with Borderline personality disorder for whom the use of Clozapine was beneficial. We found two adult male patients who are currently treated on the Oswin unit and they accept Clozapine for their Schizophrenic illness while they have also attracted diagnosis of borderline personality disorder. We compared their impulsivity, ability for emotional regulation and self-harming behaviours before and after the use of Clozapine, using their 3-monthly reports. On both occasions, the impulsivity and self-harming stopped, and the emotional regulation ability was improved.

Conclusions: The use of Clozapine for borderline Personality Disorders is not indicated yet and it is not usual practice to prescribe it for patients without a severe treatment-resistant schizophrenic practice. Randomised trials in the future will be needed to prove or not the positive effect as this is described in anecdotal reports.

P005 Improving the detection of depressive disorder in primary care in Sri Lanka: cross-sectional study of evaluating the efficacy of a two question screen for depression

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Background: Primary health services are often the first point of contact that patients with mental illness have with the healthcare system. A number of tools have been developed to increase detection of depression in primary care. However, the limited primary care consultation time-frame remains a challenge. Therefore, short questionnaires that are locally validated and equally effective as more comprehensive diagnostic tools may be beneficial in improving depression detection rates of patients in primary care settings.

Materials and methods: This was a cross-sectional study involving two steps. Step one: verbal administration of 2-QQ to patients by their primary care physician. Step two: completion of the PDS, a locally validated diagnostic tool for depression, by the patient after their consultation with the primary care physician. The results from the PDS were then correlated to the results from the 2-QQ for each patient to determine sensitivity and specificity of the 2-QQ.

Results: A score of 1/+ on the 2-QQ was most sensitive but least specific. Thus, setting the threshold at this level is effective for correctly identifying depressed patients, but inaccurately captures patients who are not depressed. A score of 6 was most specific but least sensitive. Setting the threshold at this level is effective for correctly identifying patients without depression, but not effective at capturing all patients with depression.

Conclusions: It may be worthwhile setting the 2-QQ screen at a lower threshold (such as a score of 1 or above), to generate a high test sensitivity, as the benefits of identifying a depressed patient may outweigh the harms of a non-depressed patient yielding a positive score on the 2-QQ.

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P006 Coping with dyslexia: The benefits of inclusive psychopedagogical intervention. **Case report**

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Background: The policy of an inclusive society must respond responsibly to students with special learning difficulties and respond to the needs and learning particularities they have in the context of a psycho-pedagogical program that pushes the student into personal development after a successful learning process.

Materials and methods: In the present work the dyslexic pupil profile is presented and an attempt is made to outline the characteristic deficits of the student with dyslexia as well as the advantages he brings in specific areas. It then sets out how to deal with both school and family, to implement a model of inclusive society that equally addresses all its members and provides them with opportunities for a successful school and learning path.

Results: Despina is 10 years old and she is attending a middle school class at a school in her neighborhood. She is the second child of a single-parent family, an average socio-economic level. Her mother is a piano teacher in a conservatory and works for many hours at home outside the home. According to her social history, Despina has successfully conquered all stages of development. At her pre-school age she seemed to have only difficulty in orienting, bumping the colors, and the left hand with her right hand, however she showed superiority in practical intelligence and visual-kinetic coordination.

Conclusions: It is clear that for the successful development of the personality of children with dyslexia, a coordinated educational design is required from the school in co-operation with the child and his / her family and the educational and school community, with continuous and sustained feedback

P007 Comorbidity in men with alcohol dependence in Southern Bulgaria

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Background: Although comorbidity of mental and physical health disorders for alcohol dependence is widely known, the comorbidity profile of alcohol dependent men is not examined so far in detail. The aim of this study is to examine which are the most prevalent comorbidities in a sample of alcohol dependent men in Southern Bulgaria.

Materials and methods: Eighty-three men with a diagnosis of alcohol dependence (Mage= 46.36, SDage = 10.65; Myears of education= 13.72 SD years of education = 8.37; Myears of addiction= 15, SDyears of addiction = 4) were examined with the Bulgarian version of the Lesch Alcoholism Typology - Questionnaire (LAT), while data were collected for their physical and mental comorbidities during their examination and therapy sessions at the Municipal Council on Drug Addiction in Blagoevgrad.

Results: Descriptive statistics showed physical comorbidity of alcohol dependence with gastrointestinal diseases 46.98 % (N = 39), comorbidity of alcoholism and psychiatric disorders such as mood disorders 9.63 % (N = 8) and parallel other than alcohol substance abuse 10.84 % (N = 9). The rates of comorbidity (or dual diagnosis) when compared to data regarding women from the same geographical area is higher in men for physical diseases, but lower in men than in women for mood disorders and other substance abuse.

Conclusions: According to the above results, men with alcohol dependence do experience a wide variety of comorbid diseases, thus making the therapy process a complicated procedure.

P008 Which are the most frequent comorbidities of alcohol dependence in women in Southern Bulgaria?

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²Organisation Against Drugs, OKANA, Greece

Background: Although, the presence of one or more additional diseases or disorders are widely known for alcohol dependence, the comorbidity profile of alcohol dependent women is not examined so far in detail. The aim of this study is to examine which are the most prevalent comorbidities in a sample of alcohol dependent women in Southern Bulgaria.

Materials and methods: Fifty-three women with a diagnosis of alcohol dependence (M_{age}=43.84, SD_{age} = 9.48; M_{years of education}=15.11, SD_{years of education} = 3.21; M_{years of addiction}12, SD_{years of addiction} = 3.56) were examined with the Bulgarian version of the Lesch Alcoholism Typology - Questionnaire (LAT), while data were collected for their physical and mental comorbidities during their examination and therapy sessions at the Municipal Council on Drug Addiction in Blagoevgrad.

Results: Descriptive statistics showed physical comorbidity of alcohol dependence with gastrointestinal diseases 43.39% (N = 23), and comorbidity of alcoholism and psychiatric disorders such as mood disorders 15.09 % (N = 8) and parallel other than alcohol substance abuse 13.20 % (N = 7). The rates of comorbidity (or dual diagnosis) with affective disorders is much more common compared to the results in foreign studies or the comorbidity data regarding other diseases in women.

Conclusions: According to the above results, women with alcohol dependence have high rates of comorbidities and do experience a wide range of comorbid diseases, thus making the therapy process a complicated and multi-faceted procedure. Interestingly, alcohol dependence is more prevalent in anxious and/or depressed persons.

P009 Data Analysis of Gender Effect in Cognitive-Communication Performance of Typical Elder Adults

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Background: Gender differences in cognitive functions of healthy older adults have been studied widely in the past decades. Findings have shown that men, on average, outperform women at visuospatial tasks, whereas women have an advantage on verbal skills and episodic memory. Hence, the researchers focus on gender differences on the Mini-Mental State Examination (MMSE) test [1] that is widespread in research and clinical settings accounting for the cognitive impairment. The current study examines potential gender differences in the Greek versions of the MMSE, with the use of secondary data [2].

Materials and methods: Secondary data were utilized from a previous research conducted in Greece and examined gender differences in a group of healthy older adults (N = 60). The cognitive and language abilities of the participants were measured by a number of tests such as Arizona Battery of Communication Disorders (ABCD), Abbreviated Mental Test Score (AMTS), and Clock Drawing Test (CDT), with the focus being on the MMSE. Pearson's correlation coefficient and ANCOVA analyses were performed, and data were compared using independent samples t-tests.

Results: A series of analyses revealed a significant between-subjects effect of gender in the Greek versions of the Mini-Mental State Examination (MMSE), $F(1,56) = 6.81, p = 0.12$. At the same time, an independent-samples t-test comparison for MMSE was found to be statistically significant $t(58) = 2.96, p = .004$.

Conclusions: This study indicates that healthy females perform better on MMSE than healthy males. The cutoff points according to gender [2-4] must be taken into account during clinical daily practice.



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P010 Data Analysis of Gender Effect in Cognitive-Communication of Parkinson Disease Dementia Patients

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Background: Parkinson's disease dementia (PDD), a neurodegenerative motor disorder associated with cognitive decline, affects millions of individuals and can potentially have adverse effects on their families. With these numbers growing by the day, researchers have started to examine the role of gender on PDD, as it can potentially contribute to the early prognosis of the disease. This study examines the potential gender differences in the domain of language, with the focus being on the Arizona Battery for Communication Disorders of Dementia (ABCD).

Materials and methods: Secondary data used from a study conducted in Greece [1] and examined gender differences in a group of healthy older adults (N=60) and a group of individuals with Parkinson's disease dementia (PDD) (N=19). Both groups' cognitive and language abilities were measured by a series of tests such as: (i) Arizona Battery of Communication Disorders (ABCD), (ii) Abbreviated Mental Test Score (AMTS), and (iii) Clock Drawing Test (CDT). Pearson's correlation coefficient and repeated measures ANCOVA analyses were conducted, and data were compared using independent samples t-tests.

Results: A series of analyses revealed significant gender differences in the domain of language. Specifically, between-subjects' effects of gender, $F(1, 73) = 7.728, p = .007$, and an interaction effect between medical condition and gender, $F(1, 73) = 5.983, p = .017$ was identified. At the same time, an independent-samples t-test comparison for ABCD subscales was found not to be statistically significant between subgroups ($p < .05$).

Conclusions: Results indicate that sex influences on both groups' performance on ABCD subscales as in other questionnaires [2-4].

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P011 Comparison of Cognitive-Communication Between Alzheimer's and Parkinson's Disease Demented Patients based on Data analysis of Gender Differences

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Background: Alzheimer's disease (AD) is defined as a progressive neurodegenerative disease with the most prominent symptom being the deterioration of cognitive function. Similarly, Parkinson's disease dementia (PDD) might demonstrate identical patterns of cognitive impairment, resulting in the misdiagnosis of these patients leading to a subsequently rise of the healthcare cost for PDD patients. Thus, accounting for the influence of gender on PDD can potentially ameliorate such misdiagnoses. The aim of this study is to examine the potential for gender differences in the domain of language, using the Arizona Battery for Communication Disorders of Dementia (ABCD).

Materials and methods: Data from a previous study in Greece [1] that examined sex differences in a group of individuals with Alzheimer's disease (N=12) and a group of Parkinson's disease demented patients (N=18) were used. Both groups' cognitive and language abilities were measured by a series of tests: (i) ABCD, (ii) Abbreviated Mental Test Score (AMTS), and (iii) Clock Drawing Test (CDT). Pearson's correlation coefficient and repeated measures ANCOVA analyses were conducted. Data were compared using independent samples t-tests.

Results: Analyses revealed significant gender differences in the domain of language. Specifically, between-subjects' effects of gender, $F(1, 24) = 8.439$, $p = .008$, and an interaction effect between medical condition and gender, $F(1, 24) = 11.051$, $p = .017$ was found. At the same time, an independent-samples t-test comparison for ABCD subscales were found to be statistically significant.

Conclusions: Generally, PDD females perform better on ABCD subscales than AD males. The use of cognitive and language assessments could help minimizing misdiagnosis as in other studies reported [1,3-4].



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P012 Data Processing Validation of Predictive Cluttering Inventory through a Pilot Study in Typical Greek Population

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Background: Cluttering is a fluency disorder characterized by an abnormally rapid rate. Several studies about its diagnosis were conducted based on different processes, such as articulation's and phonological assessments and/or collection of spontaneous speech samples. Standardized diagnostic tools had not been proposed till Davis et al suggested the "Predictive Cluttering Inventory (PCI)" as a self-perceived questionnaire for adults. The purpose of this study is to validate PCI in typical Greek adult population.

Materials and methods: The translated version of PCI was administrated in 361 typical adults (180 male and 181 female) aged from 18 till 87 years of age (M=49.10, SD= 18.60). The questionnaire was adjusted to Greek language according to the minimum translation criteria.

Results: No statistical significant differences were observed between male and female on PCI's total score (U= 16264.500, NS) and its four domains. On the contrary, statistical significant differences was calculated for PCI total score for all age subgroups (H=58.692, p= .000). Furthermore, the averages scores of the younger aged subgroups had lower scores in comparison to the averages scores of older aged ones. PCI questionnaire had high internal consistency (Reliability Coefficients 33 items Alpha = .972).

Conclusions: PCI questionnaire appears to be proper for standardization to adults with cluttering in its current form. It also discriminated well how adults of all ages understood the characteristics of this fluency disorder. Further research must be conducted for processing more evidenced based data and clinical use as in other disorders [1-4] for mental health professionals.

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P013 Perceived Levels of Fluency, Statistically Analysed for Typical Male Adults Using Predictive Cluttering Inventory: A Pilot Study in Greek Population

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Background: Fluency disorders and its etiologies was always of interest by mental health professionals. Cluttering -as a fluency disorder- is a clinical condition that needs to be diagnosed accurately and extensively. Self-perceived questionnaires are a new trend in evidence based assessment, and gender is a factor that influences their results. Particularly, "Predictive Cluttering Inventory (PCI)" is a questionnaire that elicits information from adults with cluttering disorders. Purpose of the current study was to extract evidence based data from typical male population using PCI.

Materials and methods: The validated PCI (in Greek language) was administered to 180 typical Greek adult males aged from 18 to 86 (M= 49.12, SD= 18.514). Participants that met criterions such as psychiatric/neurogenic disorders or having been illiterate were excluded from this study.

Results: Statistical significant differences were observed between all age groups for PCI's total score [H(5) =21.299, p= .001] for male participants. Similarly, statistical significant differences were calculated between 70+ age subgroup and the rest age subgroups 18-30 (U= 193.000, p= .000), 30-40 (U= 230, p= .000), 40-50 (U= 321.000, p= .050), 50-60 (U= 305.000, p< .050) and 60-70 (U= 282.000, p< .050).

Conclusions: PCI showed a more precise typification about how men of all ages understand the characteristics of cluttering. It is worth mentioning that men in nearby ages did not have substantial differences which indicates that they conceive cluttering in a similar way. In conclusion, older men have a totally different perception about this fluency disorder compared to men of younger ages and this can be useful evidence data during diagnosis [1-4].

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P014 Perceived Levels of Fluency, Statistically Analysed for Typical Female Adults Using Predictive Data Processing of Cluttering Inventory: A Pilot Study in Greek Population

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Background: Fluency disorders affects 1% of the population and over 3 million people in the United States. Cluttering is a disorder characterized by a rapid rate of speech that may appear as non-proper erratic pronunciation. Many guidelines were suggested for the evaluation of cluttering to the literature and one diagnostic procedure is the use of self-perceived questionnaire's. A self-reported questionnaire for adults cluttering is the "Predictive Cluttering Inventory". The aim of this study was to obtain evident based information in typical female population about cluttering using PCI.

Materials and methods: The Greek version of PCI was fulfilled by 181 typical women. Participants that had a history of medical conditions or factors that affected the administration procedures were excluded. The sample had a mean age of $M= 49.09$ ($SD= 18.746$) and was split into 6 age subgroups (18-30 till 70plus).

Results: The study has shown statistically significant differences regarding all age groups for PCI's total score [$H(5) = 42.672$, $p= .000$]. Similarly, statistically significant differences were calculated between 18-30 age subgroup and all the other age spectrum: 30-40 ($U= 228.000$, $p= .001$), 40-50 ($U= 301.000$, $p< .050$), 50-60 ($U= 142.000$, $p= .000$), 60-70 ($U= 132.000$, $p= .000$) and 70plus ($U= 106.000$, $p= .000$). Differences were noticed also between some age groups.

Conclusions: Young female population differs to a great extent from the middle-aged and elderly women relevant to understanding cluttering and its characteristics as in other disorders [1-4]. In conclusion, women from and after the middle 30s seem to have a similar way to face cluttering and its characteristics.

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P015 Validation Data Processing of Premonitory Awareness in Stuttering Scale: A Pilot Study in Typical Greek Population

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Background: Anticipation of stuttering and its symptoms is a frequent but inadequately measured phenomenon of high importance in clinical evidence based practise. It is common in assessment procedure of stuttering - especially in kids- to use self-perceived questionnaires as in other disorders [1-4]. In the literature only one questionnaire is referred to adults' self-awareness of stuttering, that is the Premonitory Awareness in Stuttering Scale (PAiS). The purpose of this study was the validation of PAiS questionnaire for typical Greek population.

Materials and methods: A total of 862 adults (440 female-422 male) aged 18 to 85 years old (M= 46.67 SD= 18.69) were recruited. They were all administrated PAiS questionnaire (a 12-items questionnaire) in order to self-evaluate their fluency of speech. The questionnaire was translated and adapted to Greek language according to minimal translation criteria.

Results: Data analysis showed no statistical significant differences for PAiS total score between male and female participants (U= 89296.000, NS) and all age subgroups [H(5)= 7.792, NS]. Significant differences of Medians were observed between male and female in questions Q1: (U= 86753.000, p< .050), Q2: (87506.000, p< .050) and Q4: (U= 87071.000, p< .050). PAiS questionnaire had high internal consistency (Reliability Coefficients 12 items Alpha = .949).

Conclusions: PAiS exhibits the potentiality of quantifying the perceived level of a person's fluency abilities. PAiS can be used across all the adult lifespan as a premonitory awareness tool and give adequate data for evidence clinical practice. Furthermore, Greek version of PAiS sounds appropriate for use and it is suggested to be standardized for Greek reality.

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P016 Validation of Adult Self Report Scale for ADHD Through Data Analysis: A Pilot Study in Typical Greek Population

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Background: Attention Deficit & Hyperactivity Disorder (ADHD) is a mental disorder associated with inability to concentrate and perform certain execution functions. Its evaluation can be based in interdisciplinary methods by using multimodal analysis. Self-perceived questionnaires are one of the evaluation methods [1-4] which are gaining more evidence based data even for ADHD. Specifically, for ADHD Adult Self Report Scale (ASRS v-1.1) was developed by Schweitzer, et al. in 2001. The aim of this study was to evaluate ASRS v-1.1 in typical Greek adult population.

Materials and methods: In a total of 786 typical adults (392 male and 394 female) aged 18-92 (M= 49.49 SD= 18.586) was administered the translated (abiding by the minimal criteria of translations) in Greek language version of ASRS v-1.1., divided in 6 age subgroups. Participants with former psychiatric or medical condition, which could affect the recruitment procedure, did not included in this study.

Results: Statistical significant differences between all age subgroups were pinpointed for the questionnaire's total score [H(5)= 63.538, p= .000]. Likewise, a statistically great difference between the age sub-groups was observed in the average of the answers on every question apart from 5,13,16. Participant over 70 years of age had the worse scores. The questionnaire showed an adequately high point of reliability in its Greek translated edition (Reliability Coefficients 18 items, Alpha = .812).

Conclusions: The questionnaire can provide information about the self-perceived level of an adult regarding to the potential difficulties from ADHD. As a result, the questionnaire qualifies for standardization to Greek reality and adult population with ADHD.

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P017 Very long-term outcome of psychotic disorders in rural areas of Greece

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Background: Few studies have addressed the issue of very long-term outcome of community dwelling patients with schizophrenia and related psychoses [1, 2]. The objective of the present study was to measure the very long-term outcome in community dwelling patients with psychotic disorders in rural areas in Greece.

Materials and methods: This is a cross-sectional study. All patients with a diagnosis of psychotic disorder (F20-F29 according to ICD-10) and illness duration ≥ 15 years who were engaged to treatment with the Mobile Mental Health Unit of Ioannina and Thesprotia, northwest Greece were examined over a three-month period with the Greek version [3] of the Health of the Nation Outcome Scale (HoNOS) scale. Good outcome was defined as the scores in all of the HoNOS items were ≤ 2 .

Results: HoNOS scores were recorded for 55 patients, mostly men (72.7%), with a mean age of 59.1 years, and mean disease duration 32.1 years. One-fifth of the patients had a history of alcohol/substance abuse. The majority of patients (65.5%) were living with a caregiver, usually an elderly parent. The vast majority (89.1%) were receiving a disability pension. A total of 34.5% of the patients were rated as having a good outcome. Outcome was found not to be related to history of substance/alcohol abuse.

Conclusions: In our community based sample of treatment engaged patients with schizophrenia spectrum disorders very long-term outcome is fairly good for a significant proportion of patients. The possible impact of rural residency on very long term outcome has to be studied further.

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P018 Validating Swallowing Disturbance Questionnaire through Data Processing Procedures: A Pilot Study in Typical Greek and Greek-Cypriot Population

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Background: Sometimes the perception and ability such as eating and swallowing, may affect the differential diagnosis of mental illnesses. Thus, the existence of an easy and reliable self-perceived tool in Greek language is essential so that professionals can gather more info as that will facilitate the clinical process and possibly prevent future complications (e.g. in other illnesses) [1-2]. The purpose of this study was the pilot administration of a Swallowing Disturbance Questionnaire (SDQ) for the detection of swallowing abilities in accordance to gender and age.

Materials and methods: The translated Greek version of SDQ was administered in a total of 1137 healthy adults (543 men & 594 women) aged from 18 to over 70 years. The sample was recruited from Greece and Cyprus. Participants that met a history of gastrointestinal disease or other medical conditions that could affect the answers of the questionnaires did not included to the study.

Results: Non-significant differences were found between Swallowing Disturbance Questionnaire total score between males and females. On the contrary statistical significant differences were found in almost every question between all age groups ($p < .050$) except question 15. Group by group comparisons exhibited a match of scores between 18-30 & 70+ age groups in great number of questions. Cronbach alpha was found equal to 890.

Conclusions: It was observed that gender does not affect the respondents answers, while age seemed to be an important factor in an almost predictable way [3-4]. The unexpected finding was that in many questions young people (18-30 yrs) demonstrated as high scores as the age group of 70+ yrs [3-4]. Also, the high coherence and reliability of Swallowing Disturbance Questionnaire shows a potential dynamic for use by any health care professional if standardized.

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P019 Validation Data Analysis of Adults Reading Questionnaire: A Pilot Study in a Typical Greek Population

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Background: In literature, a number of self-perceived questionnaires were developed about different mental, medical and developmental disorders giving good evidence data about the self-awareness of a someone apprehending his/her current condition [1-4]. Same for reading abilities studies, self-reported questionnaires were developed such as Adults Reading Questionnaire (ARQ). Purpose of this study was to validate ARQ in greek language and to copy reading difficulties in adults' population.

Materials and methods: The Greek version of Adults Reading Questionnaire -a 15 item Likert scale- was administered to 619 typical literate adults (309 women and 310 men) aged 19 to 86 years old (M= 43.91, SD= 13.785), to self-evaluate their ability-level of reading. The questionnaire was translated according to the minimum translation criteria.

Results: Statistically significant differences among the various age groups were observed for ARQ's total score [H(5)= 27.414, p= .000] as well as in most of the questions. No significance was noticed between males and females but a slightly increased score in a few questions. Cronbach alpha was calculated at .723.

Conclusions: We concluded that age is an important factor in the formation of the scores and more specifically it seems that older individuals score a lot higher than younger ones probably due to fewer years of study compared to younger generations. Moreover, the questionnaire appears to be a coherent and reliable scale as this was evidenced. Furthermore, adults reading questionnaire sounds suitable for clinical use in typical population. Finally, adults reading questionnaire is suggested to be standardized to Greek reality in order to provide evidence based data in the near future.



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P020 Estimation Through Data Analysis of the Self-Perceived Levels Relevant to the Reading Abilities of Typical Greek Female Adults: Evidence Based Data Using Adults Reading Questionnaire

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Background: Reading abilities in women seem to alter as age progresses and as cultural framework changes. Estrogen related changes also appear to contribute in reading abilities. Moreover, research shows that illiteracy affects women more than men which results in literacy difficulties. However, it is important to determine how different ages perceive their reading abilities as such data can prove useful to clinicians. In this study, we attempted to create evidenced based data for the self-perceived levels of reading abilities for typical Greek women using Adults Reading Questionnaire.

Materials and methods: 308 typical female literate adults aged from 18 to 85 years old (M= 44.25, SD= 13.526) participated in this study. The sample's education varied in years. The validated Greek version of ARQ questionnaire was administered in order to self-evaluate their reading abilities.

Results: The study showed statistical significant discrepancies between age groups. Significant differences were reported for ARQ total score [H95) = 15.745, p<. 050] as well for specific questions [question1-question5, question10-question11 and question14 (p< .050)]. The worst scoring was observed for the age group of 70 plus.

Conclusions: The results exposed significant contributes of the age factor in the formation of the scores. As expected, older individuals scored higher than younger subjects in most of the questions as in other questionnaires [1-4]. From this, we can conclude that women of older ages face greater difficulties during reading, maybe due to natural aging or undetected disorders.

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P021 Estimation through data analysis of the Self-Perceived Levels relevant to the Reading Abilities of Typical Greek Male Adults: Evidence Based Data Using Adults Reading Questionnaire

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Background: Many problems arise for adults with literacy difficulties in the daily demanding environment. Those problems are probably the outcome of undetected and untreated literacy symptoms (as reading disabilities) at childhood. Recent findings suggest that such difficulties are more common amongst men than women. Considering the above, the purpose of this study was to record how typical male adults perceived their reading abilities using Adults Reading Questionnaire in order to create evidence based data for their population in Greece.

Materials and methods: The validated Greek version of Adult Reading Questionnaire was used for this study. It was administered to 310 typical literate Greek men of 18 to 84 years of age (M= 44.49, SD= 14.174). The sample was gathered from many regions of Greece while its years of educations varied.

Results: Statistical analysis pointed out significant differences between all age subgroups for ARQ's total score [$H(5) = 15.4382, p < .005$]. Particularly, statistical significant differences were uncovered in 8 out of 39 questions of ARQ checklist. Higher negative scores observed for the age group of over 70 years and the rest subgroups.

Conclusions: The effect of age might not be a significant parameter to be taken into account during self-assessment of speech abilities for typical females. Overall, the awareness of co-ordination difficulties seems to be present mostly as age progresses as in other researches [1-4], but more research is needed for different type of populations such as those of pathological type.

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P022 Using Data Analysis for the Estimation of the Self-Perceived Levels of Speech Coordination for Typical Greek Female Adults: Evidence Based Data for Adult Developmental Co-ordination Disorders/Dyspraxia Checklist

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Background: Coordination of speech musculature is strongly associated with neurological disorders also resulting from natural aging. Whichever is the cause, an important part of the assessment is the use of self-reported tools [1-4] to determine the patient's needs and requests. One is the Adult Developmental Co-ordination Disorders/Dyspraxia Checklist (ADC). Purpose of this study was to find how females perceived their co-ordination difficulties-abilities using ADC and how this perception differed through adult lifespan.

Materials and methods: The validated Greek version of ADC (a 39-items list) was used for this study. It was administered to 235 typical Greek females from 20 till 84 years of age (M= 49.43, SD= 17.800) to self-assess their motor functioning. The translation of the questionnaire was carried out in accordance with the minimum translation criteria.

Results: Statistical analysis revealed significant differences between all age subgroups for ARQ's total score [$H(5) = 22.438, p = .000$]. Specifically, differences were found in questions question1, question3, question5, question6, question10, question11 and question13 ($p < .050$). The higher scoring was recorded from the eldest age group (70+) in contrast to the rest age groups.

Conclusions: In conclusion, age seems to be a significant parameter in order to be taken into account during self-assessment of reading abilities. Elder individuals scored higher compared to younger participants which this may be due to their lesser years of study rate than elderly Greek population. Consequently, more in-depth research must be conducted since studies showed that literacy difficulties share common causality with mental disorders and thus their timely evaluation is of great importance.

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P023 Finding Through Statistical Analysis the Self-Perceived Levels of Speech Coordination for Typical Greek Male Adults: Evidence Based Data Using Adult Developmental Co-ordination Disorders/Dyspraxia Checklist

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Background: The motor that demands of speech production can be compromised by normal aging processes and thus it could change an individual's precision and fluency. It is important to have individualized data on the motor difficulties which any person might face throughout his/her life to make the clinical process more efficient and client-oriented. To this direction self-reported questioner provide valuable information about clients' perception for the clinical condition they experience, such as Adult Developmental Co-ordination Disorders/Dyspraxia Checklist (ADC) which is a 37-items Likert scale questionnaire. This study aimed to determine the self-perceived levels of motor abilities for typical adult males.

Materials and methods: The validated version of the ADC was administered in a total of 228 healthy adult men from 20 to 84 years of age (M= 49.43, SD= 17.800). Participants that had a history of neurological and mental illness or were illiterate were not included in this sample.

Results: The analysis showed significant differences between all age subgroups for the total score of ADC [H(5)= 12.060, $p < .050$]. Furthermore, statistical significant differences were observed even when the age subgroups compared as pairs. Also, significant differences were noticed for 14 out of 37 questions.

Conclusions: From the above it is determined that age is an important factor when it comes to co-ordination difficulties for male adults in an almost predictable way. As age progresses the perception of coordination of musculature probably becomes more of a challenge for the male population as in other researches [1-4].

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P024 Determining Through Data Analysis the Mean Length of Utterance in Morphemes (MLUm) and Mean Length of Utterance in Words (MLUw) in Cypriot Greek Speaking Children

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Background: The collection and analysis of a language sample is of particular research and clinical interest due to its high validity. The most widely used language indicator is the Mean Length of Utterance (MLU). MLU is usually counted in words (MLU-w) or morphemes (MLU-m). A brief review of the literature revealed a lack of research evidence which is whether MLU-w or MLU-m would be more suitable for use in children speaking the Cypriot Greek dialect. The aim of this study was to compare MLU-w and MLU-m with children Cypriot Greek dialect of typical language development aged from 36 to 48 months.

Materials and methods: This study was based on existing data, from the Early Childhood Research Laboratory Centre of the University of Cyprus database. Thirty children aged from 36 to 48 months, of typical linguistic development, participated in this study. In 12 months duration, the children undergone three re-evaluations every 4 months and in particular 36, 40, 44 and 48 months. The children who had language or any other disorder and did not come from a monolingual Cypriot Greek dialect family were excluded from this study.

Results: According to the results at each specified age point (36, 40, 44 & 48 months), the children showed very high positive correlation to the association of MLU-w and MLU-m.

Conclusions: MLU-w could be presented as an assessment tool for Cypriot Greek speakers and will contribute to a valid diagnosis. However, it is noteworthy that the findings of this study reflect an average beneficial level. Therefore, an individual's linguistic development may deviate from the standards described in this research.

P025 Derivative and Descriptive Data Analysis on Pragmatics of Pre-primary Cypriot Greek Speaking Children

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Background: The factual study examines the use of language in a social context. The purpose of the research was to examine the use of language in four-year-old children of typical language development, speaking the Cypriot dialect.

Materials and methods: A total of 20 children (10 boys and 10 girls), who were Cypriot dialect speakers with typical language development, participated in the study. The language sample was collected using free play and free conversation, and was recorded with a digital recorder in the home of each child. The language sample size consisted of 50 enunciations from each child, and the transcript of the language sample was written by hand and it was based on the international phonetic alphabet. The results were analyzed using descriptive statistics.

Results: The results of the study showed that most language usage categories (Commentary, Regulation, Protest or Rejection, Emotion, Routine, Report or Inform, Performance and Narration) appeared in the language sample of both boys and girls. Four of the eight categories (Report or Inform, Commentary, Response and Refusal) were in most cases observed in both genders. Notably, there was a statistical significance in the gender discrimination category ($P < 0.04$).

Conclusions: The results of this study can be used in a preliminary basis for comparisons relevant to populations who are likely to suffer from speech and communication disorders.

P026 The Contribution of the Communication Partner in Language Sample Analysis

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Background: Language is a way of expression which is inherent in all people. Each person is born with the ability to develop language irrespective of nationality or language. However, some children may have language disorder or they may not have typical language development. In order to diagnose a language disorder, clinicians use formal or informal assessments. Language sample collection and analysis is an informal assessment that provides data from spontaneous speech productions on real communication environments. The main objective of the study was to find the influence of the conversational partner in Cypriot-Greek speaking children with typical language development.

Materials and methods: The research was conducted at the Speech, Language and Hearing Clinic of the European University Cyprus. The sample consisted of 20 3-year-old Cypriot-Greek speaking children 3-years-old with typical language development. Each child's voice was recorded inside clinic at a dyadic interaction with one of his/her parent and afterwards at a dyadic interaction with one of the researchers. Furthermore, the Number of Different Words (NDW) and the Mean Length Utterance-words (MLU-w) of the child with both communicational partners were analysed and finally a statistical analysis and comparison of data was conducted.

Results: The results showed that the MLU-w did not differ significantly. However, the NDW was significantly higher when a child was interacting with a parent.

Conclusions: Findings of the research give important information on the influence of the communication partner in childrens' speech and could help clinicians towards choosing the right person which will interact with a child when collecting a language sample.

P027 Analysing the Data Acquisition of Communication skills of children with autism spectrum disorders: The parents' opinions

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Background: The current research studied in depth the actual views of the parents of Greek Cypriot children with autistic spectrum disorder regarding the communication skills of their children at pre-school and primary school age.

Materials and methods: The data were collected through qualitative research. The chosen method was a structured interview which consisted of nineteen open questions. The interview was recorded using an electronic tape recorder in order to get a precise data recording. The collected data were recorded on tables which were created according to the posed questions during interview.

Results: The results of the study exhibited that parents of children with autistic spectrum disorder were well informed about the therapeutic/educational programmes that a child with the specific disorder had to attend. In addition, the research showed that the parents were well aware of the various ways which their child uses to communicate in different environments both in and out of their home. Furthermore, through this study it was revealed that children with autistic spectrum disorder were not approached in the best appropriate way by parents, siblings and familiar people and this was due to lack of knowledge regarding the proper ways of approaching and communicating with children with autistic spectrum disorder.

Conclusions: The limitations of this study were noted and suggestions were given regarding possible future research on children with autistic spectrum disorder in order to help not only the parents but also therapists who come into contact with this specific disorder.

P028 Statistically Analysed Validation of Eating Assessment Tool: A Pilot Study in Typical Greek Population

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Background: Swallowing disorders in adults can lead to chronic problems which could be the risk for malnutrition, choking and aspirating pneumonia. Speech and language assessment of swallowing disorders is usually conducted using imaging methods, bedside evaluation and grating self-perceived questionnaires. The purpose of the present study was to validate Eating Assessment Tool and provide evidence data for typical Greek population.

Materials and methods: 378 typical adults (187 men and 191 women) aged between 18 and 94 years old (M= 49.89, SD= 19.11) participated in this study. The translated Greek version (in accordance with the minimum translation standards) of EAT 20 and EAT 10 were administered in order to evaluate the ability and level of swallowing. Participants with a clinical history of affected swallowing or understanding were not included in the sample.

Results: The analysis showed statistical significant differences between all age subgroups for EAT 10 [H(5)= 32.890, p= .000] and for EAT 20 [H(95)= 33.164, p= .000]. In addition, significant differences were noticed between 18-30 age and over 70 subgroups, in all questions for EAT 20 and EAT 10. The reliability of both version of EAT were Reliability Coefficients 20 items Alpha = .941 and Reliability Coefficients 10 items Alpha = .905 showing very adequate correlations.

Conclusions: EAT 10 can be used as primary assessment tool and provide evidenced data of the perceived level of a person's swallowing ability even for the typical population as in other communication abilities [1-4]. It also appears that in its current form can be standardized in Greek language for different populations which exhibit swallowing disorders.

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P029 Data Processing Validation of Swallowing Disturbance Questionnaire through a Pilot Study in Typical Greek-Cypriot Population

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Background: Therapeutic programs for swallowing disorders are directly depended to a valid assessment by using objective and subjective methods. The subjective methods include the administration of self-assessment questionnaires so the self-perception of deglutition to be categorized. Moreover, self-assessment questionnaires can be quite beneficial [1-2] if we take into consideration how expensive and time consuming could be some types of evaluation. This study is a report of the differences for the perception of swallowing among a variety of ages for typical Greek-Cypriot individuals.

Materials and methods: A self-perceived questionnaire (Swallowing Disturbance Questionnaire-SDQ) was administered to 362 participants (151 men and 211 women) from Cyprus separated in 6 age groups from 18 to 70 and over years of age. All participants had no history of medical or other conditions that would affect that would affect their responses.

Results: Statistical significant difference of Swallowing Disturbance Questionnaire total score was observed among the different age groups. Furthermore, no presence of deviations were spotted between male and female, although, women always had higher scores. The reliability was very high (Reliability Coefficients 15 items Alpha = .832), while the internal coherence was adequate.

Conclusions: The effects of ageing in swallowing process have been examined by many other studies and it has been proved that they are responsible for deglutition problems due to the natural changes that occur [3-4]. This is a possible interpretation for the outcomes of this study which reveals different self-perception of swallowing in the elderly people. Moreover, the high reliability of SDQ implies its adequacy relevant to its Greek standardization.

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P030 Validating Swallowing Disturbance Questionnaire via Data Processing in Typical Greek Population: A Pilot Study

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Background: The correlation of clinical outcomes with reliable research evidence data is of great importance. This necessity is a fact for the Greek clinical practice and its data could help professionals. The use of self-perceived evidence data is a new trend [1-2]. The use of those type of questionnaires such as of Swallowing Disturbance Questionnaire (SDQ) is a common procedure for evaluating perceived level of swallowing abilities and/or disorders. The aim of the study was to validate SDQ for healthy Greek adults.

Materials and methods: The translated version of SDQ questionnaire was administered to 775 healthy Greek adults (392 men and 383 women) from different regions of Greece, that met including criteria (no mental/medical and/or gastrointestinal conditions).

Results: The analysis of the data showed significant differences between men and women in the questions question2, question9, question13 and question15 ($p < .050$). Regarding the age groups, significant differences were noticed in 13 out of 15 questions ($p = .000$). Finally, the reliability was determined with Cronbach Alpha was equal to 890.

Conclusions: Gender doesn't seem to be an influencing factor for Swallowing Disturbance Questionnaire. On the contrary, an almost predictable increase of scoring was noticed as age increased while the age group of 18-30 showed the lowest scores and age group of 70+ scored the highest. In conclusions Swallowing Disturbance Questionnaire is reliable and coherent scale. It is of high importance to validate more self-assessment questionnaires in Greek population in order to obtain more evidence based data that can be used properly in mental and physical health sciences.

Acknowledgements: Gender doesn't seem to be an influencing factor for Swallowing Disturbance Questionnaire. On the contrary, an almost predictable increase of scoring was noticed as age increased while the age group of 18-30 showed the lowest scores and age group of 70+ scored the highest [4]. In conclusions Swallowing Disturbance Questionnaire is reliable and coherent scale. It is of high importance to validate more self-assessment questionnaires in Greek population in order to obtain more evidence based data that can be used properly in mental and physical health sciences.



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P031 Perception of Swallowing Abilities by Typical Greek and Greek-Cypriot Male Population using Swallowing Disturbance Questionnaire via Data Processing: A Pilot Study

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Background: Assessment is important for the therapeutic decisions relevant to swallowing disorders. Moreover, it is proper to detect symptoms in early stages via self-perceived questionnaires of swallowing abilities. All the above, underline the urgent need of constructing more validated self-assessment questionnaires being fully customizable in accordance to gender [1-2]. This study aims to outline the differences in the perception of swallowing among men of various ages using (SDQ) Swallowing Disturbance Questionnaire.

Materials and methods: 543 men from Greece and Cyprus who varied in age from 18 years old to over 70 filled in the SDQ. The included participants had no former history of swallowing disorders and/or medical-mental illness that would probably affect administration procedure and/or affect questionnaires results.

Results: Statistical outcomes showed significant differences in Swallowing Disturbance Questionnaire total score among the 6 different age groups, especially between the 18-30 age group and the senior (60 and over aged) participants.

Conclusions: Many researchers have described and pointed out the set of swallowing disturbances in the elderly due to ageing, a condition called presbyphagia [3]. This study verifies that senior men perceived their swallowing abilities different than younger men. In conclusion, the importance of self-assessment questionnaires is apparent if we consider all the profits that they can provide us and their ability to detect symptoms in early stages which can be proved quite beneficial [4]. However, more research is needed to be conducted in accordance to gender that will provide better evidenced based understanding.

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P032 Perception of Swallowing in Typical Greek and Greek-Cypriot Female Population through Data Processing: A Pilot Study Using Swallowing Disturbance Questionnaire

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Background: Benefits like noninvasiveness, briefness and non-exposure to danger make the self-assessment questionnaires ideal for both speech language pathologists and other clinicians [1-2]. Their ability to provide evidence of symptoms in early stages or information for the perception of the individuals about their swallowing procedure makes them a useful tool. The study focuses on the differences in perceiving the swallowing abilities from typical females (from Greece and Cyprus). This is accomplished by using Swallowing Disturbance Questionnaire.

Materials and methods: The translated version of SDQ a self- assessment questionnaire of the perception of swallowing was utilized as a tool for the data collection. A total of 594 healthy women (211 from Cyprus and 383 from Greece) participated in the study from different regions of Greece and Cyprus. The participants that had former medical history that affected the swallowing and gastrointestinal track were not included.

Results: Not significant statistical difference was found between the female participants from Cyprus and the female participants from Greece. However, the Cyprian women had constantly lower scores than Greek individuals, especially in questions regarding symptoms like difficulty in swallowing pureed food and suffering of respiratory infections (during previous year).

Conclusions: It has been proposed by many specialists that the swallowing perception among different cultures is not the same due to the cultural influence. This fact does not apply in this study because there are many similarities in the two populations. However, it is vital for the validation of a questionnaire to conduct cross-cultural correlations [3-4].

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P033 Validating Sydney Swallowing Questionnaire with the use of Data Processing: A Pilot Study in Typical Greek Population

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Background: It has always been a challenge for clinicians concluding to an assessment that is both valid and accomplishable. The importance of an evident assessment is a necessity if we take into consideration that it determines the clinician's diagnostic and therapeutic decisions. An essential part of the assessment is an individual's self-perception of his/her situation that can be documented via self-assessment questionnaires [1-3]. The purpose of this study was to validate Sydney Swallowing Questionnaire (SSQ) and to measure the differences in the perception of deglutition process among 6 age groups in Greek language.

Materials and methods: The SSQ [a 17-items tool was developed as a means of assessing the severity of oro-pharyngeal dysphagia] was administered to 390 healthy adults (180 male and 210 female) ranged from 18 to 86 years of age with no oropharyngeal and gastrointestinal disease were not included.

Results: The statistical analysis outlined significant differences among the age groups regarding the total score ($p < .050$). Especially, the most significant result was found between the youngest age participants in comparison to oldest ones (over 60 years age subgroups). Another very important finding is that there is no significant difference according to gender. The reliability of SSQ was acceptable [Cronbach's alpha: Reliability Coefficients 17 items Alpha = .780].

Conclusions: It is a fact that ageing affects the swallowing process and the self-perception of the elderly relevant to their deglutition [4]. The standardization of such questionnaires, as SSQ, in Greek language is needed. Taking into consideration all the above, it appears that the self-assessment questionnaires can provide the clinician with significant amount of information.

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P034 Validating Swallowing Outcomes After Laryngectomy Questionnaire using Data Processing: A Pilot Study in Typical Greek Population

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Background: Symptoms of feeding and swallowing in patients that have undergone laryngectomy are quite common. Thus, there is an enormous need for ongoing evident based diagnostic procedures, even in Greek language that will help health professionals to diagnose patients with such disorders [1-3]. This pilot study is focused on the evaluation of a patient-reported questionnaire that assesses the most important deglutition functions in postoperative laryngectomy patients through a series of seventeen questions.

Materials and methods: A total of 360 healthy Greek participants (180 males & 180 females) with no former history of head and neck cancer or other medical conditions that effected swallowing were part of in this study. The translated version of the Swallowing Outcomes After Laryngectomy (SOAL) was administered.

Results: Statistical analysis of the data showed significant differences between the Swallowing Outcomes After Laryngectomy scores in different age subgroups. More specifically, statistically significant differences were found for questions question5, question8, question 13 til 17 ($p < .050$) between the 6 age subgroups. Reliability analysis was conducted using Cronbach alpha Coefficients 17 items Alpha 840.

Conclusions: The Swallowing Outcomes After Laryngectomy questionnaire constitutes a reliable means of assessing swallowing disorders in typical population. Although no statistically significant differences were observed between males and females, nevertheless differences were found relevant to age [4]. Lastly, the scale appeared to give strong evident data. Standardization of the tool and correlations with a objective assessment is needed before applying the tool in Greek clinical practice.

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P035 Validating Dysphagia Multiple Sclerosis Questionnaire using Data Processing: A Pilot Study in Typical Greek Population

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Background: Dysphagia has a wide range of mental, medical and speech language pathology implications. Not only it affects swallowing and changes the diet habits but it also alters the quality of life. This is a quite common phenomenon in the elderly which suffer from multiple sclerosis (MS) and thus they may face social isolation and depression. Self-perceived questionnaires [1-3] can acquire valuable data for diagnosis. Especially it was developed for swallowing symptoms in MS the Dysphagia Multiple Sclerosis Questionnaire (DYMUS). The aim of this study was to validate DYMUS questionnaire in healthy adults and to cope the perceived differences among six age groups.

Materials and methods: DYMUS after its Greek translation procedure, was administered in a number of 444 healthy adult individuals (203 male and 241 female) with no history gastrointestinal or medical condition that would affect their swallowing.

Results: Our study found significant statistical differences among the different age groups. The highest scores were indicated between the elderly and the younger age groups. The reliability was indicated as very high (Reliability Coefficients 15 items Alpha= 816).

Conclusions: This study reports that ageing influences the perceived level of the swallowing abilities [4]. Unfortunately, due to overlooking, the elderly do not mention their problems to their doctor or their caregiver resulting to unpleasant quality of life issues. Furthermore, the problems' severity grows and as a result the elderly have to face a variety of consequences in their mental health as well. In conclusion, the reliability of DYMUS questionnaire is considered high. In turn, this evidences the fact that this questionnaire must be standardized in populations suffering from multiple sclerosis.

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P036 Psychological symptoms in relatives of intensive care unit patients and the perceived need for support

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Background: Admissions of patients in the Intensive Care Unit (ICU) may be stressful for their relatives [1, 2]. The objective of the present study was to explore family members' psychological symptoms over the first days of patients' ICU stay; and to report on the perception of the relatives of ICU admitted patients.

Materials and methods: A prospective study was conducted over a six-month period in the ICU of the "G. Hatzikosta" General Hospital of Ioannina, northwest Greece, involving 108 participants. Demographic information was obtained from participants; and clinical information (APACHE score), was retrieved from patients' charts. Study subjects were assessed at days 1 and 7 of patients' admission with the use of the Hamilton Anxiety Rating Scale, the Beck Depression Scale [3] and a self-reported questionnaire, involving decision making procedures; the satisfaction of the families of the patients' care; and the support of the families by medical and nursing staff.

Results: Anxiety levels in patients' relatives were not significantly different over a week of ICU admission. Rates of depressive symptoms raised from 38% to 58.3% and this change was statistically significant. There was no correlation of changes in depression with age, education, closeness of relationship and APACHE II score. Relatives' perceptions and satisfaction regarding ICU stay were significantly changed over the 1 week period.

Conclusions: During the first days of ICU admission depressive symptoms are gradually evolving in relatives, regardless of the severity of patients' condition. Their attitudes toward receiving support also change. These findings have potential implications for the organization of ICU patients' relatives care.

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P037 Validating the Autism Spectrum Screening Questionnaire via Data Analysis: A Pilot Study in a Typical Greek Population

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Background: Quite a few questionnaires have been created for the detection of autistic characteristics of average population. One of them is the Autism Spectrum Screening Questionnaire (ASSQ) [1]. It is consisted of 27 questions which detect impairments in socialization, communication and unfamiliar behaviors. ASSQ has been satisfactorily validated and used in clinical practice to general population as well as to clinical samples [1-2]. Nevertheless, it has not been translated nor validated in Greek language. Also, few researches exist that evaluate the gender and age differences depending on the given answers [3-4]. The purpose of this study was the translation of ASSQ questionnaire and validation in Greek-nonprofessional sample-typically developed parents.

Materials and methods: The ASSQ questionnaire was translated in Greek language and administered to a population of 361 typically developed adults. All these adults spoke Greek as their first language (137 men and 224 women). Their age varied from 18 years old to 60 yrs. old.

Results: The ASSQ screening questionnaire was filled in by all the participants. The reliability of the AQ questionnaire was satisfactory in its Greek translation with a Cronbach Alpha being equal to 0.872. The internal coherence was also strong. In general, males' scores were higher than females based on the analysis of the ASSQ questionnaire. Results showed statistically major differences at four answers between men and women, but not in the total score. Also, when age groups were compared, differences were notable in eight answers, which did not affect the total score as well.

Conclusions: ASSQ constitutes a screening questionnaire that is well validated in other languages except Greek. It is used as a diagnostic tool and can detect High Functioning Autism and AS. Even though it was translated and given successfully to a Greek population sample, more researches need to be conducted. Gender and age differences did not play a notable role to the total score, but there where remarkable differences to each answer. Therefore, further studies on larger samples are needed to confirm the observed gender and age differences.



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P038 Data Analysis for the Validation of the Autism-Spectrum Quotient: A Pilot Study in a Typical Greek Population

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Background: Individuals, in the spectrum of autism, present difficulties in “empathising” and show higher results in “systemising” [1]. In general, women empathise more than men and in turn males systemise more than females [1-2]. Autism-Spectrum Quotient (AQ) is a 50-item self-administered questionnaire which was created to measure the level of autistic traits to adults with normal intelligence [3]. This questionnaire is consisted of questions based on measuring the main impairments confronted by individuals with ASD. The questions are also based on the ability of males and females to empathise and systemise. The aim of this study was the translation of the AQ questionnaire in Greek language and its validation in Greek non-professional population-typically developed parents.

Materials and methods: The AQ questionnaire was translated in Greek language and administered to a population of 325 typically developed adults. All of them spoke Greek as their first language (150 men and 175 women). Their age varied from 19 years old to 75+ yrs.

Results: All the participants completed the AQ questionnaire. The reliability of the AQ questionnaire was satisfactory in its Greek translation with Cronbach Alpha being equal to 0.707. The internal coherence was also strong. The analysis of the results showed that differences in the answers existed between males and females to specific questions but not in the total score. It is notable that males present a higher score to their answers than women do. Also, analysis showed remarkable differences to the answers in specific questions between the age groups as well as to the total score.

Conclusions: AQ is a questionnaire which can be used as a tool for the detection of autism spectrum disorders. It can provide important information about the social interaction and communication deficits faced by an individual with an average IQ level. The Greek translation of the questionnaire was rated as satisfactory. Nevertheless, further research would be useful for the validation of the AQ in Greek language and for the detection of the age and gender differences from the answers.

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P039 Assessing confinement environment stress using fNIRS

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Background: With human space exploration missions being a crucial focus of space programs, the number of astronauts (including Japanese astronauts) recruited for a long-term stay at the International Space Station (ISS) has increased. The confinement conditions that astronauts experience during the extended time periods spent in the same room with the same people when on mission, might present an important psychosocial stressor. However, an efficient methodology to measure the confinement-triggered psychological stress has yet to be established. Given that psychosocial stress is known to have negative effects on the frontal brain function, we attempted to assess stress-related index measurements of frontal brain function using functional near-infrared spectroscopy (fNIRS), a non-invasive method of monitoring brain activity by measuring the localized blood oxygenation levels of the brain, additionally to conventional stress-evaluation methods, under confinement conditions.

Materials and methods: In order to simulate the conditions experienced by astronauts during selection-examination and stay in the ISS, we used the “confinement environment adaptation facilities” of the Japan Aerospace Exploration Agency (JAXA), where research participants (n=15, all adult males, divided into 2 groups) were confined for a period of 14 days during 2016. To measure the stress received in confinement, we monitored the participants’ frontal brain activation during a cognitive test (verbal fluency test [VFT]) using fNIRS. Conventional stress-evaluation methods, including the self-evaluation questionnaire of sense of coherence (SOC, 29-item scale), were also used to measure the perceived confinement-induced stress. Additional exercise intervention was applied during confinement to half of the participants (n=8), who had to complete a 15-minute exercise by aero bike every day (exercise was prohibited in the control group [n=7]).

Results: fNIRS measurements showed a general decreasing tendency. SOC scores tended to increase. Interestingly, fNIRS measurements significantly differed between exercise intervention and control groups.

Conclusions: During confinement, the fNIRS measurements presented a general decrease, suggesting that fNIRS could possibly detect early signs of stress and depression. Though the confinement period was short, participants’ SOC had an upward trend, suggesting a strengthened sense of coherence due to the newly obtained experiences. Exercise had a positive effect towards maintaining good frontal brain function during confinement environment stress. fNIRS might be a useful tool to readily assess the psychosocial stress inflicted during confinement.

Acknowledgements: Ethical issues were reviewed and approved both from the University of Tsukuba Medical Ethics Committee (No.1022) and the JAXA Ethical Review Board. We declare no conflict of interest. This study was supported by the JSPS Grant in Aid for scientific research (15H05935).

P040 Is anxiety and depression research in adults with cancer dominated by a single cancer type?

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Background: Cancer patients and survivors are four times more likely to suffer from anxiety and/or depression than the general population [1, 2]. Rapid growth in psycho-oncology research has occurred in the last decade; however, its generalisability remains unclear, with some positing that oncological research across the board has been breast-cancerised and remains dominated by experiences in breast cancer [3, 4].

The applicability of this perceived bias in research on anxiety and/or depression in people with cancer remains unknown. This study will quantify anxiety and/or depression research in adults with cancer according to tumour type and compare this to population-wide tumour burden and psychiatric burden within tumour types.

Materials and methods: By early 2018 a systematic review of anxiety and/or depression research in adults living with cancer published from 2011-2016 will have been undertaken. Studies will be quantitatively described and classified according to study design, tumour site and participant characteristics. Statistical analyses and summary graphics will be used to determine parity between research effort and disease burden. Ethics approval is complete.

Results: Findings will definitely be ready for Congress. Psychiatrists in both public and private practice should be aware of trends in psycho-oncology and their practical use or limitations.

Conclusions: This study will examine a concern that psycho-oncology research is dominated by a particular tumour stream, i.e. breast cancer. Should disparity exist, researchers and funders will be prompted to examine psychiatric burden in underexplored cancer types; should disparity not exist, arguments for an improved distribution of psycho-oncology research will cease.

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P041 Emotion recognition and the influence of sleep

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Background: Meta-analyses of studies in adults have demonstrated that night sleep plays a decisive role in the effective functioning of the human body and mind. In addition to the role of sleep, older adults usually report that their cognitive and emotional abilities seem to be at a higher level in the morning hours. Based on this, the aim of the present study is to examine whether sleep and the time of day (early in the morning or afternoon) can have an influence on a specific ability that is crucial for interpersonal communication, namely, emotion recognition, in older adults.

Materials and methods: Twenty-three female caregivers of patients with meningiomas participated voluntarily in this research. Their mean age was 68.60 years (SD = 12.52, range 31-77), level of education 15.47 years (SD = 3.82). A relevant test, the Baron-Cohen Reading the Mind in the Eyes Test was administered individually. Participants were assessed with the same test in two sessions: 1) early in the morning and after night sleep, and 2) in the afternoon and after many hours since night sleep. Because the order of sessions was counterbalanced across subjects, factor order was not included in the general analysis.

Results: Results indicated that female participants showed a statistically significant higher emotion decoding accuracy in the morning testing condition, compared to the afternoon condition.

Conclusions: Future research should further investigate in men, as well as in other age groups, and with the use of other measures, how and if emotion recognition is affected by other cognitive and/or emotional factors.

P042 Stress and memory functioning in women caregivers of patients suffering from meningiomas

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Background: The way that caregivers perceive their role and duties influences their emotions and mood, and therefore perceived stress may influence indirectly their cognitive performance.

Materials and methods: Twenty-three female caregivers of patients (12 males) with meningiomas in various brain regions (8 right, 7 left and 8 bilateral) and of various sizes participated in this study. Their mean age was 68.60 years (SD = 12.52, range 31-77), level of education 15.47 years (SD = 3.82), and time since the first signs of possible brain disease (headaches, fatigue, fainting) for the patients were 4.21 years (SD = 2.19). Patients were grouped based on the Geriatric Depression Scale score, yielding 10 high and 13 low scorers. The female caregivers were examined with Cohen's Perceived Stress Scale, Forward and Backward Digit Span Tasks. In addition to that, 23 female women with similar demographics (age, education) were also examined with the same tests (control group).

Results: Results indicated that female caregivers had statistically significant lower cognitive performance on both tasks than female controls, while a negative correlation was found between perceived stress and memory performance only in the group of caregivers.

Conclusions: The low memory performance in women who are the sole caregivers for their family members may be associated with the high levels of long-term perceived stress. Future research should further clarify the influence of other factors (such as personality) in the investigation of stress and memory function of caregivers of patients with different types of diseases.

P043 The quality of life among women survivors of breast cancer in Tunisia

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Background: In Tunisia, as worldwide, breast cancer is the most common women cancer with growing interest in survivor's quality of life (QoL) [1-2]. This study aimed to assess QoL among Tunisian women breast cancer survivors

Materials and methods: A cross-sectional survey was conducted among breast cancer survivors, diagnosed at least two years and at most five years before the onset of the survey, in the department of gynecology of Monastir University Hospital. The QLQ-C30 and the QLQ-BR23 questionnaires were used in their validate Arabic version [3-4].

Results: Study population included 112 patients. Mean age was 48 ± 11 years. The global health score was low among 42% of patients with a significantly drop associated to age over 40 years ($p = 0.001$) and chemotherapy ($p = 0.02$). The mean score of emotional and cognitive functioning were respectively 31.7 ± 12 and 61 ± 23.8 with mood fluctuation reported by all patients and cognitive difficulties by 81% of them. All patients felt less feminine and 93% of them less desirable with a body image score significantly better with conservative surgery versus mastectomy ($p = 0.01$). Sexual life was deteriorate in 91% of cases, with sexual pleasure score correlated to age ($p = 0.01$), marital status ($p = 0.02$) and type of performed surgery ($p = 0.03$).

Conclusions: In our series, majority of breast cancer survivors had a poor quality of life mainly concerning emotional and social functioning field, involving the necessity of a global care approach at different stage of the disease.

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P044 Young Smokers' Emotional Self-Perceived Voice Level: In Depth Data Analysis of Administered Voice Handicap Index

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Background: Several studies have shown that smoking is the primary candidate for provoking voice disorders in adults. This unwanted condition has unfortunately other additional unwanted effects. One strong effect which is the result of this study, is relevant to psychological affected aspect of subjects which smoked [1-4]. For the purpose of conducting this research the Voice Handicap Index (VHI) emotional domain of items was administered to subjects. This domain included 10 items relevant to checking the psychological and psychosocial condition of subjects.

Materials and methods: Two hundred and fifty participants (120 females and 130 males) were recruited. This sample constituted of 128 smokers (60 females and 68 male) and 122 non-smokers (60 females and 62 male). The participants, exhibiting any voice complaint or other medical condition along with the presence of prohibited environmental conditions which could affect their voice, were excluded from this study. "Non-smokers" were considered the subjects who had never smoked prior to this research. All participants filled in the translated version of Voice Evaluation Template (VET) and the standardized Hellenic version of Voice Handicap Index (VHI).

Results: Smokers had a significant higher VHI-E ($U= 1799.000$, $P< .001$) compared to non-smokers. Similarly, male smokers' results exhibited significant differences compared to non-smokers' VHI-E ($U= 442.500$, $P< .001$). Similarly, female smokers showed higher emotional score in comparison to non-smokers ($U= 426.000$, $P= .000$). The smokers' subgroup (in all comparisons) exhibited the higher achieved scores.

Conclusions: It seems (based on VHI's items) that the smokers in comparison to non-smokers are in greater stress condition and discomfort which in turn pushes their self-esteem in lower levels while it increases their feelings of shame. Moreover it appears that smokers receive the irritated behavior of others as they do not comprehend the voice problem of smokers [1-4]. Moreover the others probably do not understand the smokers' condition and eventually do not express empathy towards them. The smokers' low self-esteem in conjunction to being not accepted (social exclusion) by the non-smokers affect their everyday life while reducing their social contacting. In turn, this condition increases the time of isolation and consequently the risk of imminent depression and anxiety disorders.



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P045 Extensive Data Analysis on the Tango Voice Treatment Method relevant to its Positive Emotional Effects using Voice Handicap Index

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Background: Various therapies of voice disorders exist such as the kind of invasive treatments. On the contrary, a significant non-invasional method, demanding only the physical exercise of the subject, is Tango Voice Treatment Method [1]. Its beneficial results constitute this voice therapy as a standalone procedure even without hydration (not a strong factor). This research prolongs the beneficial results of this method by checking the emotional effects by administering Voice Handicap Index (VHI) [2-3]. These effects are directly associated with voice disorders and they include stress, emotional, or personality factors. It is well-known that emotional distress maybe related to voice disorders through a vicious cycle without distinguishing between them the cause and the result [4].

Materials and methods: In this study fifty-two adults (22 dancers and 30 non-dancers) were recruited. All participants had no former history of ENT (Ear-Nose-Throat) disorders or had former history of at least two weeks before enrolment while the environmental living, working or physical conditions were not prohibited relevant to affecting their voice condition. Tango dancers were considered the individuals with at least two dance sessions per week for one year. As for the control group, its participants never danced. All subjects filled in the Voice Evaluation Template (VET) and the Hellenic Voice Handicap Index (VHI).

Results: Non-dancers had a significant higher VHI-Emotional score ($U= 192.500$, $P= .001$) compared to tango dancers. Similarly, the female non-dancers exhibited significant differences compared to dancers VHI-E ($U= 38.000$, $P< .001$). Likewise, by comparing all divided subgroups according to gender, statistical significant changes were calculated relevant to VHI-Emotional scores ($H(3)= 7.657$, $P< .050$). Also, the previous results were similar to the case of male non-dancers who had higher emotional score in comparison to tango dancers ($U= 55.500$, NS) and this result was not statistically significant. In general, the non-dancer subgroup (in all comparisons) exhibited the higher achieved scores.

Conclusions: The Tango dancers in comparison to non-dancers exhibited better emotional condition which could be consisted of three significant beneficial categories. The first category is related to lower stress levels, lower discomfort and shame during the communication procedure with others. The second beneficial category is related to a more positive behavior from

others towards Tango dancers. The third beneficial category is the enhanced social contacting in conjunction to the reduced anxiety in Tango dancers' voice. In conclusion, the overall benefits are prominent for the emotional voice status of the subjects under Tango Voice Treatment Method.

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P046 The relationship between Personality and Late-Life Depression

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Background: Late-life depression is a disorder in many cases of elderly patients. Many factors contribute to late-life depression. The possible influence of personality on the onset, outcome and social functioning of late-life depression have long been of interest to clinicians, often with the assumption that some personality features predispose individuals to develop depression in late life.

Objective: To estimate the impact of some personality disorders on late-life depression.

Materials and methods: The research was conducted on a sample of 60 patients who met the ICD-10 diagnosis of a depressive episode or recurrent depressive disorder and 60 non-depressed elderly, aged 60 years and older. All participants were examined using the criteria for specific personality disorders by ICD-10.

Results: A higher percentage of statistical significance was found in the group of patients than in the control individuals, regarding the personality disorders ($D_{max}=0.75$ $p<0.01$). In the experimental group, the most frequent disorders were the dependent structured personality (33.33%) and the avoidant personality disorder (21.67). The next most common personality disorders were the obsessive-compulsive (13.33) and the histrionic personality disorder (11.67).

Conclusions: Our study has shown a significant positive relationship between some personality disorders with late-life depression. These data suggest that late-life depression risk is elevated among elderly patients with these personality features.

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P047 Do pathological gamblers exhibit a dysexecutive syndrome? I bet not!

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Background: There are several studies investigating the presence of cognitive manifestations, mainly related to executive functions, in pathological gambling. However, most of the studies involve treatment-seeking individuals, and the overall outcome of the available literature is inconclusive and not yet clear. This study aims to investigate cognitive impairment in an ecologically valid sample of Greek gamblers, focusing on executive functions.

Materials and methods: Twenty-four non-treatment seeking men, aged 30-68 years with 6-23 years of formal education, with at least one year of mixed gambling history were recruited from ecological settings, and characterized as probable pathological gamblers using the South Oaks Gambling Screen and a clinical interview. The control group consisted of an age- and education-level matched group of 21 men without history of habitual gambling. Both groups were assessed with the Iowa Gambling Task plus a comprehensive neuropsychological battery consisting of memory, language, and executive neuropsychological measures.

Results: Gamblers displayed significantly lower scores on indices of inhibition and decision making. Notably, gamblers scored similarly or significantly higher compared to controls on measures of verbal and visuospatial working memory, cognitive flexibility, processing speed, verbal fluency, and sustained attention.

Conclusions: Overall, our findings show that gamblers may demonstrate specific cognitive deficits, but there is no evidence for a generalized executive impairment. The importance of assessing cognitive and other aspects of gambling, by utilizing an ecologically valid sampling, is also discussed.

P048 Ethical aspects of forensic psychiatric expertise of the children

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Background: Forensic expertise of the children in general, and especially psychiatric, is a significant challenge for forensic psychiatrists. (1,2,3). A significant ethical dilemma for the forensic professionals is the media coverage of the public forensic cases. This paper deals with two cases from the forensic practice of the author.

Materials and methods: methods Case history No1. It is a child victim of a sexual assault from a stepfather. Throughout the expertise of the girl, there are significant social pressures on the family and the material dependence of the abuser. Case history No 2. The second case deals with two underage children who have been sexually assaulted by their father when, after the disclosure of the case by a large number of media in the country, the house where the crime was committed was shown and there were discussions with their neighbors.

Results: The forensic psychiatrist working on the expertise faced with the consequences of the double victimization of the children, as well as a victims of sexual assault and victims of media.

Conclusions: This article refers to that particular attention should be paid to forensic work with underage children. Legal provisions for children should be transformed into a code of forensic expertise with children, where the justice system must practice with more flexibly approach to this category of forensic cases (4); forensic cases of public interest should be processed by trained journalists with adopted ethics in journalism.

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P049 Influence of aging on memory and executive functions abilities among Tunisian nurses in public hospital

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Background: Ageing affects cognitive abilities. Fluid function, like memory and executive functions may decline from early adulthood. This study aims to evaluate age impact of age on memory and executive functions among Tunisian nurses and to identify their determinants. Ageing affects cognitive abilities. Fluid function, like memory and executive functions may decline from early adulthood. This study aims to evaluate age impact of age on memory and executive functions among Tunisian nurses and to identify their determinants.

Materials and methods: Cross sectional study among representative sample of 1,179 Tunisians nurses, distributed in two groups according to age: young workers (< 45 years) and elderly ones (45 to 60 years). Neuropsychological tests were practice to evaluate memory (Corsi cubes test) and executive functions (Stroop Victoria test). Perceived mental workload was evaluated by questionnaire.

Results: The mean age was 42.6 ± 21 years. Poor memory performance was noted among 63.48% elderly caregivers. Moreover, 57.86% of elderly nurses excided the average time of the group for the color plate (C), and 61% for the word board (M), with significant difference of the interference index between the two groups ($p = 0.005$). Multivariate analysis concluded that indicators of tested cognitive functions, decline in significantly way both with age and perceived mental workload. The mean age was 42.6 ± 21 years. Poor memory performance was noted among 63.48% elderly caregivers. Moreover, 57.86% of elderly nurses excided the average time of the group for the color plate (C), and 61% for the word board (M), with significant difference of the interference index between the two groups ($p = 0.005$). Multivariate analysis concluded that indicators of tested cognitive functions, decline in significantly way both with age and perceived mental workload.

Conclusions: We concluded that growing old is associated with nurse's memory and executives' functions declined with a heavier mental load perception. Preventive actions seem necessary to improve caregiver's cognitive performance and well-being.

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P050 Impact of work related stress on mental health of anesthesia medical and paramedical staff in Tunisian public hospital

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Background: This study aims to assess the prevalence of work-related stress among in anesthesia caregivers and to determinate its impact on mental health of caregivers. This study aims to assess the prevalence of work-related stress among in anesthesia caregivers and to determinate its impact on mental health of caregivers

Materials and methods: Cross-sectional study conducted within medical and paramedical staff of anesthesia departments in two public Tunisian hospitals. Assessment of work-related stress and harassment and their impact on mental health were anonymous and based on validated questionnaire and psychometric scales, specially Job Content and NAQ questionnaires and Rosenberg, Beck and Anxiety Hamilton scales.

Results: In total, 126 subjects were included. Among anesthesia staff 38.33% were victims of moral harassment, 15% of them were in Job strain situation. Among respondents, 40% have had a low or very low self-esteem; 61.7% of them were depressed, with a severe depression in 13.3 % of cases. Moreover, 49.9% of caregivers had have anxiety disorders and 26.6% of them were moderate to severe. The multivariate analysis concluded that Job strain situation and workplace harassment were correlated with multiple individual and occupational factors, specially the low self-esteem ($P = 0.002$) and the anxiety trouble ($p = 0.004$). In total, 126 subjects were included. Among anesthesia staff 38.33% were victims of moral harassment, 15% of them were in Job strain situation. Among respondents, 40% have had a low or very low self-esteem; 61.7% of them were depressed, with a severe depression in 13.3 % of cases. Moreover, 49.9% of caregivers had have anxiety disorders and 26.6% of them were moderate to severe. The multivariate analysis concluded that Job strain situation and workplace harassment were correlated with multiple individual and occupational factors, specially the low self-esteem ($P = 0.002$) and the anxiety trouble ($p = 0.004$).

Conclusions: Psychological and social constraints are frequent in the intensive care units with heavy impact on caregiver's mental health

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P051 Posttraumatic Stress Disorder and Traumatic Brain Injuries

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Background: Traumatic brain injuries are connected with posttraumatic stress disorder (PTSD) and lead to severe, chronic and treatment-resistant forms of the disorder. The aim was to understand the pattern and meaning of clinical presentation of PTSD/TBI vs PTSD-only group.

Materials and methods: 60 patient were evaluated using GCS and CAPS-DX. The group of symptoms which differed among groups involved: intrusive recollections, nightmares, flashback and reliving, psychological distress, avoidance of thoughts and activities, detachment, sleep disturbances and difficulties concentrating. The symptoms which did not differ involved: physiological reactivity, inability to recall, diminished interests, restricted range of affect, sense of forshortened future, irritability, hypervigilance and exaggerated startle response.

Results: Comparison with 4-D model of PTSD showed that the symptoms which were more severe in PTSD/TBI group were those which occurred within trauma-related altered states of consciousness (TRASC): flashbacks, reliving, fragmentation, voice-hearing, depersonalization, emotional numbing, compartmentalized emotions. The symptoms which did not differ among PTSD/TBI vs PTSD-only group were those which occurred during normal waking consciousness (NWC): reminder distress, negative self-referential thinking, physiological hyperarousal and general negative affect.

Conclusions: This finding may have important implication in understanding the role of TBI and TRASC in chronic, severe and treatment-resistant forms of PTSD.

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P052 Prevalance and clinical correlates of childhood trauma in patients with schizophrenia

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Background: Childhood abuse is a known risk factor for developing major psychiatric disorders including depression, personality disorders and anxiety. The association between childhood abuse and psychosis has been largely reported [1,2,3].

Materials and methods: A cross-sectional study of 56 patients with schizophrenia was conducted. Sociodemographic and clinical data were acquired. Patients were evaluated using the childhood trauma questionnaire (28 item), the positive and negative syndrome scale (PANSS), the calgary depression scale for schizophrenia (CDSS). Recognition of facial emotion was assessed using prototype images for the six basic emotions.

Results: 44.6% of the patients have reported either abuse or neglect. Patients with sexual abuse had a significantly younger median age at first admission ($p=0.046$) and got better scores at emotion facial recognition($p=0.014$). A negative but not significant correlation was found between PANSS-G scores and the severity of the sexual abuse subscale ($p=0.07$). Denial scale was correlated with a younger onset age ($p=0.03$), a more important number of suicide attempts ($p=0.023$) and a higher number of hospitalizations ($p=0.011$). No associations were found between the other CTQ subscales nor PANSS-P nor PANSS-N nor with the CDSS.

Conclusions: Childhood adversities is one type of stress that could contribute to develop a severe form of schizophrenia. Patients with a history of sexual abuse should benefit from personalized interventions.

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P053 Mental health literacy about depression and schizophrenia among Portuguese young

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Background: Mental health literacy is a key concept to plan interventions for improving appropriate help seeking and early intervention. The purpose of this study was to compare mental health literacy about depression and schizophrenia among Portuguese young.

Materials and methods: This study is based on a questionnaire in the form of a written self-report, administered to a representative sample of 1500 young adults, 39.4% males and 60.6% females, aged between 18 and 24 years (mean age of 18.73 years and standard deviation of 1.19 years). A multi-stage clustered-stratified sampling was used. To evaluate mental health literacy we used the QuALISMental.

Results: The comparing results for both vignettes showing statistical differences ($p < 0,05$) in 90,0% of the mental health literacy items. We observe moderate agreement (Cohen $K > .40$) in the majority of the components, with exception of all items of the component recognition of disorders in order to facilitate help seeking.

Conclusions: Deficits were found in some aspects of schizophrenia and depression mental health literacy of Portuguese youth. Therefore intervention in this area is needed.

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P054 Finding Variations of Adult Self Report Scale for ADHD Scores Throughout Life Span Using Statistical Methods: The Importance for Evidence Based Data According to Aging

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Background: Attention-deficit/hyperactivity disorder (ADHD) is one of the most common mental disorders affecting children till adult life [1]. Symptoms of ADHD include inattention, hyperactivity and impulsivity [2]. The majority of previous adult ADHD studies have focused on children so that relatively little is known about ADHD symptoms and their effects in mid and late life [3]. This study aimed with the use of Adult Self Report Scale (ASRS v-1.1) to copy the differences in the way that ADHD influences a person during his life through a pilot study on a typical adult population.

Materials and methods: In a total sample of 786 typical adults (392 male and 394 female), with an age of 18-92, was given a translated (abiding by the lower criteria of translations) and modified to Greek questionnaire on self-evaluating ADHD.

Results: Statistically significant differences were calculated between 18-30 age subgroup and all the other age spectrum: 30-40 (U= 6747.000, p< .050), 40-50 (U= 6156.000, p= .000), 50-60 (U= 5633.000, p= .000), 60-70 (U= 4921.500, p= .000) and 70plus (U= 4618.000, p= .000). Likewise, statistical difference were observed between different age subgroups. Close age-groups had the same total score, e.g. sub-groups of 30-40 and 50-60 years old.

Conclusions: ASRS v-1.1 provided information about age-group differences, which should be incorporated into research, as other questionnaires [4]. Thus, there is a definite need for better understanding and development of age-appropriate approaches relevant to the diagnosis of ADHD.

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P055 Analyzing test batteries in animal models of psychopathology with multivariate analysis of variance (MANOVA): one possible approach to increase external validity.

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Background: One concern regarding animal models of psychopathology is unclear external validity. One way to establish external validity is to examine measures representing separate facets of the pathology with a battery of tests in the same cohort of animals. Additionally, utilizing the same animals in a battery of tests can help to reduce the number of animals in research. However, issues had been raised regarding the analysis of data coming from batteries and the standard practice is to analyze each test separately. This approach introduces two problems: (1) the analysis answers the question regarding separate tests but not regarding the general effect; (2) there is no correction for multiple comparisons. One way to overcome these challenges is to use transformations to Z-scores. We suggest an additional approach, analyzing test batteries with multivariate analysis of variance (MANOVA).

Materials and methods: To compare the outcomes of Z-score analysis and MANOVA we re-analyzed two published studies where data were initially analyzed separately for each test. Additionally, we computed effect sizes.

Results: The first study tested interaction between sex and lithium in a battery of manic-like behaviors, the second study tested asenapine in a battery of anxiety-like behaviors. For the first study, the MANOVA analysis indicated no effects of sex and a significant antimanic-like effect of lithium and for the second study, the MANOVA indicated a significant anxiolytic effect of asenapine. Z-scores analysis resulted in a significant general antimanic-like effect in the lithium study but failed to demonstrate the anxiolytic effects of asenapine in the second study.

Conclusions: it is possible to suggest that MANOVA is an appropriate way to analyze data from test batteries and that the use of MANOVAs, when appropriate, will increase the validity, predictability and reproducibility of results.

Acknowledgements: Study was partially supported by a grant in aid of research to HE from the Tel Aviv-Yaffo Academic College.

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P056 The Psychology of Neocolonialism and Psychological Liberation of the Mentally Ill through Biopolitical Frameworks in Ghana

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Background: Mental health services, with my research focus on the most prevalent disorders: schizophrenia and depression, are incredibly under-resourced. Ghana has 18 practicing psychiatrists and 3 psychiatric hospitals for the entire country. There are many misconceptions about mental illness; for example, the idea that children of mental health staff acquire mental illness discourages providers from going into mental health care. Due to resource constraints and the stigma attached to mental illness, majority of the population suffering with psychiatric conditions are not treated with psychotherapy or medication; instead, they are sent to spiritual churches or prayer camps where they are sometimes severely mistreated by being chained (sometimes outside in poor weather) or prevented from using adequate medical care.

Materials and methods: The focus of this study will be on the following research questions: “How do Ghanaian mental health institutions and their strategies influence the social ‘othering’ of the Ghanaian mentally ill? How does this not only impact the vulnerable population but also impact voluntary mental health care utilization and mental health care seeking behaviors in Ghanaian society? Are the mental health and asylum systems technological instruments for social and political control?” Through extensive interviewing, a nuanced perspective concerning orthodox and traditional medical systems and how they impact the Ghanaian population’s use of mental health services was gained.

Results: The top 8 major issues identified that impact the use of mental health services are: Societal Stigma, Economic and Political Factors, Education, Transportation and Infrastructure, Health System and Resources, Type of Healthcare, Quantity of Mental Health Professionals, and Culture and Spirituality.

Conclusions: Ideas for improvements to these barriers are a decentralized mental health system, partnership between medical and traditional healing system, and awareness and education through the media.

The legacies of colonial relationships between power, race, culture, medicine, and individual subjects continue to this day in Ghana and other countries in Africa. It is critical for me to present my research on the changes happening in addressing the concerns about mental health and health-seeking and how this may or may not impact the “othering” of the Ghanaian mentally ill population. The field of global mental health, especially Ghanaian Mental Health (which recently passed their mental health law just 6 years ago in 2012), is very new age, and I hope to bring light to the topic in aims to bring more awareness and to let Ghanaian psychiatric issues have a seat at the table.

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P057 A Proposed Research Protocol for investigating the Beneficial Effects of Green Office Buildings on their Workers, with the use of Data analysis

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Background: In recent years, the usefulness of Green Technology along with the implementation of advanced wireless technologies led scientists towards investigating the effects of this advanced Green Technology to Human Resources. A large number of surveys have investigated the impact, of working conditions inside conventional buildings, on health, productivity, and job satisfaction. This research “stream” have led to the green revolution. Insufficient Indoor Environmental Quality (IEQ) has been shown to be the cause or the burden of a pre-existing physical illness such as a respiratory problem (asthma, infections and allergic rhinitis), musculoskeletal problems, and tendency towards psychological effects (cognitive impairment, depression, anxiety, vocal disorders) [1-3]. Labor absence and productivity decrease are related to the aforementioned problems, while the lack of job satisfaction is often referred to as a consequence. Consequently this research is intended to discover the beneficial effects to Greek Human Resources from utilizing Green Office Buildings.

Materials and methods: The following proposed research protocol is comprised of 30 employees working in a conventional building located in a Greek area. The sample does not include people such as smokers, asthmatics, people with known depression or anxiety disorder, and people with chronic illnesses. The first phase of the survey will be conducted by studying the employees during their work hours in a conventional building for a period of 3 weeks, while in the second phase, the workers will move in a green building to work for the same number of weeks. The following tools will be used such as demographics acquisition which will be filled in through a new questionnaire (applicable only in the first stage), the physical condition of employees that will be assessed using the Sick Building Syndrome (SBS) questions, the psychological condition with the use of Warwick-Edinburgh Mental Well-Being Scale (WEMWBS), the job satisfaction with the Minnesota Satisfaction Questionnaire-MSQ and the Occupational Stress Inventory-Revised / OSI-R. Employees’ productivity will be measured with the use of produced reports by their supervisors in both stages of the survey. In addition, it is proposed to use a sensor package including a Netatmo Weather Station and a portable measuring device such as Smart Watch. The measurement will include at least skin temperature and conductance, heart pulse, acceleration and oxygen saturation, while the Netatmo will measure temperature, humidity, CO2 concentrations and sound levels in dB on a regular basis.

Results: The methods that will be used will include probably t-tests in order to examine differences inside the worker' group of Green Building and the control group (working in a typical building). As the sample will be of small size, Kruskal-Wallis tests will be employed as they are the most appropriate for these occasions. Additionally, Mann-Whitney U tests will compare the two groups relevant to a same collection data type. It is expected that employees working in a green building will exhibit increased productivity, reduced work-absences, and at the same time they will improve any physical problems or eliminate psychological problems which emerge from the working conditions inside a conventional building.

Conclusions: Alteration of working environmental conditions can affect positively the physical and psychological health of workers. The later has been shown by various surveys which they have compared the green buildings with conventional buildings. This study wants to confirm the aforementioned in the case of our already developed protocol named as Reduced Ecological Footprints of Modern Facilities (REFF) [4].

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P058 Pregabalin use in the treatment of opiate and alcohol dependence

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Background: In this observation study, preliminary results of the use of pregabalin for opioid and alcohol dependent patients, already using benzodiazepines, are presented. Pregabalin has been used for treating withdrawal symptoms of opioid, benzodiazepine and alcohol dependence with beneficial results

Materials and methods: 36 outpatients (32 men and 4 women), all previously addicted to opiates or alcohol and currently under benzodiazepines, took part in the study. Patients using opiate substitutes or neuroleptics were excluded. 12 of them were also using pregabalin, and thus they were divided into two groups. Patients were evaluated with Beck anxiety inventory. Anxiety score and daily doses of benzodiazepines and pregabalin were recorded at the start, and every 3 months during the survey.

Results: The analysis of data showed that patients on pregabalin showed lower anxiety levels (44,66 vs. 51,54 $p=0,008$) and lower, but not statistically significant benzodiazepine daily doses (mean alprazolam 2,8mg vs 3mg, bromazepam 7mg vs 7,8mg, and chlorodiazepoxide 30 vs 37,5) at the first three months of pregabalin use. A new statistical analysis will be done after adding more participants to the survey.

Conclusions: By this study it is shown that the use of pregabalin can help alleviating the anxiety and abstinence symptoms and reducing the use of benzodiazepines for former opiate and alcohol addicts.

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P059 Preliminary Design of a Smart Logic, Electronic and Green Public Health Questionnaire (SLE-GPHQ) for investigating the Proper Compatibility between People and Green Facilities

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Background: The new era of the continuous deployment of wireless and sensory technology in conjunction to the rapid expansion of Green Buildings' has led to a point of developing and enforcing specific rules and conditions. These conditions depend on the proper matching of Peoples' temperament and Green Smart Buildings. In parallel, the rules are relevant to the constructed Protocols for accomplishing the most efficient result relevant to the proper implementation of Green Buildings (LEED - Leadership in Energy and Environmental Design). This preliminary work is intended to find the best match between Habitants (or Workers) and Green Buildings based on an already proposed Protocol named as REFF (Reduced Ecological Footprints of Modern Facilities) [1].

Materials and methods: This work will firstly focus on the needed conditions in order to obtain a health green environment which should be consisted of nine fundamental elements which are proposed in [2]. These will include high quality of air quality (Indoor Air Quality - IAQ), the use of proper ventilation, thermal health, high water quality, minimized moisture, safety and security, reduced noise, proper lighting (frequencies below 100 Hz are prohibited) and absence of dust. Secondly our already constructed protocol of REFF [1] will be applied and readjusted relevant to the aforementioned. Then, 40 people will be tested into various green environments inside the same LEED Building (for two weeks) while using various personality tests [3] and productivity measurements in order to construct a map of Green Environment to Character Correspondence named as GEtoBCC. After this procedure, an electronic questionnaire will be constructed which will primarily be constituted of nine parts. Each part will correspond to one of the nine fundamental elements in conjunction to REFF. The Smart Logic will be based on Python, HTML and or MATLAB code in order to rearrange the questionnaire relevant to each personality. This will conclude into better foreseeing the proper environment for each Habitant/Worker.

Results: Twenty people (10 men and 10 women) along with a control group of twenty people

(10 men and 10 women) will be tested under different green environmental conditions. The control group will correspond to people working in a typical conventional building. In general, smokers will be excluded from the sample [4] and thus it will probably be split into independent subgroups relevant to character correspondence [3]. Consequently ANOVA will be employed in order to compare the unrelated “character” groups. In turn, and if the distribution of different populations is normal, a t-test will be used to compare each population with the mean of the control group. Then, Kruskal-Wallis tests will be conducted as they are the most appropriate for such small samples exhibiting exceptional results. Also, in the occasion of skewed variables, Mann-Whitney U tests will compare the different “character” groups relevant to a same data type collection. It is expected that the different “character” groups will interact differently inside altered green environments. This will help scientists, ranging from engineers to psychologists and other clinicians, to find and determine a viable solution relevant to the proper correspondence of population to various types of green buildings.

Conclusions: This work is focused on the construction of a new questionnaire named as SLE-GPHQ in conjunction to the rules proposed by REFF protocol [1]. This electronic questionnaire will be self-adaptive to different types of answers and consequently will lead to the proper estimation of the appropriate “character” corresponding to the compatible LEED Building. If the aforementioned tactics will be employed in the case of people being moved at LEED Buildings then the final resulting populations of these facilities will be cohesive and will act towards the best possible maintenance of the new micro-environment.

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P060 The impact of Green Systems and Signals on the Health of Green Residences' Habitants

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Background: The promotion of green growth has been a strategy for developed countries by improving the energy performance of residences. This tendency will help towards overcoming the continuously increasing greenhouse effect because the contribution of typical residences to the production of air pollutants is extremely high. Housing conditions (indoor air quality, building and furnishing materials, noise, humidity, temperature, lighting, dust, tobacco, chemical cleaners) have been a forming factor of the physical and mental health of residents. The proposed survey aims to investigate the impact of Green Residences on the physical and psychological health of their occupants. The design of these residences will include REFF Protocol [1]. This investigation will be focused on correlating the Indoor Environmental Quality (IEQ) with the residents' health and quality of life.

Materials and methods: The sample of the proposed research will include 30 families (adults with children) living in conventional houses and 30 families living at least one year in green houses in the Greek area. Adults and children with chronic illnesses such as asthma, chronic obstructive pulmonary disease, allergies, mental health problems, and Sick Building Syndrome (SBS) symptoms will be included in the survey to assess their burden or health improvement according to their living conditions over the past year. All kind of smokers and people with voice disorders will be excluded from this research [2] [3] [4]. In the proposed research protocol, the following questionnaires will be included: The demographics of the participants will be filled in an impromptu questionnaire, the physical condition will be evaluated with the Sick Building Syndrome Questions and additionally will be recorded in a self-improvised questionnaire concerning the past year, the Psychological condition will be recorded with the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) and the quality of life with the SF-36 Health Profile.

Results: Green residences are expected to greatly outperform conventional ones over time as they offer improved living conditions, superior electronic micro-environmental systems and at the same time low radiation sources (e.g. Wireless devices with adaptable and extremely low

energy transmitted signals). In particular, we predict that residents of green houses will experience lower incidence of symptoms such as sick building syndrome (dizziness, headaches, nausea, coughing, tiredness, nosebleeds, breathing problems, blurred vision, wheezing, sneezing, ear infection, skin rashes). Additionally, it is quite likely that chronic conditions, such as asthma (in adults and children), chronic obstructive pulmonary disease, allergies and cardiovascular problems, will show a remission in the symptoms. In addition, residents of green houses will outperform in mental and neurological health. The corresponding levels are intertwined with the quality of life's index which is expected to exhibit a high score.

Conclusions: Green residences sustain living conditions which promote the health of the beneficiaries and, in particular, appear to have a positive effect on the physical and mental health of their occupants, while improving their quality of life.

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P061 Audit into VTE (venous thromboembolism) risk assessment on psychiatric wards

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Background: VTE carries a significant risk of morbidity and mortality, an estimated 25,000 people in England die from preventable VTE every year. Treatment of non fatal VTE and related long term morbidities is associated with considerable costs.

Psychiatric in-patients have unique risk factors for VTE, such as the use of antipsychotics, sedation, catatonia or restraint. These may be in addition to the risk factors that NICE (National Institute for Clinical Excellence) state.

Over the last year there have been 3 incidents of hospital acquired VTE in our trust. NICE guidelines state that all patients including those admitted to psychiatric inpatient units should be assessed on admission for their risk of VTE.

The aims of this audit were:

1. Assess compliance of NICE guidelines for completion of VTE Risk Assessments
2. If there is no evidence of a completed VTE Risk Assessment, assess for documented evidence of the patient being at increased risk of VTE

Materials and methods: Data was collected retrospectively from two inpatient wards (40 patients)

Results: Of the 40 patients, 0% had a VTE assessment completed during their admission. 11 patients (27.5%) were found to be potentially at increased risk of VTE.

Conclusions:

The following suggestions were implemented

- Education regarding VTE risk assessments was arranged for all doctors
- Completion of the VTE risk assessment to be monitored by the pharmacist and consultant
- Teaching arranged for nursing staff regarding the measuring of anti embolism stockings
- A patient leaflet was created to provide information on VTE



P062 Improving baseline ECG recordings on inpatient wards

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Background: It is well established that antipsychotic medications are associated with adverse effects such as cardiac arrhythmias

Materials and methods: An audit cycle was completed to assess if there was an improvement in the completion of ECG's on a 19 bedded female general adult ward after the implementation of the allocation of a room, time slots and the installation of better equipment.

Results: The initial audit results revealed that only 1 (5%) of the 19 patients on the ward had an ECG completed during their admission. 16 (85%) of the patients were on an antipsychotic medication.

Staff used an ECG transmitter device, which sent recordings via telephone to a cardiologist for their expert interpretation.

The difficulties in completing ECG's were explored with ward staff.

The main reasons were that relevant equipment was not available on the ward. There was no allocated time to complete ECG's. There was also some uncertainty regarding staff's roles and responsibilities.

A telephone was installed in the ward clinic and 2-3 time slots were arranged each week for the physical health practitioner to complete ECG'S.

There was an improvement in the monitoring of ECG's 4 weeks after these changes were implemented. 14 (74%) of the 19 patients had an ECG recording completed, 2 patients refused and 3 patients hadn't been offered.

Conclusions:

- ECG's were not routinely completed during admission
- It was important to explore the barriers and difficulties to completing ECG's
- The main difficulties were lack of an allocated room with adequate equipment and uncertainty about roles
- Simple changes led to an improvement in ECG monitoring

P063 Desvenlafaxine succinate in depressive patients, Peru

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Background: There are depressive patients not responding to Selective Serotonin Reuptake Inhibitors (SSRI), with evident risks caused by Depression, like suicide.

Materials and methods: An Open-Label trial to assess safety and efficacy of Desvenlafaxine Succinate (Selective Serotonin and Noradrenaline Reuptake Inhibitor) (SNRI) in patients of NIMH, during 2015-2016, with diagnosis of Major Depressive Disorder (DSM IV -RT), applying Hamilton Scale Rating for Depression (HAM-D 17), who had received, at least, 2 different SSRI without depressive remission along 1 year. Desvenlafaxine 50 mg was administered for 6 weeks. Pregnants, Hypertensive or cardiovascular disease were excluded.

Results: They were studied 59 patients: 16 males (27.1 %), 43 females (72.9 %), aged between 18-72 years old . According HAMD-17, all 59 patients ranked 7 or more points. After 6 weeks, they were found 7 or more points in 18 pats (30.5 %), while in 41 pats(69.5.0 %) less than 7, a difference with statistically significance ($p < 0.005$); no significant differences in gender. Major side effects of desvenlafaxine: nausea, dizziness, nervousness, and in 15 % of pats. mild Blood Pressure elevation.

Conclusions: Following the trial, Desvenlafaxine looks safe and secure as an antidepressant in this sample, perhaps due to its dual mechanism of action (SNRI), having account the method used here; so, authors recommend controlled, randomized, double-blind studies, and extended samples.

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P064 The effectiveness of teaching attribution on achievement motivation and psychological helplessness in students

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Background: An early intervention teaching attribution program in students at risk of learned helplessness may achieve an optimal outcome, before a possible consolidating of mental disorders occurs.

Materials and methods: The purpose of this study was to investigate the effectiveness of teaching attribution on achievement motivation and psychological helplessness in students. The research method was semi-experimental and pre-test and post-test with control group and follows up design. In this open clinical trial, 40 students who were between the ages of 16 and 18, had been assigned to two random groups of experimental and control. Before the intervention began the average score of the questionnaires between the two groups was comparable. In the intervention group, teaching attribution program was held based on the model of behavior change, for 8 sessions (two times a week). To assess the achievement motivation and psychological helplessness, the two questionnaires Soolomon & Rothblum Psychological helplessness Questionnaire (2010) and Hermanns Progressive Motivation Scale (2011), both with approved reliability and validity, were used.

Results: Data analysis was performed using covariance. The results indicated that training the attribution on the improvement of psychological helplessness and the motivation for the progress of the experimental group was effective. At post-treatment, 69% of the experimental group showed a significant improvement in helplessness and achievement motivation, at follow-up, the proportions decreased to 60%. No predictors of dropout or treatment response were found.

Conclusions: Therefore, it can be said that these results, although preliminary, suggest that, a attribution training program can be used to increase the achievement motivation and reduce the psychological helplessness of students.

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P065 Fostering adaptive stress management via technology-mediated mindfulness practice: self-report and psychophysiological evidence

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Background: Mindfulness practice have been shown to reduce stress in clinical contexts and to improve psychophysical well-being [1]. However, the fact that traditional approaches require intense exercise and constant commitment often acts as an obstacle for beginners. It has been proposed that supporting mental practice with body-sensing devices able to track and provide a feedback on progresses over time might lower the negative impact of such requirements [2, 3]. The present study aimed at testing the potential of an intensive intervention based on awareness practices and supported by a wearable device for improving self-regulation and stress management skills.

Materials and methods: Forty participants were randomly divided in an active control and an experimental group. Both groups were involved in a structured four-week intervention constituted by brief daily activities. The experimental group, differently from the active control one, underwent mindfulness-based practices with the support of a dedicated brain-sensing device. Pre- and post-intervention assessment data were compared to test effects of the intervention on physiological (cardiovascular measures: heart rate and variability) and subjective markers of stress.

Results: Data analysis highlighted a relevant decrease in stress and anxiety measures in the experimental group. Participants in the experimental group also showed improved physiological markers of relaxation and parasympathetic tone (sdNN - standard deviation of inter-beat intervals) during resting-state recording and during a challenging cognitive stressor task.

Conclusions: Findings suggest that the intensive technology-mediated mindfulness intervention has lead to an improved positive change in subjective well-being and in bodily stress responses even with respect to the active control intervention.

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P066 The effect of musical training on attention skills: behavioural and electrophysiological evidence

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Background: Understanding adaptive mechanisms underlying the development of musical competence may inform specific training programs aiming at performance enhancement as well as neurorehabilitation [1]. Nonetheless, such learning mechanisms are still understudied and have been mostly investigated via behavioural and neuroimaging techniques. The present study then aims at testing differences in cognitive functioning between people trained and not-trained in music. Namely, we will focus on both electrophysiological and behavioural markers of monitoring and attention control

Materials and methods: Eighteen participants were presented with an omitted tone task, which taps on endogenous orientation of attention skills. In addition to performance data (accuracy and response times), EEG responses to both actual and omitted tones have been processed to compute their spatial components (independent component analysis- ICA) and time/frequency dynamics (power spectra, event-related spectral perturbation [2] and inter-trial coherence [3]).

Results: As for behavioural performance, we found that musicians were more accurate to predict the onset of omitted tones, confirming that their auditory-motor skills were more efficient. As for electrophysiological data, the analysis of time/frequency oscillatory responses highlighted four primary clusters of electrophysiological activity and showed that expertise in music is respectively associated to a greater theta, alpha and beta reactivity, which may reflect an adaptive response of brain oscillatory activities.

Conclusions: Present findings provide further evidence that EEG is a valuable tool to help our understanding of adaptive mechanisms fostered by musical training and hint at the potential of musical training in modulating and strengthening cognitive and attention skills.

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P067 Promoting healthy aging via neurocognitive empowerment: electrophysiological and neuropsychological outcomes of an intensive intervention protocol

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Background: Besides being characterized by increased psycho-physical frailty, physiological aging is also a dynamic process that shows potential for adaptive modifications of neural and cognitive processes [1]. Such opportunities to strengthen cognitive functioning can be fostered via empowerment protocols. In particular, given their crucial role in everyday activities and in successful aging, prefrontal executive functions and their neural substrates may be a critical target for cognitive and neurocognitive interventions based on non-invasive brain stimulation (NIBS) [2].

Materials and methods: In order to investigate the potential of intensive cognitive and NIBS protocols for empowering cognitive and attention control in healthy elderly people, we designed a longitudinal three-branch study. Thirty-two participants were divided into NIBS, cognitive empowerment, and control groups and underwent pre-intervention, post-intervention, and follow-up neuropsychological/electrophysiological assessment. The intervention period lasted eight weeks, with three sessions per week.

Results: The analyses of neuropsychological and electrophysiological (event-related potentials, ERP) data across the assessment steps highlighted that a specific response to the empowerment interventions, with better performances at tests tapping on executive functions and increased ERP responses to a challenging attention task. Such effects were partly maintained at the follow-up.

Conclusions: Present findings are consistent with evidences on the role of prefrontal cortex in supporting executive control [3]. Structured neurocognitive empowerment protocols may then help to improve cognitive abilities in healthy elderly people as well as their quality of life, as suggested by participants' reports on subjective increase in everyday functioning.

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P068 Technology-supported mental training to improve performance in sport

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Background: Mental training has a long tradition as a supportive technique to foster mental strength and focus and to increase bodily- and self-awareness in sports. Nonetheless, such form of training often require notable engagement and regular practice to induce a relevant increase in athletes' well-being and performances [1]. Supporting such traditional techniques with wearable neurofeedback devices might help reaching desired goals quicker and might make such training more accessible, in particular, to beginners [2, 3]. The study aimed at testing the effects of intensive integrated mental training with reference to focusing and cognitive control abilities in athletes, by combining mindfulness practice with real-time feedback from a brain-sensing device.

Materials and methods: Ten young soccer players took part in the study and underwent an intensive 14-day mental training intervention. The intervention included daily practice of focused meditation on breathing with the support of a wearable brain-sensing device, which provided practicers with real-time feedback on their focused vs. distracted mindset. Performance at attention and cognitive control tests as well as electrophysiological assessment data were compared pre- and post-intervention to test its effects.

Results: Analysis showed that, after 14 consecutive days of technology-supported mental training, athletes improved their scores at a standardized test tapping on attention and cognitive control. Further, their automatic electrophysiological responses (N200 event-related potential) mirroring attention orientation toward target stimuli were heightened.

Conclusions: First evidences suggest that, even after 14 days of activity, the intensive integrated training combining mindfulness practice and real-time feedback from a brain-sensing device might induce adaptive improvements of cognitive performance efficiency.

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P069 A preliminary proposed scheme for Smart talking Green Environment (STaGE) using empathetic voice signal rules for implementation into Green Systems

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Background: Green residences are known for their innovative character towards living conditions and low energy emissions. Their reduced ecological footprints design is not only limited to aforementioned but also include the construction of better environmental spaces and conditions even through transforming conventional buildings. Moreover, the psychological factor plays an important role in redefining and updating the already developed green logic. If we concentrate into implementing an evolutionary smart talking environment then we should also take into account the proper voice characteristics, expressions and time length of voice announcements or interaction. Especially, the robotic voice should exhibit “empathy” towards the needs of the “green habitant”. Consequently, this scheme has the purpose of redefining the proper communication mechanisms that should be applied on already developed voice hardware which are intended for smart green residences. This scheme is compliant with an already developed protocol named as Reduced Ecological Footprints of Modern Facilities REFF [1].

Materials and methods: The primary purpose of this study is to place the proper foundations for designing a scheme which will include step by step information for constructing a voice protocol. This protocol includes 10 rules to be applied, even in already constructed systems. The first rule is the ability of the system to self-adapt in the presence of a human. This self-adaptation needs the implementation of micro-cameras along with microphones. The first rules’ function will be to monitor continuously the human habitant (in the field of vision of each device). This will help each Digital Processing System (incorporated in every system) or a general monitoring system to quick adapt to the subject’s emotional status. This will include the proper adaptation of robotic speech and of the optional emoticons’ projection on the screen of the smart device (e.g. refrigerator, washing machine, etc.). The 2nd rule is the adaptation of the robotic voice pitch. E.g. higher pitch would be more emotional. If a bad habitant’s condition

is sensed, then the pitch (0 - 100) of the robot should be lower in order not to trigger further emotional burden. In this occasion, the voice will be perceived as less pleasant but will empower the habitant through its stronger perceived personality. Normal pitch has a mean value of 50, while the lower pitch exhibits a flat and monotonically observed sound [2]. The 3rd rule takes into consideration other variables such as volume, timbre and speech rate which their proper adjustment will lead to a more empathetic or non-empathetic robotic voice. The 4th rule will include the proper selection of gender's (female, male) or a child's voice (the latter only in the case of addressing to young children). Especially the last case of the robotic child's voice will help towards avoiding accidents and towards the proper learning process of hazards. The robotic child's voice and the proper figure projections on a screen will act in a mimetic manner from the child's aspect towards avoiding the danger (primary prevention) in the case of an imminent misuse of an electric appliance inside a Green Residence. The 5th rule is specialized into creating a more humorous character when other rules won't have the expected impact. The recommended type of humor as declared in [2] is the "innocent humor" which is definitely inoffensive. This type of self-adaptation will be furthermore empathetic and at the same time will try to pass in the mind of the habitant the key points towards avoiding dangers. In turn, this robotic behavior could help also the better social interaction of the habitant as it will improve his/hers mood. The 6th rule incorporates the feedback function which will be a common feature in all smart devices. The feedback function will transport in high data rates the information relevant to the mood of the habitant and other vital information to the next near device. Consequently, all devices will cooperate for the best possible safety even with the use of voice scenarios cooperation. This will be consisted of various types of voices when the system perceives high imminent danger. Network support should also be enabled in order to alert public health services of primary health care. The 7th rule contains update capabilities in order for the smart devices to be promptly reinforced with up-to-date voice functions. The 8th rule contains identification of voice disorder protocols. This function also includes conducting in parallel a minor psychological evaluation for prompting the habitant with proper counselling towards addressing to primary health care services. The 9th rule will include an advanced disguised protocol which will use Voice Handicap Index (VHI) for further obtaining the screening status of the habitants. The domains of VHI consist of the physical, functional and emotional parameters [3] [4]. The 10th rule consists of quick logical decisions in order to identify and act rapidly in times of situations beyond danger (E.g. Sudden events such as quick escalated fire). The voice then becomes monotonic with low pitch, high volume and mean speech rate while system uses all available devices to quickly help the habitant to abandon the residence or green facility through voice commands.

Results: Fifty people (25 men and 25 women) constituting a typical group of subjects without any kind of clinical disorders will be recruited in order to participate in all 10-different kind of scenarios (character variations) inside a building complying to REFF Protocol [1]. Consequently, 10 independent groups will be formed which will participate only in one different scenario. This will certify that the answers in an impromptu questionnaire will be independent of comparison. The employed statistical strategies will include the correlation of same and different parameters inside the 10 different experiments. Also, Wilcoxon signed rank test in order to detect differences in ratings between the ten different scenarios. Moreover, Kruskal-Wallis tests will be applied being the most appropriate for such small samples. Also, if applicable, the Mann-Whitney U tests will compare the different "character" groups to a same data type collection. It is expected

that people when annoyed will react efficiently in the presence of empathetic voice. Moreover, females will react differently to female empathetic voices as in [2]. This probably will show that female participants want more professionalism or probably a male voice instead of a female.

Conclusions: This research is a part of the construction of an enlarged protocol which will be generalized for all green buildings. Specifically, the “voice interaction” is a significant part of the Green environment as it humanizes the green technological environment offering more safety and better correspondence to the needs of the habitants. Also, an important factor is utilized which is the application of Primary Health Care. This idea also could be applied to “small talking places” in the dimension of ATMs inside Hospitals, Schools and Public Services.

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P070 Revolutionizing E-learning with the proposition of Matrix Based-Artificial Intelligent Decisions (MB-AID) taking into account the best practices towards each person's psychological condition

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Background: Throughout the history of e-learning, the people with disabilities had to face a lot of omissions relevant to every aspect of their learning procedure [1]. These problems ranged from improper web designed pages to the improper way of confronting these types of our fellow citizens. This research takes into consideration the need for radical changes into e-learning process and especially the need for breakthrough changes towards e-class design while it introduces a new way for assessing people and especially patients suffering from severe psychological problems. The latter could be accomplished by properly calibrating the innovative e-class environment (by an Artificial Intelligent System) through audiovisual and self-perceived measurements [2]. These measurements could be split into various matrix-based robotic decisions for properly estimating the condition of a person interacting with the e-class environment. This in turn will not only benefit the final user from the aspect of best e-learning but also to properly warn him/her for potential psychological problems that could be addressed with the use of a clinician (E.g. Ophthalmologist, Psychiatrist, Psychologist, Speech Language Therapist, etc.). Also, the proposed system could be part of an advanced scheme such as the Reduced Ecological Footprints of Modern Facilities REFF [3].

Materials and methods: The research is focused on a protocol which introduces the way of designing and constructing a viable smart e-learning environment. Moreover, this protocol is so flexible that it can be implemented in a large variety of applications and systems. It consists of two parts. The first part describes the needed hardware along with the imminent rules of designing the proposed e-learning system. The second part is relevant to the proper mathematical conditions in order the system to behave autonomously. Specifically, the first part has two protocols (P1 and P2). The P1 dictates the use of a micro system including seamless video and audio capturing. The specifications include a very high resolution micro-camera and an audio system with sophisticated filtering capable of distinguishing several voice streams among

a complicated audio sample. The P2 is relevant to the Digital Processing System (DSP) which recognizes every body movement and expression in order to analyze primarily the psychological and even the clinical condition if the latter is possible. The e-learning system exhibits a self-guided behavior. It auto arranges based on the type of the trainee's character, disability or even his/hers psychological condition. Typical population will confront a screen split into two sides. In one side the video lecture of the trainer will be shown while in the other side various digital notes will be displayed. The system will react to the psychological condition of the trainee and it will sometimes focuses to one of the two displayed sides-parts. Nevertheless, if the trainees are individuals with disabilities then the system environment will radically change. E.g. A deaf person will see a screen with the trainer communicating in sign language while notes will be displayed with enlarged fonts. The procedure will be conducted automatically by the system based on its sensors. During also the whole training procedure various popup messages will interact with the trainee using artificial intelligence logic. The second part is relevant to the mechanism of the system's decisions. This mechanism includes matrices which have at least four elements which are named as C1 ("advantageous decision"), C2 ("others' effect"), C3 ("disadvantageous decision"), and C4 ("psychological value"). All their values are expressed in 10-points scale. C1 corresponds to a soft decision (0-10) relevant to the right-taken decision, C2 and C4 correspond again to a soft decision (ranging from -10 to 10). C2 and C4 correspond to the user's contribution to the final system's decision and to the psychological condition. E.g. If $C2 < 0$ then the person has a negative psychological condition and vice-versa. If $C4 < 0$ then the person has a strong effect to the system while else, the person has a weak effect. Finally, the C3 factor takes always positive values and it corresponds to the false-taken decision. With the proper algorithmic application of the aforementioned factors, the e-learning system will adapt while it could determine one's mood or psychological condition.

Results: A small sample consisted of 60 people (30 men and 30 women) and a control group of 20 people (10 men and 10 women) will be tested in using the proposed system. Prior to testing procedure, the participants will be asked to fill in the SCL-90-R questionnaire in order to be determined their current psychological condition. After the procedure, the participants will be asked again to fill in two questionnaires. These two impromptu questionnaires will examine firstly the satisfaction from using the proposed system (questionnaire 1) and secondly the distant learner's satisfaction (questionnaire 2) [4]. The statistical evaluation methods will include various tests such as Wilcoxon signed rank test in order to define the differences between various detected groups of psychological conditions and Mann-Whitney U for finding the differences of all groups compared to the control group. Also, depending on the type of distribution, other tests will be conducted such as t-test, Anova and cluster analysis. Generally, a predicted result would be the higher efficiency in working with such an e-learning system along with revitalizing the will to study more.

Conclusions: The proposed research is multidimensional as it has 3 goals to accomplish. The first goal is the appropriate protocols to be applied in order the system to be consisted of the needed hardware. Then the system should be well designed in order the e-learning system to be self-adaptable to various different trainees' needs. The final goal will acquire significant results from an add-on research through the construction and validation of impromptu questionnaires. Consequently, this research will not only be beneficial from the aspect of proposing an innovative system but furthermore will involve the construction of two very significant ques-

tionnaires which will be updated to provide satisfaction evaluation of edge e-learning systems. Future benefits will also involve security recognition systems for detecting probable human threats for nearby habitants or workers.

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P071 ICD symptomatology in Parkinson's Disease: First data from a cohort of patients

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Background: Several studies have described, among other non-motor symptoms in PD, Impulse Control Disorder symptomatology. The aim of the present study is to explore the prevalence of these symptoms in a large cohort of patients.

Materials and methods: This is a retrospective study. The original patient pool consists of 861 PD patients examined at the Specialized Movement Disorders outpatient clinic of the First Neurology Department of the National and Kapodistrian University at Eginition Hospital. A case-by-case investigation was performed to identify patients with non-motor symptoms, which were then classified in several categories. Comorbidity with other neurological and previous psychiatric disorders, or limited number of visits were considered as exclusion criteria.

Results: One hundred and four were identified with at least one ICD, out of which 31 manifested more than one ICDs. The most frequent ICD (64 patients) was food-related (binge eating). Thirty patients demonstrated compulsive buying, 23 patients exhibited gambling behavior, and 14 patients manifested hypersexuality.

Conclusions: ICDs are shown to be common among a subgroup of PD patients demonstrating non-motor, psychiatric symptomatology. Such symptoms may affect the patients' course (for example, patients' compliance to treatment and overall co-operation). Relationships between ICD symptomatology, clinical and demographic variables, as well as type and duration of pharmacological treatment, are also discussed.



P072 Standalone Empathetic Intelligent Monitoring System (SEIMoS)

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Background: In the modern era of vast communication and information dissemination the need for radical security measures must be addressed. Specifically, as the Internet has a tremendous influence on people and especially on younger ones, new threats are added to existing ones such as the Blue Whale phenomenon [1]. The latter is continuously growing with the corresponding suicide rate to equally arise while being already beyond acceptable values. Especially in some countries the percentage is really high denoting that immediate confrontation is needed. Many solutions can be found but the most proper should be found in any means of electronic monitoring and intervention. In turn, this autonomous monitoring system will exhibit empathetic characteristics. This system will have the capability of working locally but can also be connected to every network in order to alert security services for quick on-site intervention. The hardware part of the system will contain wired and wireless sensor nodes which will conduct measurements from various points of the body, as well as from various peripheral devices that are close to it. The software part will include a database and a local application to store the information acquired by sensors. In turn, the feedback will be processed algorithmically based on significant principals of psychotherapy in order the system to influence the users through multimedia interaction (empathetic approach) for the sake of their mental health. Also, additional features will be available for the sake of their relaxation or their stimulation for carrying on their work. The proposed scheme is named as Standalone Empathetic Intelligent Monitoring System (SEIMoS) which is based on Freudian psychoanalysis.

Materials and methods: This research has the purpose of investigating a viable solution towards the continuous clinical monitoring of people in order to act as precaution beneficial measure. By properly classifying the various stage procedures of SEIMoS such as its input information acquisition (by sensors) and the signal processing part, the system could be split into three major subsystems. The first subsystem includes all the sensory components, the second subsystem

is directly related to the software innovative operation while the third subsystem is the algorithmic implementation of Freudian psychoanalysis into the software of the system. The latter enhances the system for exhibiting empathetic reactions in order to confront potential hazards such as imminent users' suicide attempts. A small but significant detail is that each subsystem has digital signal processors (DSPs) acting as an additional intermediate security firewall against network attacks. Albeit this adds more complexity to the system, it is a needed part for not compromising the health of the monitored subjects in any case of potential security violation. The first subsystem includes various sensors, located or integrated in the keyboard, mouse, monitor screen, desk, footrest, inside buttons, chair, and in the perimeter of the user's position. Additional supported sensors could be based on the body wireless sensors network (BWSN) technology [2]. Generally, these sensors will measure transpiration, pressure (diastolic and systolic), heartbeat, body temperature, and vibrations. Also, an integrated oximeter on a device such as a "mouse" could even provide other vital information. Furthermore, additional technologies will be part of this subsystem such as face recognition with high detail sensing for recognizing facial features like the movement of the eye's pupil (expansion or contraction), of the eyebrows or even lips' micro movements. Also, audio will be processed automatically regarding the spoken words and the voice quality relevant to potential disorders [3]. The second subsystem is the software system with the capability of combining different results for activating various procedures. One of the procedures could be the immediate self-adaptation of the system relevant to an imminent hazard. Then, the system could interact with the users in order to notify them or to "persuade" them to act differently. For example, if the users interact with "Blue Whale", then the system will adapt and start to show messages or advertisements with subconscious messages. These will help changing their mood and consequently to make them abort the "Blue Whale" procedure relevant to an imminent suicide. Also, the system could even control devices compliant to IoT (Internet of Things). E.g. If a sensor (mouse device) sends the information of increased moisture or transpiration, along with a probable rise of user's circumferential temperature then the air conditioning will be activated for adjusting the microclimate. Finally, the third subsystem is the heart of the proposed scheme as it acts based on Freudian Psychoanalysis which will be implemented as the decision maker into second subsystem. This theory claims that the pleasure principle drives a person towards the instinctive seeking of pleasure or death. This seeking is combined to the avoidance of pain for satisfying the biological and psychological needs. So, the system will constantly measure the satisfaction of the users and their psychological condition in order to identify if they experience pain (psychological or physical). Consequently, the id (type of the personality) of a user could be easily understood by the system when six values (10-scale) will have been measured. These are the positive satisfaction (PS - seeking of pleasure), the negative satisfaction 1 (seeking of death - aggressive towards others), the negative satisfaction 2 (seeking of death - self aggressive), avoidance of pain 1 and 2 which exhibit positive or negative values respectively, and finally the estimation or the already known knowledge of clinical condition. Even if this condition is not known this is not a prohibitive factor for the system to conclude to an action towards the user. E.g. If a user exhibits positive satisfaction and at the same time a negative avoidance of pain then these measurements indicate a potential masochistic subject. Also, if a user is measured of having negative satisfaction and positive avoidance of pain then he is a not a potential victim of "Blue Whale". If the aforementioned six factors are implemented inside the third subsystem then the latter can understand the users' condition and accordingly to act empathetically for helping them to supersede various hazardous psychological or clinical emerged conditions.

Results: This research will be carried out in at least three different places which would be inside typical buildings, inside a LEED building [4] and finally a building which shares elements from the previous two types of buildings. 150 people (men and women) will be split into three teams of 50 subjects. All the subjects should be analyzed prior to the use of SCL-90-R in order to determine if they are typical users. Also, another impromptu questionnaire will be filled in for determining the type of a possible physical illness and for correlating the results of this category of subjects to possible system's unpredicted results. After the procedure, all the subjects will be evaluated again with a new impromptu questionnaire based on the system's employed Freudian Psychoanalysis' factors. Then, statistical analysis will be conducted along with the goal of finding correlations between typical people having physical illnesses and various confronted conditions such as "Blue Whale" phenomenon. The anticipated tests will probably include cluster analysis along with Wilcoxon signed rank tests. In fact, a prediction would definitely be that typical population, having a physical illness and being in a negative avoidance of pain, would be candidate of heavy influence not only through Internet but also in real life.

Conclusions: This study has two perspectives. One is the research towards creating an evolved interactive electronic system while the other prospective is to construct a new questionnaire which will be even used for monitoring purposes. Specifically, the Standalone Empathetic Intelligent Monitoring System aims to promote the decisions of every electronic interactive system to a higher intelligence level (with the support of sensory technology). The constant use will enhance this system as it will learn and adapt according to special conditions such as imminent suicides, deaths from other causes or even typical needs of a better micro climate inside a typical or a green house. The prototyping's anonymous results will be saved to a database in order to discover new factors of estimating the clinical condition of a person along with the evaluation of the results from the system's intervention to users' decisions. Another significant result would be the validation of a new questionnaire which will be further enhanced based on the feedback from the electronic prototype platform. This questionnaire based on Freudian Psychoanalysis will be a significant predictive tool in the hands of a clinician.

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P073 Bullying victimization: Associated contextual factors in a Greek sample of children and adolescents

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Background: School bullying is increasingly recognized as an important factor affecting both individual's well-being and social functioning [1]. Several studies provide evidence for the potential role of contextual factors that relate to bullying victimization such as the socioeconomic status of the family, the quality of home environment, the school climate, structure and ethos, and also various community characteristics [2][3].

Materials and methods: The aim of this school-based, cross-sectional study was to investigate the relations between the subjective impression of bullying victimization and several sociodemographic and socioeconomic factors in a sample of Greek children and adolescents. Bullying victimization was measured through a simple "yes/no" question. Also, demographic and socioeconomic data about the families of children and adolescents were collected. A total of 1588 children (51.8% females, mean age \pm SD: 12.9 \pm 2.8 years) were assessed.

Results: The overall prevalence of victimization was 10.4%. Multiple logistic regression analysis on the probability of being victimized identified that the living at a main urban center (Odds Ratio[OR]:2.63,CI:1.78-3.87, $p < 0.001$), the presence of a person with a chronic illness at home (OR:1.90,CI:1.12-3.20, $p = 0.016$), the poor family economic status (OR:1.83,CI:1.05-3.20, $p = 0.032$), and the increased number of adults at home (OR:2.00,CI:1.00-3.77, $p = 0.041$) had a positive correlation with the prevalence of reported bullying victimization. Moreover, higher parental educational level related to lower probability of bullying (OR:0.88,CI:0.78-0.99, $p = 0.05$).

Conclusions: These findings demonstrate the extent to which several demographic and socioeconomic factors play a potential role in bullying victimization among schoolchildren [4]. Our results highlight the need to also consider the influence of contextual factors in the design of targeting efforts countering and/or preventing bullying victimization.

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P074 Cognitive empathy in children with Neurodevelopmental Disorders: Decreased empathic accuracy to a facial emotion recognition task in children with High-Functioning Autism Spectrum Disorders

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Background: Autism spectrum disorders (ASD) are characterized by deficits in the three components of empathy (i.e. motor empathy, emotional empathy, and cognitive empathy) [1]. Regarding the cognitive empathy, which is registered as the level of accurate emotion recognition and can be measured with emotion labelling or emotion matching tasks, the results for ASD are inconsistent [2].

Materials and methods: We investigated the frequency of accurate judgements for 10 black and white full-face photographs of an actress posing 6 basic emotions (happy, sad, angry, afraid, surprised, disgust, and distress) [2]. We assessed 144 schoolchildren of normal intelligence, aged between 6 and 15 years old. Children were distributed into four groups: High-Functioning Autism [H-FA](N=46), Attention Deficit Hyperactivity Disorder [ADHD] (N=21), Moderate Learning Difficulties [MLD](N=50) and Typically Developing controls [TD](N=27), matched for age but not for gender (p=0,012).

Results: Groups differed in an statistically significant way concerning their performance to the facial emotion recognition (FER) task (F=2,650,df=3,p=0,05). Significant findings were shown between the H-FA and the TD groups, with the former group exhibiting lower scores to the FER task [mean±SD:7,33±1,38(H-FA) vs 8,30±1,20(TD),p=0,046].

Conclusions: Children with H-FA showed attenuated cognitive empathy compared to TD children, as it was indicated by their significantly lower scores to the facial emotion recognition task used. Our findings are in line with previous studies and may be attributed to the lack of eye contact, which is characteristic for ASD and possibly related to empathic impairments [1]. Increased amygdala reactivity could be a determining factor of increased autonomic response to eye contact resulting in personal distress rather than empathy [4].

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P075 New methods to assess the correlation between reward system and chronic fatigue in patients on chronic hemodialysis

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Background: Fatigue is a common symptom experienced by patients with end-stage renal disease on chronic hemodialysis (HD) treatment that affects their quality of life (QoL) [1]. Research on neuro-immune interactions has demonstrated that an alteration of the basal ganglia function may translate in an altered reward processes in chronic diseases, such as hemodialysis patients. Recently there is a growing interest in finding new methods and perspectives to assess these chronic patients. The aim of this study was to examine the correlation between fatigue and motivational behaviors and how these mechanisms are affected in HD patients with a significant impact on their QoL.

Materials and methods: Evaluative scales were administered to a sample of middle-aged hemodialysis patients (N=94). Fatigue Severity Scale (FSS) was applied to measure the impact of fatigue on behavior. Behavioural Activation System (BAS) and Behavioural Inhibition System (BIS) Scale was administered to investigate the mechanisms of reward in approach/avoidance behaviours [2]. State-Trait Anxiety Inventory (STAI-Y) and Beck Depression Inventory (BDI-II) were used to evaluate the potential comorbidity of anxiety and depression disorders.

Results: The results showed that FSS score was significantly higher in patients with high BIS Z-score than in patients with low and medium BIS Z-score. Conversely, the BDI and the STAI-Y1/Y2 scores were similar among high, medium and low BIS Z-score groups of patients. The correlation between BIS and FSS scores was statistically significant.

Conclusions: These data suggest the correlation between fatigue symptoms and reward system that predispose to action inhibition with consequences on patients' engagement.

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P076 A new experimental paradigm to evaluate the role of working memory in prospective memory

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Background: Recently, several neuroscientific researches have been interested in investigating the role, functions and relation between prospective memory (PM) and working memory (WM), observing whether these two mechanisms use shared cognitive resources or they are partially independent [1,2]. Although the existence of some standardized tests for PM evaluation, there are few paradigms for its analysis.

Materials and methods: This study aimed to examine the role of WM in PM in a sample of twenty-one healthy subjects. Participants were required to develop two different ongoing tasks together with a PM switching task. The first, arithmetic task, required a low WM load of cognitive resources; whereas, the second, PASAT test, demanded an high cognitive WM load. Prospective retrieval was administered from two different modalities: event-based and time-based. In event-based condition the PM recall was associated with an external cue (sound); while, in time-based condition the PM retrieval occurred at a given time.

Results: Findings demonstrated that PM was influenced by WM only during the development of complex tasks requiring an high cognitive load of WM and an active self-retrieval (time-pasat) of PM.

Conclusions: These results demonstrate that WM and PM can be considered as distinct mechanisms at least when the prospective retrieval is associated with a cue (event-based conditions). Moreover, these findings highlight the complexity of PM such as high-level metacognitive function, which uses strategic and controlled processes for the coordination of future intentions.

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P077 New paradigms for emotional elicitation. EEG, hemodynamic (fNIRS) and autonomic evidences.

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Background: Psychology interest has always focused on emotions analysis, because individuals' life experiences are characterized by the presence of different emotional states. In particular, emotions can be considered as internal individuals components that entail modifications in cortical and autonomic activity, determined by central and peripheral nervous system elicitation [1].

Materials and methods: The present study aimed to investigate a new protocol for emotional states elicitation consisting in the administration of three tasks. Tasks were created to evaluate two dimensions of emotions: valence and arousal, according with dimensional model of emotions. Specifically, two tasks required participants to observe emotional stimuli selected from the International Affective Picture System (IAPS) and pictures representing human interactions [2]. A third task related to subjects' autobiographical memories was created to elicit emotional responses. During the tasks performance, electroencephalographic, hemodynamic (fNIRS) and autonomic correlates of emotional responses were recorded on a sample of healthy subjects. Clusters of emotional responses biomarkers have been found by the employment of specific algorithms.

Results: First data highlighted consistent cortical and autonomic responses, in agreement with the valence of emotional stimuli presented in the three tasks. Furthermore, differently-valenced emotional stimuli induced distinct modulations of electrophysiological and hemodynamic activity, with a different hemispheric lateralization in response to positive and negative stimuli.

Conclusions: This study highlights the potential use of novel paradigms for emotional responses elicitation. Moreover, electroencephalographic, hemodynamic and autonomic measures allow to find clusters of biomarkers for the elicited emotions.

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P078 Sensorial stimulation in vegetative state patients: what kind of response?

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Background: Sensory stimulation is the application of environmental inputs for responsiveness and neural reorganization promotion in compromised awareness condition. Patients in Vegetative State could benefit from sensory stimulation protocols in order to improve their consciousness condition [1]. This study explored psychophysiological markers to sensory stimuli addressed to patients to get covert responses under lack of behavioural awareness evidences.

Materials and methods: A set of multi-sensory stimuli was administered to a sample of 23 vegetative state patients. A wrist hold and ice application were the tactile stimuli; vanilla and cinnamon fragrances were the olfactory ones. Cortical activity (EEG) and physiological activation (biofeedback) measures were acquired during the sensorial stimulation.

Results: Data showed greater skin conductance levels and greater heart rate in response to ice compared to the wrist hold and for vanilla to cinnamon. Cortical activity indices confirmed physiological activation for olfactory, with higher Theta band activity in left frontal cortex for vanilla and in right frontal cortex for cinnamon. Lateralization of Theta band activity seemed to highlight stimuli pleasantness (left) and unpleasantness (right). While differences in physiological activation should be probably due to pleasantness for olfactory, patients' responses to ice application were maybe due to alertness. Patients with a more compromised consciousness, seemed to detect ice as potentially dangerous stimulus for organism and not only as a distress.

Conclusions: This study is a starting point for state of consciousness assessment and rehabilitation, thanks to implicit measures, which allow to go beyond to behavioral evidences of an explicit processing of the surrounding environment.

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P079 Body dysmorphic disorder or delusional disorder?: case report

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Background: Body dysmorphic disorder (BDD) previously known as ‘dysmorphophobia’ is defined as a preoccupation with imagined imperfections in physical appearance. Currently, it is recognized that patients with BDD do not necessarily perceive their symptoms as unreasonable, and their ideas may be described as overvalued or delusional. It is sometimes difficult to distinguish between BDD and delusional disorder (DD) somatic type, especially when BDD is associated with delusional ideas.

Materials and methods: Through a clinical case, we will first discuss the difficulty of distinguishing between BDD with delusional beliefs and DD-somatic type. Second, we will describe the therapeutic implications.

Results: The patient is a 25 years old man hospitalized for suicidal ideation. The patient was convinced that he had a cranial deformity and that everyone was laughing at him because of the distorted aspect of his skull. These ideas appeared in adolescence. The patient was obsessed with this idea. He was afraid to go out of his house and wanted to die. The content of his concerns were sometimes so weird that they seemed delirious. The patient did not consider his ideas to be unreasonable or absurd. He had also delusional ideas of reference. The main suspected diagnoses were BDD and DD somatic type. The patient was treated with several antipsychotic drugs (haloperidol, risperidone, olanzapine, amisulpride) without any improvement.

Conclusions: It is important to distinguish between BDD with delusional beliefs and DD somatic type given the importance of the therapeutic implications. In general, delusional syndrome may respond to antipsychotics, whereas BDD usually does not, even with psychotic characteristics.

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P080 The association between traumatic childhood experiences, sensory processing patterns, and quality of life among unipolar and bipolar outpatients

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Background: Suicidal behavior is one of the leading cause of death and is associated with a significant disability and psychosocial impairment worldwide. Suicide is a complex issue involving a number of psychological, social, cultural, and biological factors [1, 2]. Several risk factors including sleep disturbances have been associated with suicidal behavior. There are studies showing that patients with insomnia are at an increased risk of experiencing suicidal ideation and/or making a suicide attempt [3, 4]. Overall, the presence of sleep disturbances has been significantly associated with suicidality but the exact nature of this association needs to be further elucidated. Given this background, first the present study aimed to examine the correlation between sleep disturbances and suicidal behavior. Moreover, sleep disturbances have been analyzed as possible predictors of suicide behavior.

Materials and methods: We recruited 299 inpatients with a mean age of 48 (± 17.01) years. Participants have been assessed using the Pittsburgh Sleep Quality Index (PSQI), Beck Hopelessness Scale (BHS), Scale for Suicide Ideation (SSI), and Intent Score Scale (ISS). All the analyses were performed using the Statistical Package for Social Sciences (SPSS) for Windows 20.0.

Results: Suicide thoughts/wishes derived by the BDI-II resulted significantly associated with the subjective sleep quality ($r=.221$; $p=.01$), sleep latency ($r=.311$; $p=.01$), habitual sleep efficiency ($r=.283$; $p=.01$), step disturbances ($r=.220$; $p=.01$), daytime dysfunction ($r=.354$; $p=.01$), and global PSQI total score ($r=.315$; $p=.01$). The subjective sleep quality was also related to suicide intent ($r=.302$; $p=.01$) and suicide thoughts ($r=.201$; $p=.01$). Suicide thoughts were associated with sleep latency ($r=.230$; $p=.01$), daytime dysfunction ($r=.198$; $p=.01$) and global PSQI total score ($r=.203$; $p=.01$) as well. Daytime dysfunction was a significant predictor of suicide thoughts/wishes ($p=.004$) and subjective sleep quality ($p=.008$) while daytime dysfunction ($p=.015$) and global PSQI total score ($p=.020$) predicted active suicide intent, respectively. Finally, active suicide ideation was also predicted by sleep latency ($p=.047$).

Conclusions: The present study is limited by the small sample size and cross-sectional study design that did not allow the generalization of the main findings. However, according to our

results, a significant relation emerged between sleep disturbances and suicidal behavior. The present findings confirmed the results of a meta-analytic study demonstrating that sleep disturbances are strongly associated with suicidal ideation, suicide attempts, and completed suicide [5]. Sleep quality and its related disturbances should be carefully and systematically investigated in clinical practice in order to reduce suicide risk. Importantly, assessing the mental health of patients with sleep disturbances should be not only part of the routine clinical evaluation but also a fundamental aspect of the systematic suicide risk assessment. Clinicians should also evaluate not only the existence of insomnia but also the subjective sleep quality and the complex psychosocial dysfunctions associated with this disabling condition in psychiatric samples. [Keywords: Suicide thoughts/wishes; suicide intent; suicide ideation; subjective sleep quality; daytime dysfunction]

Acknowledgements: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P081 Acute stress disorder in cancer

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Background: The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders recognized for the first time that posttraumatic stress disorder (PTSD) may be precipitated by life-threatening illness, such as being diagnosed with cancer.

Acute stress disorder (ASD) was introduced in DSM-IV to describe acute traumatic stress responses, and to identify individuals at risk of developing PTSD.

The aim of this study was to showcase the symptoms of acute trauma disorder in a newly diagnosed lung cancer patient with a focus on the importance of the doctor-patient communication.

Materials and methods: A case report

Results: Mr JM, a 53-year-old man, was hospitalized seven days in the pulmonary department of the military hospital of Tunis in order to explore a pulmonary mass. The diagnosis hasn't been communicated yet but the patient started to suspect the malignant nature of the mass and developed behavioural disturbances in the form of agitation, irritability, aggression and refusal of any medical intervention. He was later on transferred to the psychiatry department. The psychiatric interview revealed symptoms of acute stress disorder.

Among the risk factors of developing acute stress disorder and PTSD, we find the subjective perception of cancer as threatening and the difficult interaction with the medical staff.

Thus the practitioner should pay attention to how and when the diagnosis should be communicated and not let the patient extrapolate facts about the disease and its severity which was the case with our patient.

Conclusions: Understanding the factors that predispose individuals to ASD following a cancer diagnosis may enhance our understanding of the prevention and treatment of pathological trauma responses in this population.

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P082 Vitamin D Deficiency Associated With Cognitive Functioning in schizophrenia

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Background: Cognitive dysfunctions are core features of schizophrenia with substantial impact on daily functioning. Vitamin D deficiency has been found to be related to cognitive dysfunctions (1,2), but the associations between vitamin D deficiency and cognition in persons with schizophrenia are largely unknown.

Materials and methods: This cross-sectional study was conducted in 67 patients with schizophrenia according to the DSM-V recruited during the year 2015, in which we measured the blood level of vitamin D. The population of patients was evaluated by a clinical protocol and a battery of cognitive tests.

Results: Vitamin D deficiency was related to auditory-verbal memory impairment as assessed by the direct digit span test score ($p = 0.002$, $r = 0.34$). Vitamin D deficiency was significantly associated with alteration of the executive functions at several levels ($p < 0.05$): the ability to inhibit automatic processes, ideomotor speed, treatment speed, as well as mental flexibility and research initiation strategies. Hypovitaminosis D was associated too with attention deficit, selective attention, and visuospatial working memory difficulties, as demonstrated by positive correlations of vitamin D level with patient performance in both trials of the ZAZZO test, R1 ($p = 0.043$, $r = -0.248$) and R2 ($p = 0.022$, $r = 0.280$).

Conclusions: The associations between vitamin D deficiency and cognitive impairment are arguments for planning large-scale randomized controlled trials in target populations to draw conclusions about the potential effect of vitamin D supplementation on cognition in schizophrenia (3).

Acknowledgements: I would like to thank my supervisors; Dr Hanene Ben Ammar and Dr Zouhaier Elhechmi

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P083 Can family members assist in overcoming barriers to deprescribing psychotropic medications in aged care facility residents with dementia?

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Background: In Australia and internationally, concerns have been raised regarding the high prevalence of psychotropic medication use in residential aged care facilities and their potential for adverse side effects such as over-sedation and falls. These concerns occur alongside significant barriers to psychotropic medication cessation or deprescribing, including a lack of detailed medication histories available to treating general practitioners. It is possible that engaging family members and ascertaining both their knowledge of prescribed medications as well as their attitudes towards deprescribing might facilitate this process.

Materials and methods: Family members of aged care facility residents with dementia were interviewed to explore their understanding and views regarding psychotropic medication prescribing and deprescribing. Preliminary quantitative results are presented here.

Results: Family members were significantly less likely to recognise regularly prescribed psychotropics (53%) than other medications (64%). The least recognised psychotropics were antidepressants (45%) despite depression being the most common mood disorder (73.1%). Family members were significantly more supportive of the deprescribing of psychotropics versus other medications despite no significant difference in ratings of medication effectiveness.

Conclusions: Family members' knowledge of psychotropic medications was limited, raising questions about their ability to meaningfully inform the deprescribing process despite their general support of it. A greater willingness to support deprescribing of psychotropics over other medications despite no difference in their perceived effectiveness may be reflective of stigma towards psychotropic medications in the wider community. A balanced approach towards deprescribing in aged care facilities, that emphasises the necessity and benefits of psychotropics in some cases, may thus be preferable.

Acknowledgements: This project has been funded by the Lions John Cockayne Memorial Fellowship Trust Fund. The Lions John Cockayne Memorial Fellowship Trust is jointly funded by Oakleigh Lions Club Elderly Peoples Home Inc. and Monash Health.

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P084 Insight and manic symptoms in patients with chronic schizophrenia in the Korean community

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Background: Insight about the illness is very important factor for the management of schizophrenia. Manic symptoms can be identified occasionally even in schizophrenia. To examine the relationship among the insight, the psychotic and manic symptoms, and clinical variables.

Materials and methods: Seventy-four participants (male 44, female 30) with chronic schizophrenia in community mental health facilities have been evaluated with the Scale to assess Unawareness of Mental Disorder (SUMD), the Mood Disorder Questionnaire (MDQ), and the Brief Psychiatric Rating Scale (BPRS).

Results: The mean number of previous admission was 3.85. Their drug adherence was favorable (6.73 day/week). Mean CGI-S score was 3.8. Thirty-five percent of subject were MDQ positive (cutoff point = 7 or more). Among SUMD, "awareness of effect of medication" showed significant negative correlation ($r = -0.33$) with total MDQ score not with total BPRS score. The negative correlation was more obvious in participants with negative MDQ (total MDQ score 6 or less, $r = -0.31$). Several MDQ items (irritability, $r = -0.25$; decreased sleep, $r = -0.27$; thought racing, $r = -0.28$; and easy distractibility, $r = -0.40$) negatively correlated with "awareness of effect of medication". In contrast, only one item (guilt feeling, $r = -0.27$) of BPRS revealed this correlation. Individual items in MDQ and BPRS rarely correlated with each other. Total MDQ score was not correlated with duration of illness and medication adherence.

Conclusions: Manic symptoms were frequently detected even in schizophrenia as reported in previous studies. This made it difficult to differentially diagnose the disorder using only the total MDQ score. There was possible relationship between these manic symptoms and their insight. Identifying manic symptoms in schizophrenia would be considerable in clinical setting.

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P085 Dose Trends of Aripiprazole from 2004 to 2014 in Psychiatric Inpatients in Korea

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Background: The purpose of the present study was to evaluate the initial and maximum doses of aripiprazole over a decade to estimate appropriate dosage in clinical practice. We hypothesized that there was a measurable change in dosing patterns during 2004-2014 in Korean psychiatric inpatients.

Materials and methods: In this retrospective study, we reviewed the medical records of patients who were hospitalized in the psychiatric ward of five university hospitals in Korea from March 2004 to December 2014. The patients were at least 18 years of age, prescribed aripiprazole during the index hospitalization and were given at least one prescription for oral aripiprazole. We compared baseline demographic variables among Waves 1 (2004-2006), 2 (2007-2010) and 3 (2011-2014) using univariate one-way analysis of variance (ANOVA) with Bonferroni correction for continuous variables and a chi-square test for categorical variables.

Results: There was a significant difference in mean age among waves ($p = 0.012$). The use of concomitant medications with aripiprazole was significantly different among waves, as well. The use of other atypical antipsychotics in Wave 1 was 27.0% ($n = 20$) and 27.4% ($n = 55$) in Wave 2 and increased to 36.5% ($n = 129$) in Wave 3, but the difference between Waves 1 and 3 ($p = 0.118$) and 2 and 3 ($p = 0.027$) did not reach statistical significance after Bonferroni's correction. In total, the initial dose of aripiprazole was significantly lower in Wave 3 (7.0 ± 3.9 mg/day) when compared to Waves 1 (10.9 ± 4.6 mg/day, $p < 0.001$) and 2 (10.7 ± 5.6 mg/day, $p < 0.001$). The initial doses of aripiprazole in all diagnostic groups were significantly lower in Wave 3 than in Wave 2.

Conclusions: The results from the present study show that the initial doses of aripiprazole, and not the maximum doses, decreased in hospitalized psychiatric patients with the accumulation of clinical experience in aripiprazole use.

P086 The Factor Structure of the Hamilton Depression Rating Scale in Major Depression Patients with Anxious Distress Specifier in DSM-5

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Background: Several studies have validated the factor structure of the Hamilton Depression Rating Scale (HDRS) in patients with major depression, and reported adequate reliability. This study aimed to apply factors of the HDRS in major depression patients with anxious distress specifier in DSM-5, and then evaluate the predictive value of factors for anxious distress group.

Materials and methods: Retrospective chart review of patients admitted to a university hospital with a primary diagnosis of MDD in a period from March 2012 to June 2015 was conducted. We reviewed anxious distress symptoms, detailed clinical information, and assessment tools, the major measures being the HDRS. We examined 5 factor structures (anhedonia-retardation, guilt-agitation, bodily symptoms, insomnia and appetite) of the HDRS being applied a confirmatory factor analysis (CFA) in anxious distress group and non-anxious distress group. The association of factors with anxious distress specifier was assessed by using receiver operating characteristic curve (ROC) analysis and by calculating the area under the ROC (AUC).

Results: There were differences in HDRS (27.8 ± 5.2 vs. 23.4 ± 5.2 , $p < 0.001$), BDI (31.0 ± 7.7 vs. 26.7 ± 7.8 , $p < 0.001$), GAF (31.4 ± 5.1 vs. 35.4 ± 7.6 , $p < 0.001$), and CGI-S (5.9 ± 0.4 vs. 5.6 ± 0.6 , $p < 0.001$) between anxious distress and non-anxious distress at index episode. The guilty-agitation factors were significantly higher in anxious distress than other factors, and exhibited good predictive efficiency at baseline (AUC = 0.804, 95% CI: 0.735-0.861). In predictive efficiencies of factors following treatment, guilty-agitation factor (AUC=0.743, 95% CI: 0.668-0.809) were better than anhedonia-retardation factor (AUC=0.730, 95% CI: 0.655-0.797) at week 1, and guilty-agitation factor (AUC=0.790, 95% CI: 0.709-0.857) remained better than anhedonia-retardation factor' (AUC=0.789, 95% CI: 0.708-0.856) at week 2.

Conclusions: This study provide that anxious distress specifier in DSM-5 might be worthwhile to be further evaluated as a diagnostic entity. These findings proposed that guilty-agitation factor may be a promising marker for distinguishing anxious distress group from other subtypes of major depression, especially for anxious distress group at baseline.

P087 Blonanserin augmentation in patients with schizophrenia - who is benefited from blonanserin augmentation? : An open-label, prospective, multicenter study

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Background: Evidences for antipsychotics augmentation for schizophrenic patients with suboptimal efficacy have been lacking although it has been widespread therapeutic strategy in clinical practice. The purpose of this study was to investigate the efficacy and tolerability of blonanserin augmentation with an atypical antipsychotics (AAPs) in schizophrenic patients

Materials and methods: A total of 100 patients with schizophrenia partially or completely unresponsive to treatment with an AAP recruited in this 12-week, open-label, non-comparative, multicenter study. Blonanserin was added to existing AAPs which were maintained during the study period. Efficacy was primarily evaluated using Positive and Negative Syndrome Scale (PANSS) at baseline, week 2, 4, 8, and 12. Predictors for PANSS response ($\geq 20\%$ reduction) was investigated.

Results: The PANSS total score was significantly decreased at 12 weeks after blonanserin augmentation (-21.0 ± 18.1 , $F=105.849$, $p<0.001$). Response rate on PANSS at week 12 was 51.0%. Premature discontinuation was occurred in 17 patients (17.0%) and 4 patients among them discontinued the study due to adverse events. Nine patients experienced significant weight gain during the study. Response to blonanserin augmentation was associated with severe (PANSS >85) baseline symptom (OR=10.298, $p=0.007$) and higher dose ($>600\text{mg/day}$ of chlorpromazine equivalent dose) of existing AAPs (OR=4.594, $p=0.014$).

Conclusions: Blonanserin augmentation improved psychiatric symptoms of schizophrenic patients in cases of partial or non-responsive to an AAP treatment with favorable tolerability. Patients with severe symptom despite treatment with higher dose of AAP were benefited from this augmentation. These results suggested that blonanserin augmentation could be an effective strategy for specific patients with schizophrenia.

P088 The role of melatonin and melatonin agonists in counteracting antipsychotic-induced metabolic side effects: a systematic review

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Background: Melatonin administration to high cholesterol-treated and high fat-treated rats has been shown to suppress body weight and visceral adiposity. In addition, in various animal models related to obesity, metabolic syndrome, and diabetes, melatonin has beneficial efficacy in ameliorating various metabolic symptoms, including attenuating weight gain, lowering blood pressure (BP), and improving insulin resistance. This systematic review aims to investigate whether melatonin or melatonin agonists significantly attenuate metabolic side effects among psychiatric populations treated with atypical antipsychotics.

Materials and methods: Four randomized controlled trials were identified through a comprehensive literature search using MEDLINE, EMBASE, and the Cochrane Library on 22 October 2015. These four trials (including three melatonin studies and one ramelteon study) included 138 patients, of whom 71 were treated with melatonin or ramelteon and 67 were treated with a placebo. Because of high heterogeneity, we did not carry out a meta analysis.

Results: Melatonin was beneficial in lowering blood pressure among bipolar disorder patients; this blood pressure-lowering effect was not prominent among schizophrenic patients. Melatonin appeared to improve lipid profiles and body composition and attenuated weight gain among both schizophrenic and bipolar disorder patients. Ramelteon showed a significant efficacy in lowering total cholesterol level.

Conclusions: Despite the few studies included, this systematic review provided promising evidence of the potential benefits of melatonin and its agonists in attenuating one or more components of metabolic syndrome among psychiatric patients using atypical antipsychotics.

P089 A novel target for focusing on neurocognitive symptoms in depression: ATP6V1B2 rs1106634 is associated with hippocampal dysfunction and lifetime depression

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Background: Current understanding and treatment in depression still focuses on the monoaminergic theory and is far from adequate due to limited efficacy and significant side effects. It would be valuable to investigate SNPs with weak but replicable effects in GWAS-s to identify new molecules of vulnerability, mechanisms, and targets of treatment. While there is a general failure to find replicable associations with genome-wide significance in GWAS in depression, recently a metaanalysis implicated rs1106634 in the ATP6V1B2 gene encoding the B subunit of the vacuolar H⁺ pump ATP-ase with a suggestive significance ($p=6.78 \times 10^{-7}$) [1], and this SNP also exhibited a suggestive p value in another metaanalysis in schizophrenia and bipolar disorder [2]. This subunit is part of a transmembrane complex contributing to proton gradient generation across synaptic vesicle membranes, playing a role in synaptic vesicular reuptake, accumulation and storage, thus management and maintenance of neurotransmission, and its function is therefore vital for the central nervous system. Furthermore, variations of vacuolar ATPases are also associated with oxidative stress, known to play a role in both depression and neurocognitive dysfunction and disorders. The aim of the present study was to investigate the association of ATP6V1B2 rs1106634 with depression-related phenotypes including current and lifetime depression as well as neurocognitive phenotypes reflecting hippocampal and prefrontal deficits in a large, non-clinical European population.

Materials and methods: After genotyping, association of rs1106634 with self-reported lifetime depression and BSI depression score reflecting current depression was investigated in a sample of 2226 subjects using logistic and linear regression models. Subsequently, in a subsample association of the investigated polymorphism with performance on neurocognitive tests reflecting frontal (Stockings of Cambridge, SOC) and hippocampal (Paired Associates Learning, PAL) function was analysed with multivariate general linear models.

Results: rs1106634 of the ATP6V1B2 gene had a significant effect on lifetime ($t=3.591$, $OR=1.465$, 95% CI: 1.189-1.804, $p<0.001$) but not current depression ($t=0.965$, $\beta=0.042$, $p=0.335$), and also on the hippocampal (PAL-memory: $F=15.159$; $p<0.001$; PAL-errors: $F=9.350$; $p=0.003$; PAL-

required trials: $F=8.546$; $p=0.004$) but not frontal cognitive performance (SOC-ITT: $F=0.612$; $p=0.435$; SOC-correct trial rate: $F=2.039$; $p=0.155$) suggesting a brain-region specific effect. All results are shown for dominant models.

Conclusions: Our findings indicate that variation of the vacuolar ATPase may indicate a new molecular mechanism playing a role in the long-term risk of depression and also hippocampal neurocognitive deficits often associated with affective disorders. As neurocognitive dysfunction is often overlooked both in the diagnosis and treatment of depression, contributing to significant residual symptoms severely and negatively impacting functional recovery and long-term well-being of patients, identifying genetic variation and molecular targets which may be a converging point of cognitive deficits and mood disorders may pave the way for targeting new systems for treatment that could provide for full functional recovery in depression treatment that goes beyond alleviation of mood symptoms.

Acknowledgements: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P090 5-HTTLPR shows association with younger age at suicide: preliminary results from the Hungarian suicide biobank

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Background: Although the majority of suicides are committed by psychiatric patients, suicide is a multicausal phenomenon with a strong biopsychosocial background, including a significant contribution of genetic factors. As suicide still contributes to a large number of unnecessary, and possibly preventable deaths worldwide, constituting the leading cause of death among young males, we lack effective methods for predicting, screening, and preventing suicide. Thus our aim is to develop a complex model incorporating several levels of evidence from genetics through biochemistry as well as social and psychosocial determinants of suicidal behaviour. The 5-HTTLPR polymorphism of the serotonin transporter gene has previously been implicated in suicidal behaviour and violent completed suicides. The aim of our present study was to investigate the association between 5-HTTLPR and suicidal behaviour in our currently developing suicide biobank.

Materials and methods: During autopsy sample DNA samples were obtained for 5-HTTLPR genotyping from 200 subjects deceased due to suicide and 200 controls deceased due to other causes. Chi-square tests and logistic regression analyses were performed according to additive, dominant and recessive models to analyse the possible association between 5-HTTLPR genotype distribution and suicide.

Results: Ratio of violent and non-violent suicides was 81% and 19% in our suicidal subsample, respectively. No significant difference was found in the distribution of 5-HTTLPR genotypes between the suicidal and control samples according to any genetic models (additive: $\chi^2=0.602$, $p=0.740$; dominant: $\chi^2=0.404$; $p=0.525$; recessive $\chi^2=0.457$; $p=0.499$). No difference was found between violent and nonviolent suicides with respect to genotype distribution within the suicidal sample (additive: $\chi^2=1.771$, $p=0.412$; dominant: $\chi^2=1.555$, $p=0.212$; recessive $\chi^2=0.913$; $p=0.339$). Using logistic regression, a significant association was found between sl genotype and suicide at a younger age in the suicidal subsample according to the additive model (OR=1.037; $p<0.001$; df=1; B=0.036).

Conclusions: Although our preliminary study found no evidence for an association between 5-HTTLPR genotype and suicide, a significant association was found between the sl genotype and younger age at suicide, indicating an important role of this genetic variant in the emergence of suicidal behaviour which may deepen our understanding of the dynamics of suicide risk and may help us identify targets for early screening and intervention. Several limitations must be mentioned possibly contributing to our negative results. Our control group included subjects deceased due to accidents where suicidal intent cannot be ruled out. Furthermore, due to a lack of suicidal autopsy we could not gain data concerning psychiatric illness in our suicidal sample and we could not gather information on distal and proximal life stressors which

are known to play a role in the effect of 5-HTTLPR at least in depression. Given the difficulty of studying suicidal behaviour due to the relatively low number of cases, our results argue for the further development of our suicide biobank and the investigation of further novel genotypes associated with endophenotypes of suicidal behaviour in living subjects.

Acknowledgements: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

P091 Relationship of low vitamin D status with positive and negative symptom in people with schizophrenia

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Background: Deficient vitamin D levels are very common among people of all ages and ethnicities, but little is known about its prevalence or associated problems among those with schizophrenia.

Materials and methods: Stored plasma from 67 patients with schizophrenia subjects and 34 matched healthy comparison subjects were analysed for 25 OH vitamin D, and related to measures of symptom severity.

Results: We found a lower rate of Vit D in patients with schizophrenia than in healthy subjects ($10.78 \pm 5.9\text{ng} / \text{ml}$ versus 18.82 ± 6.32 , $p = 0.026$). This result is in agreement with a rich literature on this subject. All patients had vitamin D levels below $30\text{ng} / \text{ml}$, of which 52.24% had vitamin D deficiency. Among psychosis subjects, our study did not show a correlation between vitamin D levels and the severity of negative or positive symptomatology in patients with schizophrenia.

Conclusions: New randomized studies will be needed to examine the therapeutic effect of vitamin D supplementation in patients with schizophrenia.

Acknowledgements: I would like to thank my supervisors, Dr Hannen Ben Ammar et Dr Zouhaier Elhechmi

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P092 Tunisian cognitive battery for patients with schizophrenia

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Background: Cognitive disorders are common and severe in schizophrenia. They are also correlated with the functional outcome of the disease. Cognition can not be assessed during a standard clinical interview but needs to be evaluated by means of specific cognitive tasks. Aim of the study is to construct a battery of cognitive tests which is adapted to the Tunisian cultural and linguistic context and to collect normative data in Tunisian Arabic speaking healthy subjects.

Materials and methods: We have selected and adapted cognitive tests to our socio cultural context. Then we have proceeded to the administration of these tests within a group of healthy subjects.

Results: The cognitive battery is composed of 8 tests: Cognitive functions were evaluated with a battery of cognitive tests evaluating different cognitive domains. The memory was evaluated with the Hopkins Verbal Learning Test (HVLT), the digit span task, and the categorical semantic fluence test. For executive functions, we used the phonemic speech fluency test, the TMT (TrailMaking Test), the WCST (WisconsinCardSorting Test) and the Stroop test. Finally attention was assessed by the Zazzo test and the Letter Digit Substitution Test (LDST). These tests are presented with their manual of utilisation and their normative data.

Conclusions: The Tunisian cognitive battery is believed to permit a better cognitive assessment of patients suffering from schizophrenia. Improvement of cognitive impairments in schizophrenia is associated with a better social and professional integration of these patients.

Acknowledgements: I would like to thank my supervisors D Hanen Ben Ammar and Dr Zouhaier Elhechmi

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P093 Professional environment of teachers on a sick leave for psychiatric cause

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Background: Teaching is one of the most valued jobs giving its crucial role in the constitution of the society. It's a job which requirements can end in a physical and emotional exhaustion [1] bringing the teacher to consult in psychiatry. The number of teachers on sick leave for psychiatric cause is constantly increasing.

The working conditions and the personal problems are factors which are involved in the early retirement [2] and which we owe consider in the care of the teachers.

The aim of this work is to study the professional environments of teachers on a sick leave for psychiatric cause.

Materials and methods: We resorted to an auto-questionnaire that we distributed to the teachers who came to our department as part of a medical examination to determine their ability to work.

Results:

- We collected 166 answers.
- 75.3% of the participants were women.
- The average age was 50.98 years.
- 78.9 % of the teachers were married.
- No change of the working establishment 90lnafor sixty five teachers for at least ten years.
- Stagnation in the same grade during at least five years for less than 10 %.
- The average seniority of the teachers was 25.65 years.
- 53.6 % of the teachers were satisfied with their jobs and 53 % of them had also professional problems.

Conclusions: The care of the teachers on a sick leave for psychiatric cause has to take into account not only the nature of their pathology but also their life and work environments to ensure an optimal care.

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P094 Persistent complex bereavement disorder: A case report

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Background: Persistent complex bereavement disorder (PCBD), previously known as complicated grief disorder is a newly proposed diagnosis included in the DSM-5 as an invitation for further study and exploration. It's a diagnosis assigned to individuals who experience an unusually disabling or prolonged response to bereavement and have shown persistent and severe grief symptoms during at least 6-12 months after the death of a loved one.

Materials and methods: Our case study deals with a patient with PCBD who consulted and were followed in psychiatry outpatient ward.

Results: Mr NH was a 38-year-old father who lost his child at the age of two by drowning seven years ago. Since the tragedy, he was devastated, felt hopeless and experienced a deep yearning and longing for his kid. He started being disconnected from social life and accumulating absenteeism at work. He became irritable, anxious and started picturing his son and reviewing in his mind his laughs and attitudes. He also reported nightmares and his tries to avoid reminders that would trigger intense emotion or physical symptoms. He was often neglecting his diabetes medication knowing this could be dangerous. The prolonged symptoms were so unbearable that he made a suicidal attempt and was referred to our ward. Patient was treated with Paroxetine 20mg/j and didn't show an improvement yet (3 months). He maintains that no one can help him because no one can bring his son back.

Conclusions: PCBD has been recently the focus of DSM-5 work groups as its symptoms, prognosis and treatment are specific. It must be distinguished from non-impairing grief and other disorder such as: major depressive disorder and post traumatic stress disorder. Further studies are needed to understand and well define this condition.



P095 Association between sleeping disorders and suicidal ideations among type I bipolar disorder patients during euthymia

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Background: Bipolar disorder (BD), is a severe and frequent psychiatric pathology. Several studies were interested in the period of euthymia, considered for a long time as asymptomatic, in particular the sleeping disorders and the suicidal ideations in this period. the aim of this.

The aim of this work is to study sleeping disorders and their associations with the suicidal ideations among type I bipolar disorder patients during euthymia.

Materials and methods: We studied the chronotype, the daytime sleepiness and the quality of the sleep in the period of euthymia among a population of 108 type I bipolar disorder patients and we explored the association of the various disturbances with the behavior and the suicidal ideations.

Results: The circadian chronotype (Morning Evening Questionnaire) was significantly associated with the age ($P=0.007$), with the profession ($P=0.006$), with the marital status ($P=0.002$) and with the Hamilton Depression Rating Scale (HDRS) score ($P=0.021$).

The daytime sleepiness (Epworth Sleepiness Scale) was significantly associated with the sex ($P=0.047$).

The global quality of the sleep (Pittsburgh Sleep Quality Index) was significantly associated with the HDRS score ($P < 0.001$) and with the suicidal ideations ($P < 0.001$).

Conclusions: Further studies with larger samples will be required to better address this important question. This would be particularly relevant because sleep disturbances are considered a potentially modifiable or preventable risk factor for suicide.

**P096 Association between Schizophrenia, cognitive disorders and vitamin D serum level:
Review**

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Background: Vitamin D deficiency has been identified as a global problem. Approximately 14% of the world population has inadequate vitamin D levels. This vitamin may be an important factor in the development of psychiatric illnesses, therefore clinicians should not leave this serious issue unresolved.

The aim of this review is to describe the current data concerning the association between vitamin D serum levels, cognition and mental disorders.

Materials and methods: We conducted a systematic bibliographical research, of PubMed, Med-Line literature and Cochrane database without language restriction to identify all publications concerning this issue from 2012 to the first quarter of 2017.

Results: We found 85 articles concerning vitamin D and schizophrenia, published during the last 5 years. We selected only those publications focused on the association between vitamin D serum deficiency and cognitive disturbances. One hundred and sixty-seven papers were found suitable to our selection criteria.

Careful evaluation of the relevant literature demonstrates that addition of vitamin D to antipsychotic (Clozapine) was associated with a trend towards improved cognition, but did not affect psychosis, mood or metabolic status.

Conclusions: In order to recommend supplementation of vitamin D as a standard therapeutic attitude, more randomized placebo-controlled studies should be performed with definite results showing its efficacy.

Acknowledgements: I would like to thank my supervisor Dr El Hechmi Zouhaier

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P097 Psychosis, intermittent hyponatremia, polydipsia (PIP) syndrome in schizophrenia: Diagnosis and treatment strategy through a case report

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Background: Polydipsia and water intoxication remain important clinical problems for a significant portion of persons with schizophrenia. These disorders are associated with increased morbidity and mortality for a number of causes.

Because of its impact on health and quality of life, the psychosis, intermittent hyponatremia, polydipsia (PIP) syndrome needs a particular attention. Therefore, all mental health care providers must be aware of its signs, symptoms and treatment options.

Materials and methods: Starting from a clinical case, we proposed a diagnostic algorithm based on empirical evidence. The performed literature review was made through an electronic research on the MEDLINE database, from 1994 to 2017, using the following terms: Schizophrenia, hyponatremia, water intoxication, water imbalance, inappropriate ADH syndrome, antipsychotic agents and polydipsia.

Results: The patient is a 41 years old man, presenting resistant schizophrenia since 2008. He responded to Clozapine during one year treatment. Unfortunately, he developed neutropenia which required stopping medication. He received then Haloperidol associated with amisulpride, valproate, and diazepam. One month later, a hyponatremia around 122mmol/l was discovered. Water consumption about 9 to 11 L per day was also detected. We decided to explore this symptomatology.

Conclusions: The incidence of PIP syndrome may be much higher than currently thought. Some reversible factors have been identified and possible interventions have expanded.

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P098 How Robots could reach Humanity with the Implementation of Advanced Emotional Signalling in Algorithmically Structured Systems (AESASS)

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Background: Robots as well-known are complex machines constituted of artificial parts and digital logic structures. Two key points need special attention in order an artificial humanoid to be finely developed. Firstly, the artificial structure must resemble to a human not only in the figure but moreover in expressed movements accomplishing a body language very close to that of their owner while this artificial body should include sensors network (BWSN) technology [1]. Secondly, the artificial brain must exhibit seamless decisions and if needed quick responses taking into consideration an empathetic employed nature of behavior. The latter could be accomplished with the use of 5-stage iterative logic which guarantees the best possible result and a unique behavior even when compared between the same robot models. In this point of development all precautions must take into account that the artificial developed characters should conform to a significant standard. Their auto-development should not constitute an abuse towards their owner's safety and generally towards every other human's clinical condition. Additionally, a self-robot check is proposed based on SCL90-R questionnaire as soon as the artificial character will be fully-deployable.

Materials and methods: This work is centered on five primal principles-stages. Iterative logic is employed in order the system to self-adapt to the best solution. The latter is accomplished by using soft approximation through various stages and finally a feedback loop to constantly monitor new apprehended data versus past decisions. In this way, the behavior of the robot is constantly changing in order to adapt to their owner's manners and behavior. The decision making is enhanced by using double precision 7-likert scale i.e. the grade of every estimation has two parts. One part is the 1-7 positive value relevant to what the owner wants while the other part (1-7 value) corresponds to how much empathetic behavior is exhibited by the robot. The later depends also to past conditions and it could take different values even when the first part has the same value. This means that the robot expresses their mood and consequently an artificial intelligence behavior which is accomplished by taking into consideration various condi-

tions even the climate itself. The iterative empathetic behavior is consisted of five stages. The first stage is a comparator of the total score of current and past condition while the second is the estimation of the optical data. Then a new soft decision (third stage) uses the newly estimated optical data in conjunction to the audio evaluation of the environment. This denotes the necessity of always taking into consideration the environmental conditions along with the data from audiovisual sensing. The fourth part estimates the value of pressure in various body parts of the robot (3D perception of the environment). E.g. when a robot senses a lot of pressure (hit) while talking to a subject then this is estimated as a value of the anger towards their structure. The fifth part is more complicated as it uses a version of an impromptu questionnaire based on SCL-90-R clinical evaluation not only for the human but also for the structure itself. Then a feedback loop passes through a memory block which has stored the significant past conditions for comparing them to the current one (consisted of five likert scores) and in this way to produce a final Likert score (five parts) which then is guided back to the first stage. The output of the final decision is each time after fifth stage. Especially the memory block is very important as it utilizes the humans' logic of metamemory (a type of metacognition also known as Socratic awareness) in order to self-perceive and be guided by past knowledge and decisions. This is essential for developing a true robotic ability of Empathy.

Results: This research involves a total sample of 30 people (15 men and 15 women) in order to be conducted a preliminary test of reaction towards Advanced Emotional Signaling in Algorithmically Structured System (AESASS) inside typical and LEED buildings [2]. The latter is in fact a true empathetic robot exhibiting a self-acquired and not conventional or programmed behavior compared to other robotic structures. This behavior will be analyzed and tested when it is experienced by 30 people. Before the testing procedure, each subject will fill the SCL-90-R questionnaire for verifying that their psychological condition is among typical population. Also, the subjects should not exhibit any disorder even those related to voice [3] [4]. Also, Active - Empathetic Listening Scale (AELS) along with Toronto Empathy questionnaire will be used in this research in order to determine the empathetic level of each subject. After the robotic experience a new impromptu questionnaire will be administered for estimating the grade of satisfaction from the interaction with the robot. The evaluation will be conducted by using (if possible) ANNOVA between various unrelated features in order to determine how these could be related to the robot's feedback experience. Also, skewed variables will be checked and if possible Wilcoxon signed test along with Mann-Whitney U tests will be applied to the data set. Especially Kruskal-Wallis tests will be conducted as they are one of the best statistical procedures for manipulating small samples. Then cluster analysis should exhibit important results. This will help grouping objects for better analyzing the behavior and estimation of the subjects relevant to the robotic experience.

Conclusions: This work involves the construction and estimation of a robotic structure which will employ advanced empathetic logic and self-awareness with the use of an internal robotic SCL-90-R version. This version will help towards the proper self-analysis of the robot and thus will give the capability of its application to other robotic systems. Moreover, the new impromptu satisfaction questionnaire will be an important new estimator of the robotic behavior of various systems and structures. It is expected that the subjects will be keen to a robotic structure but they will be very susceptible to a structure exhibiting Empathy and not an artificial Behavior. Other future benefits will involve the recording of this satisfaction in conjunction to time, while

robotic technology will keep on moving forward. If the scores increase radically from a time point and then, this will declare an even higher robotic evolution.

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P099 Neuropsychological Measures in Minimal Hepatic Encephalopathy: Towards a Standardized Screening Approach

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Background: At the absence of a definitively established neuropathophysiology of Minimal Hepatic Encephalopathy (MHE), profiling the patterns of neurocognitive impairment at an early stage is clinically valuable for treatment trials and for predicting the development of overt forms of disease.

Materials and methods: In this context, a local group of 22 cirrhotic patients (13 males) at risk of MHE, were matched to 23 outpatient controls with non-documented neurological manifestations or liver failure, all tested on a non-commercially available neuropsychological scale including measures of attention, visuospatial abilities and fine motor skills.

Results: Results indicated covariation between the indices of neurocognitive impairment of cirrhotic patients and the severity of encephalopathy derived from histological examination, functional neuroimaging, disease variables and independent measures of quality of life.

Conclusions: Methodological limitations of the screening method employed are discussed, along with its clinical validity in the detection and monitoring of MHE at onset.

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P100 Cannabis use and age of onset of schizophrenia and bipolar disorder

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Background: Co-morbidity between cannabis use and psychiatric disorders, especially schizophrenia and bipolar disorder, is very common which explains the increasing number of studies concerning this association.

Materials and methods: A retrospective study of a systematic sample of patients diagnosed with schizophrenia and bipolar disorder who were hospitalized in our department between January 2016 and December 2017 and who had cannabis use.

Results: Fifty-two patients had cannabis use out of which fifty were male (96%).Thirty-two patients (61%) were diagnosed with schizophrenia and the remaining twenty (39%) suffered from bipolar disorder. The mean age of onset of schizophrenia was 23 years and 24 years for bipolar disorder. Thirty percent of patients of both groups had used other substances along with cannabis. Family history of psychosis was found in 31 % of the schizophrenic group.

Conclusions: Cannabis use has an undeniable effect in decreasing the age of onset of schizophrenia and bipolar disorder and this risk is higher for people with family history of psychosis.

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P101 How sexology training might impact sexual disorders approaches? A sample of Tunisian doctors

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Background: Sexuality has always been a taboo topic. In the recent years, it has been under spots, but still remains rarely evoked even during medical interviews.

In Tunisia, like most oriental societies, there is a growing interest regarding sexuality and management of sexual disorders. Nevertheless, an integrative and complementary approach of qualified professionals has yet to be established.

The aim of this study was to examine the impact of a sexology training on the outcome of sexual disorders management.

Materials and methods: A comparative study was based on a sample of 61 doctors of four distinct specialities : gynecology, urology, psychiatry and endocrinology. Two groups of doctors were formed according to whether they had a training in sexology or not. Approach and management characteristics of sexual disorders were assessed.

Results: Trained doctors reported more ease to initiate interview on sexuality in comparison with non trained ones. The difference was statistically significant ($p=0.014$).

They also reported an easier approach to explain the physiology of sexuality to concerned patients.

However, both groups had reported no difficulty in managing patients with sexual complaints.

Conclusions: This study showed that training in sexology improves the ability to approach sexual problems. Despite the lack of management differences, generalizing trainings in sexology is necessary .

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P102 Factors associated with perceived poor antidepressant response in older adults.

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Background: Studies report, in up to 50% of patients, the phenomenon of ‘resistance, tolerance or seemingly loss of antidepressant efficacy’ (1-3). The objective of this study was to determine the factors associated with perceived poor antidepressant (AD) response in primary care older adults.

Materials and methods: The study sample consisted of older adults aged ≥ 65 years participating in the ESA-Services study (2011) reporting AD treatment and followed up to 2017. Self-perceived treatment response was ascertained with the ‘Treatment Response to Antidepressant Questionnaire’ (4), which asks about the type and dosage of an AD being prescribed for depression or anxiety. Here we present data on whether there was an improvement in symptoms while on the antidepressant (yes/no): good/excellent versus not at all, partial response, had a good or excellent response, but lost it (despite being on AD). Multivariate logistic regression analyses were carried to study response as a function of age, sex, distress (K-10; GAD-7), HRQOL, duration, AD treatment episodes and beliefs about medications (BMQ questionnaire).

Results: No or lost AD response was associated with severity of depression (1.5OR; 95% CI: 1.1-2.0); having had 2 or more AD treatment episodes in past 6 years (75.2 OR; 95% CI: 5.7-990) and duration of AD treatment < 6 weeks vs ≥ 6 weeks (11.1OR; 95% CI: 1.1-99.0). Perceived necessity of AD was also marginally associated with response (0.8OR; 95% CI: 0.7-1.0).

Conclusions: Research should also focus on medication adherence and lifestyle factors as potential mediators and moderators of response.

Acknowledgements: This study was funded by operating grants from the Canadian Institutes of Health Research and Fonds de Recherche en Santé du Québec.

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P103 Anxiety and depression-related behavioral manifestations in a “multi-stress physical and psychological factors exposure” rat model of irritable bowel syndrome

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Background: Irritable bowel syndrome (IBS) is one of the most important and current functional gastrointestinal disorders, which can only be diagnosed based its symptomatology, as it lacks any clear physiological or organic cause. There is also an increase awareness lately on the neuropsychiatric associations of this disorder.

Materials and methods: Based on our previous experience with the behavioral neuropsychiatric manifestations in rats, we worked here on a “multi-stress physical and psychological factors exposure” rat model of irritable bowel syndrome, where the animals were submitted to a variety of factors such as tilt cage, water/food deprivation, pinch tail, predator sound, wet bedding and injection mimicking, in order to get a more complex IBS rat model. Controls were kept in normal cages during this time. For the behavioral testing, elevated plus maze (for anxiety), forced swim test (for depression) and Y maze (for immediate or spatial memory) were used.

Results: The aforementioned “multi-stress physical and psychological factors exposure” rat model of irritable bowel syndrome generated anxiety-related manifestations, when compared to controls, as showed by the reduced time spent by the rats in the open arms of the maze. Also depressive-like manifestations are reported in the forced swimming test, as demonstrated by the reduced mobility in the IBS model. However, no significant effect was observed in Y maze test, suggesting no effects on immediate/ spatial memory.

No preliminary histo-pathological modification for found at the bowel level.

Conclusions: This complex approach (tilt cage, water/food deprivation, pinch tail, predator sound, wet bedding and injection mimicking) in generating a rat model of IBs resulted in significant anxiety and depressive-like manifestations, with no significant changes in the spatial memory.

Acknowledgements: Alin Ciobica and Radu Lefter are supported by a PN-III-P1-1.1-TE-2016-1210 grant called “Complex study regarding the interactions between oxidative stress, inflammation and neurological manifestations in the pathophysiology of Irritable bowel syndrome (animal models and human patients)” offered by UEFISCDI.

P104 Neosensitization to Multiple Drugs following Drug Reaction with Eosinophilia and Systemic Symptoms Syndrome(DRESS)

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Background: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome is associated with severe skin eruptions, fever, hematological abnormalities, and multi-organ involvement. Although aromatic anticonvulsant drugs have been frequently associated with the manifestation of DRESS syndrome, its induction following treatment with nonaromatic anticonvulsants, such as valproate, has rarely been reported. Moreover, there are limited data regarding the development of neosensitization related to chemically unrelated drugs following an episode of DRESS syndrome.

Materials and methods: Here, a case of neosensitization to multiple drugs is described. The present case report describes a female patient who experienced neosensitization to amoxicillin, olanzapine, and quetiapine following the manifestation of DRESS syndrome induced by valproate.

Results: A 50-year-old woman with a 15-year history of schizophrenia was being treated with lithium (1200 mg) and quetiapine (600 mg) about 1 month, but due to high lithium serum concentrations, the lithium was changed to valproate (600 mg). Seven days later, the patient developed a whole-body skin rash, facial edema, and hyperthermia. Laboratory tests revealed an abnormal white cell count ($25.2 \times 10^3 / \mu\text{L}$ with 6% eosinophils) and aspartate transaminase (AST) and alanine transaminase (ALT) concentrations of 2729 IU/L and 2749 IU/L, respectively. At that time, the patient had no any other medical history including drug allergy. A diagnosis of DRESS syndrome due to valproate treatment was established by a consulting dermatologist. As a result, all medicines were discontinued because of severe hepatitis, and intravenous methylprednisolone (60 mg per day) was administered for 1 week. The skin rash, fever, and liver dysfunction progressively disappeared. After discharge, the patient was treated with quetiapine (200 mg). However, she became lost to follow up after 6 months. Approximately 3 years later, the patient was admitted to a local hospital for psychotic symptoms aggravation because she was not taken antipsychotics for 3 years. She treated with lithium (900 mg), sulpiride (600 mg), risperidone (2 mg), and quetiapine (100 mg) for 2 weeks. Additionally, the patient initiated treatment with amoxicillin for acute tonsillitis. On the first day of amoxicillin intake, she developed fever, diffuse erythematous macules on her trunk, and facial edema, and she was transferred to a general hospital via the emergency department. To control her psychotic symptoms she is prescribed olanzapine, haloperidol and quetiapine step by step but all these medications develop fever, skin rash and abnormal AST/ALT. Finally she was given amisulpride which had not



been previously prescribed. Within 2 months, the patient's psychotic symptoms had gradually decreased and ultimately remitted.

Conclusions: To our knowledge, this is the first case report of neosensitization to multiple drugs after valproate-induced DRESS syndrome. A thorough search of Pubmed was performed to identify similar cases, which confirmed that no cases of hypersensitivity to amoxicillin or neosensitization to multiple drugs after a valproate-related DRESS episode have been reported. Furthermore, only two studies have reported possible neosensitization to amoxicillin following DRESS episodes induced by carbamazepine, and only one case reported neosensitization to amoxicillin following a DRESS episode induced by allopurinol.

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P105 The prevalence of adult ADHD risk group and its related factors in college students in Jeju, Korea

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Background: Even though risk of adult attention deficit hyperactivity disorder(ADHD) has not been studied extensively, the prevalence rate has been reported to be 1% in Korean adult ADHD risk group. Due to lack of clinical manifestation of symptoms representing ADHD risks in college students and misdiagnosis as other psychiatric disorders, it is important to make an appropriate diagnosis as adult ADHD in the critical period of their lives.

Materials and methods: The study was done from March 2015 to September 2015 with 1050 undergraduate students of Jeju National University. Proportional stratified sampling of the participants was performed according to individual schools, majors, and gender. To see the risk of adult ADHD they were evaluated by Korean-Wender Utah Rating Scale (K-WURS) and Conners Adult Attention Problem Rating Scale - Korean version (CAARS-K). The operational definition of adult ADHD risk group includes those participants scored in the upper 13% of both K-WURS and CAARS-K. This study was approved by the Jeju National University Hospital Review Board.

Results: Prevalence of adult ADHD risk group in college student in Jeju was 6.84% (95% C.I. 5.18~8.49). ADHD risk was more prevalent in older age(OR 0.842 95% CI 0.726-0.975), in students whose academic achievements(2.574 95% CI 1.222-5.420) was better than average or worse than average, and in students who have alcohol abuse(OR 2.818 95% CI 1.433-5.541), comorbid mental disorders(OR 1.944 95% CI 1.057-3.574), and lower family support(OR 3.237 95% CI 1.264-8.290).

Conclusions:

Prevalence of adult ADHD risk group in college student in Jeju was 6.84% (95% C.I. 5.18~8.49). It was higher than the 1% from the report previously published in Korea and the 4~5% from other international reports on adult ADHD. Early intervention is required in older ages, comorbidity of other psychiatric disorders, or substance abuse because their prevalence rate was relatively higher. In addition, future studies need to focus on influence of family support as protective factor and association with desire for academic achievement.

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P106 A Study on Irritable Bowel Syndrome (IBS) in Mental Health Professionals and the Psychosocial Factors Affecting This

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Background: The present study investigates irritable bowel syndrome in mental health professionals and the characteristics of psychosocial factors that affect this.

Materials and methods: The present study selected an irritable bowel syndrome group among 291 mental health professionals based on the Rome III criteria, and investigated demographic variables. The Hospital Anxiety Depression Scale (HADS), Psychosocial Well-being Index (PWI), and Korean Occupational Stress Scale (KOSS) were used to evaluate psychosocial factors. An independent t-test and chi-square test were used to determine differences between the groups, and a logistic regression analysis was used to determine the odds ratio (OR) of IBS based on occupational stress. SPSS 21.0 (IBM Statistical Package for the Social Sciences 21.0) was utilized for all statistics.

Results: Differences in demographic variables based on IBS group were not statistically significant. Depressive symptoms ($t = -4.767, p < 0.001$) and anxiety ($t = -4.068, p < 0.001$) were higher in the IBS group, and psychosocial well-being was lower ($t = 2.288, p < 0.05$). The OR of IBS based on depressive symptoms was 5.737 (95% CI = 2.24-14.69). There were significant differences in occupational stress based on IBS within the subordinate domains of physical environment ($t = -3.160, p < 0.01$), job demand ($t = -3.273, p < 0.01$), interpersonal conflict ($t = -2.295, p < 0.05$), job security ($t = -3.005, p < 0.01$), and lack of reward ($t = -2.046, p < 0.05$). The OR of IBS based on the subordinate domains of occupational stress was 3.708 (95% CI = 1.20-11.41) in physical environment, and 3.759 (95% CI = 1.33-10.56) in job demand.

Conclusions: The results of the present study verify that psychosocial factors in mental health professionals have a close correlation with IBS. Accordingly, improvements in both IBS symptoms and quality of life should occur through proactive intervention in these variables.

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P107 Relationship between Suicidal Ideation and Plasma C-Reactive Protein Level in General Population: The Korean National Health and Nutrition Examination Survey

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Background: The purpose of this study is to inquire into the relationship between suicidal ideation and plasma C-reactive protein level in general population.

Materials and methods: This study selected a total of 5,090 subjects who has responded to the survey item on suicidal ideation status, and received the plasma C-reactive protein test, as a research subject using the 2015 data of the national health and nutrition survey. This study conducted covariance analysis by correcting a potential influence of demographic and hematological factors. Besides, this study intended to define the cut-off value of the optimum plasma C-reactive protein level which can distinguish between a subject with and without suicidal ideation using the decision tree.

Results: The Plasma C-reactive protein level of a subject having suicidal ideation was significantly higher than the one having no suicidal ideation in covariance analysis ($P = 0.046$). In addition, the proper cut-off value of the plasma C-reactive protein level between the subjects with and without suicidal ideation was found to be 1.30 mg/L ($P = 0.003$).

Conclusions: High plasma C-reactive protein level showed a significant correlation with suicidal ideation. In addition, this study has significance in that it presented that the plasma C-reactive protein concentration has the possibility as a marker of suicidal ideation.

Acknowledgements: The data used in this study are obtained from the 2015 Korean national health and nutrition survey.

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P108 The DSM-ICD diagnostic approach: why we still need psychiatric diagnosis

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Background: Criticism towards DSM-ICD diagnosis traditionally regards such problems as hypnarrativity, biologism, “death of phenomenology”, and a questionably valid overfragmentation of diagnosis among others. Lately, criticism has shifted to such issues as lack of validity, having failed to adopt a dimensional stance, not adequately relying on genetics and neurobiology, and impeding research into the etiopathogenesis of mental disorders. The former problems seem to derive from the fact that the operationalist criteria have been uncritically accepted as the ultimate authority in diagnosis, instead of being merely guides, as intended explicitly; the latter problems have been made more evident since the emergence of the American RDoC research initiative, which not only points to an alternative, more valid, classification of mental disorders, but also aspires to signal a move of psychiatry towards precision medicine.

Materials and methods: We examine the historical and epistemological context of the emergence of DSM, and its remarkable achievement in terms of diagnostic reliability as well as clinical utility. Then we consider the potential of the new era of genetics, neurobiology and analysis of the “big data” for generating a novel approach to psychiatric diagnosis and classification. We also discuss the particularity of the psychiatric object and the clinical significance of the categorical approach to diagnosis.

Conclusions: We conclude that the DSM-ICD approach continues to have a place in psychiatry as a bridge/interface between clinic and research data, as a common clinical language, and as an epistemic hub.

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P109 Efficacy of Cognitive Stimulation Program for Community-Dwelling Solitary Elderlies with Mild Cognitive Impairment and Dementia

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Background: This study aims to investigate the efficacy of 48-sessioned cognitive stimulation programs (CSP) in solitary elderlies with mild cognitive impairment (MCI) and dementia

Materials and methods: Among 194 subjects, 125 were CSP participants and 69 were controls. Korean version of Mini-Mental Status Examination for Dementia Screening (MMSE-DS), Global Deterioration Scale, Seoul-Instrumental Activities of Daily Living (S-IADL) and Korean version of Geriatric Depression Scale-Short Form, Korean Quality of Life-Alzheimer's Disease (KQoL-AD) were assessed. Outcomes were measured at baseline and after 48th session. we analyzed these collected data.

Results: In CSP group, MMSE-DS ($p < 0.001$), KQoL-AD ($p = 0.021$) were significantly improved compared with their baseline.

MMSE-DS was significantly improved in CSP group compared with controls, but KQoL-AD was not ($p = 0.078$). Relative risk (RR) of MCI and dementia in CSP group was 0.491 [95% confidential interval (CI)=0.380-0.633] and that of activities of daily living (ADL) impairment (S-IADL>8) was 0.873 (95% CI=0.773-0.985).

Conclusions: CSP improved cognition and quality of life in solitary elderly individuals with MCI or dementia. Also, CSP reduced relative risk of MCI and dementia by 50.8% and ADL impairment by 12.7%. Although we expect CSP might be helpful to prevent cognitive problems of them, appropriate public mental health programs are still needed for their emotional wellbeing.

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P110 Survey of Depression in the Elderly Patients with Chronic Obstructive Pulmonary Disease

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Background: Depression is commonly comorbid in the elderly patients with physical illness. This study examined the prevalence of depression in the elderly with chronic obstructive pulmonary disease (COPD).

Materials and methods: The eighty-seven patients with COPD were enrolled. The subjects are over 60 years old. The medical and psychiatric history, Hamilton Rating Scale for Depression (HDRS), Patient Health Questionnaire-9 (PHQ-9), Patient Health Questionnaire-2 (PHQ-2), Geriatric Depression Scale-Short form Korean (GDS-SF-K), Mini-Mental Status Exam Korean version (MMSE-KC) were investigated. Global Initiative for Chronic Obstructive Lung Disease (GOLD), which predict the severity of COPD, also investigated.

Results: The prevalence of depression was estimated to be 24.7% (male 19.3% ; female 35.7%) in HDRS, 31.0% (male 24.6% ; female 43.3%) in PHQ-9, 8.0% (male 10.5% ; female 3.3%) in PHQ-2, 23.0% (male 17.5% ; female 33.3%) in GDS-SF-K. The severity of COPD (GOLD) was associated with the prevalence of depression (HDRS, $p=0.027$; PHQ-9, $p=0.045$; PHQ-2, $p=0.112$; GDS-SFK, $p=0.089$).

Conclusions: The prevalence of elderly depression with COPD ranged from about 20% to 30%, the prevalence of depression is nearly two times more common in women. The severity of COPD (GOLD) was associated with the prevalence of depression. The self-reporting scale, such as GDS-SF-K, PHQ-9 and PHQ-2 is the effective screening test of depression.

P111 Prevalence of distorted body image in young Koreans and its association with age, sex, body weight status, and disordered eating behaviors

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Background: To define the prevalence of distorted body image in 10-24-year-old Koreans and determine its relationship with sex, age, body weight status, and disordered eating behaviors.

Materials and methods: A total of 3,227 young Koreans were recruited from elementary, middle, and high schools, as well as from universities. The participants completed a self-reported questionnaire on body image, eating behaviors (Eating Attitude Test-26), and body weight status.

Results: The prevalence of a distorted body image in males was 49.7% and that in females was 51.2%. Distorted body image was more frequent in adolescents (age, 10-17 years) than in young adults (age, 18-24 years). The highest prevalence (55.3%) was reported in female elementary school students (age, 10-12 years). Distorted body image was associated with disordered eating behaviors and abnormal body weight status.

Conclusions: These results suggest that distorted body image is a public health problem, given its high frequency in young Koreans, and that it is associated with abnormal body weight status and disordered eating behaviors.

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P112 The relevance of immunological therapies for mental disorders: a review.

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Background: Since the early 1990s, the immune system has been found to have a direct link to mental disorders. More and more recent findings indicate this connection in a more specific way.

- 1) The circulating and central cytokines, are found to be increased in both the manic and the depressive phase of bipolar disorder.
- 2) There has been a negative association between inflammatory markers and general cognitive abilities in bipolar disorder and schizophrenia.
- 3) Microglia is found to be overactive under pathological, hyper-inflammatory conditions, which leads to the destruction of important neural pathways.

Materials and methods: In this presentation, we are studying several recent findings in the Inflammatory pathway, concerning its connections to mental disease.

In order to do so, we have examined the studies from the last decade, which have at least two of the following key words: immune system/ anti-inflammatory agents/ inflammation and psychiatric/ mental disorder/ schizophrenia/ depression/ bipolar.

Results: The results are astonishing: 8 out of 10 studies reveal a strong connection between inflammation disease and also examine the way they are connected in each disorder, more specifically.

Conclusions: In schizophrenia, several anti-Inflammatory agents have been associated with a better score in PANSS, after concomitant treatment with antipsychotics.

Patients with major depression had better scores on at least one scale, after treatment with pioglitazone, n-acetylcysteine and omega-3 fatty acids.

Similar results with different agents were found in several studies concerning mania and bipolar depression.

P113 Psychological factors influence the irritable bowel syndrome and their effect on quality of life among firefighters in South Korea

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Background: The purpose of this study was to investigate the characteristics of psychological factors that are related to irritable bowel syndrome (IBS) and their effects on the quality of life (QOL) of firefighters in South Korea.

Materials and methods: This study examined data collected from 1217 firefighters in South Korea. After identifying firefighters with IBS according to the Rome III diagnostic criteria for functional gastrointestinal disorders (FGIDs), we collected demographic data and psychological variables through self-administered questionnaires. In order to observe the distribution of the high-risk group in the Korean occupational stress scale (KOSS) subcategories, we conducted logistic multiple linear regression. The correlations between psychological factors and QOL were analyzed and we performed a stepwise regression analysis.

Results: The groups (firefighters with and without IBS) showed differences by sex, working period, task, working pattern, Patient Health Questionnaire-9, Generalized Anxiety Disorder Questionnaire-7, Korean Occupational Stress Scale, Rosenberg's Self-Esteem Scale, and the World Health Organization Quality of Life-BREF. IBS risk was higher in the following KOSS subcategories: job demand [OR 1.79, 95% CI: 1.11-2.89], interpersonal conflict [OR 2.21, 95% CI: 1.25-4.33], organizational system [OR 1.87, 95% CI: 0.58-3.30], and lack of reward [OR 2.39, 95% CI: 1.08-5.26]. The final regression model explained 42.6% of the variance in overall quality of life.

Conclusions: The findings of this study indicate that a number of psychological factors increase the likelihood of irritable bowel syndrome (IBS) and affect QOL. Therefore, when diagnosing IBS in the future, mental health aspects should be considered in addition to physical health.

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P114 Evaluation of affective temperaments, depression and anxiety in white-coat, well-treated and resistant hypertension and in healthy controls

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Background: Hypertension and mood disorders both increase the frequency of cardiovascular events. Affective temperaments are related to mood disorders, however, less data are available about the relationship between affective temperaments and cardiovascular diseases. The aim of this study was to evaluate affective temperament scores, depression, anxiety, hemodynamic and arterial stiffness parameters in healthy subjects (Cont), as well as in chronic, well-treated (Chr), chronic, resistant (Res) and white-coat (Wh) hypertensive patient populations.

Materials and methods: In our study, 262 patients were included: 148 Chr, 29 Res, 18 Wh and 67 Cont subjects. The patients completed the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Autoquestionnaire (TEMPS-A), the Beck Depression Inventory (BDI) and the Hamilton Anxiety Scale (HAMA). Blood pressure was measured with a validated oscillometric device (Omron M3) and arterial stiffness was examined with tonometry (PulsePen).

Results: Significant differences were found between the Cont, Chr, Res and Wh in brachial systolic blood pressure (121.44±11.1, 131.66±12.16, 151.1±27.92, 136.31±12.31 mmHg, respectively) and in pulse wave velocity (7.78±1.39, 9.24±2.19, 10.49±2.76, 8.06±1.61 m/s, resp.). In cyclothymic affective temperament scores we found significant differences between the Cont, Chr and Res groups (2(0-4), 3(1-5), 4(3-8), resp.). In BDI scores also significant differences were found between Cont, Chr and Res (3(0-5), 5(2-9), 7(4-12.5), resp.), while in HAMA scores differences between Cont, Chr, Res and Wh (3(1-6), 5(2-9), 12 (6-19.5), 8(5-10.5), resp.) groups were found.

Conclusions: Evaluation of affective temperaments might be helpful in identification of high-risk subgroups of hypertensive patients. However, prospective studies are required to confirm this observation.

Acknowledgements: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.



P115 Should we consider sleep disturbances as predictors of suicidal behavior?

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Background: Suicidal behavior is one of the leading cause of death and is associated with a significant disability and psychosocial impairment worldwide. Suicide is a complex issue involving a number of psychological, social, cultural, and biological factors [1, 2]. Several risk factors including sleep disturbances have been associated with suicidal behavior. There are studies showing that patients with insomnia are at an increased risk of experiencing suicidal ideation and/or making a suicide attempt [3, 4]. Overall, the presence of sleep disturbances has been significantly associated with suicidality but the exact nature of this association needs to be further elucidated. Given this background, first the present study aimed to examine the correlation between sleep disturbances and suicidal behavior. Moreover, sleep disturbances have been analyzed as possible predictors of suicide behavior.

Materials and methods: We recruited 299 inpatients with a mean age of 48 (± 17.01) years. Participants have been assessed using the Pittsburgh Sleep Quality Index (PSQI), Beck Hopelessness Scale (BHS), Scale for Suicide Ideation (SSI), and Intent Score Scale (ISS). All the analyses were performed using the Statistical Package for Social Sciences (SPSS) for Windows 20.0.

Results: Suicide thoughts/wishes derived by the BDI-II resulted significantly associated with the subjective sleep quality ($r=.221$; $p=.01$), sleep latency ($r=.311$; $p=.01$), habitual sleep efficiency ($r=.283$; $p=.01$), step disturbances ($r=.220$; $p=.01$), daytime dysfunction ($r=.354$; $p=.01$), and global PSQI total score ($r=.315$; $p=.01$). The subjective sleep quality was also related to suicide intent ($r=.302$; $p=.01$) and suicide thoughts ($r=.201$; $p=.01$). Suicide thoughts were associated with sleep latency ($r=.230$; $p=.01$), daytime dysfunction ($r=.198$; $p=.01$) and global PSQI total score ($r=.203$; $p=.01$) as well. Daytime dysfunction was a significant predictor of suicide thoughts/wishes ($p=.004$) and subjective sleep quality ($p=.008$) while daytime dysfunction ($p=.015$) and global PSQI total score ($p=.020$) predicted active suicide intent, respectively. Finally, active suicide ideation was also predicted by sleep latency ($p=.047$).

Conclusions: The present study is limited by the small sample size and cross-sectional study design that did not allow the generalization of the main findings. However, according to our results, a significant relation emerged between sleep disturbances and suicidal behavior. The present findings confirmed the results of a meta-analytic study demonstrating that sleep distur-

bances are strongly associated with suicidal ideation, suicide attempts, and completed suicide [5]. Sleep quality and its related disturbances should be carefully and systematically investigated in clinical practice in order to reduce suicide risk. Importantly, assessing the mental health of patients with sleep disturbances should be not only part of the routine clinical evaluation but also a fundamental aspect of the systematic suicide risk assessment. Clinicians should also evaluate not only the existence of insomnia but also the subjective sleep quality and the complex psychosocial dysfunctions associated with this disabling condition in psychiatric samples.

Acknowledgements: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P116 Associations between polymorphisms of glucocorticoid receptor gene (NR3C1) and brain emotional stress processing in migraine

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Background: Stressful life events are inevitable in everyday life, among them pain is a strong and frequently unpredictable stressor. Migraine patients suffer from repeated migraine attacks that stimulate biological pathways related to stress response. Under stress hypothalamo-pituitary-adrenal axis (HPA) is activated which results in cortisol release. The function of the HPA axis is controlled by brain regions, for example by the amygdala and the prefrontal cortex, and by the released cortisol that binds to glucocorticoid-receptors and exerts negative feedback regulation during the stress response.

Materials and methods: In this study brain activation to fearful-faces was measured by functional magnetic resonance imaging (fMRI) and migraineurs were compared to control subjects. Looking at fearful-faces activates brain regions that plays important roles in stress response. Association of five polymorphisms throughout the glucocorticoid receptor gene (NR3C1) and migraine was investigated with a logistic regression model. In addition, we studied how NR3C1 and migraine influence migraine-specific brain activation by means of general linear model.

Results: Using full-brain analysis, increased activation was observed in the right medial frontal gyrus to fearful-faces in migraineurs. Genetic variations of NR3C1 showed a significant relationship to migraine when the effects of all polymorphisms were analysed in one model. Based on further analysis, it could be establish that the SNPs which are significant in migraine do not influence the examined brain regions neither as main effect nor in interaction with migraine.

Conclusions: In conclusion, the variants of NR3C1 gene are presumably contribute to the development of migraine, but this effect is most likely independent from the observed brain emotional stress processing differences between migraineurs and controls.



Acknowledgements: The study was supported by Hungarian Brain Research Program - Grant No. KTIA_NAP_13-2-2015-0001 (MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group), by the Hungarian Academy of Sciences (MTA-SE Neuropsychopharmacology and Neurochemistry Research Group), and by the Hungarian Brain Research Program - Grant No. 2017-1.2.1-NKP-2017- 00002 (SE-NAP2 Genetic Brain Imaging Migraine Research Group). Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P117 The effect of genetic variant rs324420 of anandamide fatty acid amide hydrolase (FAAH) on resting-state connectivity in migraine

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Background: In the development of migraine and during its chronification an endocannabinoid system deficit is hypothesized but the exact nature of it is not clear. Anandamide degrading enzyme (FAAH) gene has a functional polymorphism, rs324420. Individuals carrying the A allele have a reduced enzyme activity and thus have a higher anandamide level. [1, 2]

Materials and methods: In this study the effect of FAAH rs324420 polymorphism was investigated on the brain resting-state functional connectivity in migraineurs and healthy individuals. Notably the strength of the functional connectivity between the periaqueductal gray matter (PAG) and brain regions responsible for pain transmission or modulation was studied with functional magnetic resonance imaging (fMRI).

Results: The rs324420 polymorphism and the migraine diagnosis did not show any major influence on the investigated brain connections. At the same time significant interaction was present between the rs324420 and migraine on the connectivity of right PAG and right insula, and additionally of the sensory-motor network (SMN) and PAG. The right insula and right PAG showed less synchronized resting-state activity in migraineurs carrying the A allele whereas CC homozygous migraineurs showed enhanced connectivity between these two regions. A significantly altered connectivity was shown between the SMN (gyrus postcentralis, gyrus precentralis and supplementer motor area) and PAG synchronization in CC homozygous migraineurs compared to migraineurs carrying the A allele.

Conclusions: Our results suggest that the FAAH rs324420 A allele is a potential protective factor in migraine, since in individuals who suffer from migraine but carry the A allele the pain neuronal-matrix's connectivity is less strong. However, further studies are needed to understand the role of FAAH and the examined functional polymorphism (rs324420) in migraineurs.



Acknowledgements: The study was supported by Hungarian Brain Research Program - Grant No. KTIA_NAP_13-2-2015-0001 (MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group), by the Hungarian Academy of Sciences (MTA-SE Neuropsychopharmacology and Neurochemistry Research Group), and by the Hungarian Brain Research Program - Grant No. 2017-1.2.1-NKP-2017- 00002 (SE-NAP2 Genetic Brain Imaging Migraine Research Group). Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P118 Predictors of sexual violence against women

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Background: Sexual violence against women is a controversial issue across the world. Sexual violence includes rape, attempted rape, or other forms of sexual assault. Mental health consequences of it should be well known by clinicians.

Materials and methods: This study aimed to present risk factors and immediate and long term mental health consequences of sexual violence against women. Literature review was conducted by using studies between 2000 and 2017.

Results: Risk factors for sexual violence is having been living with an intimate partner, poverty, being young age, having a history of other sexual traumas. Acute consequences of sexual trauma consist of negative feelings such as shock, denial, fear, confusion, withdrawal, guilt or nervousness. Long term consequences of sexual trauma include PTSD, anxiety disorders, alcohol or illicit substance dependence, suicidal ideation, and suicide attempt (Campbell, 2001).

Conclusions: Risk factors is especially important to prevent sexual trauma. Acute and long term consequences of sexual violence should be well known in order to identify and serve the best treatment survivors.

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P119 Prevalence of burnout among primary care physicians in Oman

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Background: Previous studies have suggested that medical profession is one of the professions associated with high level of burnout and it is negatively associated with physicians productivity, job performance and the level of care they provide to their patients. In the last few decades, prevalence of burnout increased among physicians to alarming level. Several studies have indicated a high prevalence of burnout among practicing physicians with rate ranging from 30% to >60%, with the highest rates seen among family medicine, emergency medicine, and general internal medicine. To the best of our knowledge, this is the first study ever to assess rates of burnout among primary care physicians in Oman

Materials and methods: A cross-sectional analytical study was conducted among a cluster random sample of primary health care physicians working in Muscat. Burnout was evaluated using the the Maslach Burnout Inventory Human Services Survey (MBI-HSS) . A binary logistic regression model, unadjusted and adjusted Odds Ratio, were used to correlate between burnout and participants characteristics and work related factors.

Results: (190) primary care physician participated, with a response rate of(90 %) . 41% of the participants have high score in either emotional exhaustion(EE),or depersonalization (DP) and 6.3 % scored high in all three dimensions. A logistic regression analysis revealed that age and financial strain are the only two independent predictors associated with high EE or high DP .

Conclusions: Burnout among primary care physician is common .The impacts of burnout not only affect the suffering physicians but extend to affect their patients. Therefore, the determination of these predictors is important in order to reduce the level of burnout and to improve the quality of care provided by these primary care physicians .

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P120 Needs of Patients with Mental Illness in a Community Context

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Background: Taking into account the different circumstances that make the community, this becomes a privileged context for the development of interventions in the scope of health. It is expected that the person with mental illness, who is integrated in his community, develop skills that allow him/her an effective recovery, taking into account the importance of its promotion.

Materials and methods: Aims: explore and describe the perspective of health professionals on the needs of a person with mental illness. Qualitative and exploratory study, based on symbolic interactionism. It was constituted a convenience sample of 7 health professionals from different areas of intervention. A semi-structured interview was chosen as a data collection instrument. Data analysis was performed using content analysis according to Blumer (1986). All ethical procedures were guaranteed.

Results: From the analysis of the narratives emerged four dimensions, namely, social relations, disease, environment and health services. Twelve subdimensions also emerged: relation with the family, relation with the environment, therapeutic intervention with the family, therapeutic with the person, therapeutic regimen, stigma, difficulties caused by the disease, knowledge about resources in the community and accessibility, social integration and resources in the community, continuity of care, articulation between health services and communication between health technicians/teams.

Conclusions: We can conclude that the needs detected are related to different domains, being the difficulties demonstrated in terms of family dynamics, work environment and social relations; the difficulties in the management of the therapeutic regime is also highlighted, as well as difficulties in accessing support networks, or the inability of the person to mobilize means of access them.

Acknowledgements: This article is a result of the project (NORTE-01-0145-FEDER-023855), supported by Norte Portugal Regional Operational Programme (NORTE 2020), under the PORTUGAL 2020 Partnership Agreement, through the European Regional Development Fund (ERDF).

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P121 InterComuniCare: a Research Project in Recovery and Community Intervention

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Background: To achieve the goals associated to the implicit values in the portuguese National Mental Health Plan, in particular the recovery, is necessary a cooperation between the health and educational institutions, in order to fulfill the deinstitutionalization of the patients. It is widely accepted today that the current mental health policies advocate the implementation of continued and integrated care in mental health, where the home care support teams take part.

Materials and methods: This research project has as a study object the recovery of individuals with mental illness and presents as general aim the development of an intervention program in the range of recovery, and it is developed by two institutions placed in the north of Portugal. The presented project intends to respond to the aim through an action research, with community home intervention, and a sample constituted by patients with mental illness.

Results: This research intends to contribute to the increase of knowledge in the scope of the recovery intervention, in particular in the context of action of the community health teams, through the construction of a guide for health, which will be completed in 2019.

Conclusions: The synergies between the two institutions are promoters of a research philosophy which it is presented as an asset to the development of this project in a relevant area such as mental health. This research project will also contribute to the promotion of the quality of life and well-being of the people who will be submitted to the intervention, producing indicators that will demonstrate effective outcomes in health.

Acknowledgements: This article is a result of the project (NORTE-01-0145-FEDER-023855), supported by Norte Portugal Regional Operational Programme (NORTE 2020), under the PORTUGAL 2020 Partnership Agreement, through the European Regional Development Fund (ERDF).

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P122 Inflammatory processes from a neuropsychiatric point of view

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Background: Many researches have hypothesised the significant role of inflammatory pathways in the pathomechanism of neuropsychiatric disorders. Our aim was to further investigate the effect of cytokines on depression and anxiety.

Materials and methods: In a Hungarian population cohort the impact of proximal and distal life stress on the effect of two single nucleotide polymorphisms (SNPs) in the IL-1B gene (rs16944 in the promoter, rs1143643 in the intron region) was investigated in relation to depressive and anxiety symptoms [1]. In addition, the influence of the SNP rs1800795, situated in the promoter region of the IL-6 gene, was analysed on depressive symptoms, as well as the SNP's interaction with proximal life stress and painful events was studied [2]. Our other objective was to examine whether social support reduces the psychological side effects of low dose interferon-alpha treatment in melanoma patients [3].

Results: Minor allele carriers of rs16944 showed higher depressive and anxiety scores when high stress exposure was present. Also a weak protective function of the allele was found when coupled with low stress exposure. Rs1143643 interacted significantly with recent life stress only on depressive symptoms [1]. The rs1800795 polymorphism affected depressive symptom scores in connection with both recent life stress and painful physical conditions, but it played a notable role in developing somatic symptoms than emotional-cognitive symptoms [2]. Melanoma patients with higher social support scored lower on the depression scale compared to patients with less social support [3].

Conclusions: As negative environmental factors, both psychological and physical stress induce depressogenic effects through modulating neuroinflammatory signaling mechanisms on a genetic level [4]. Contrarily, positive environmental effects such as the presence of social support can reduce symptoms of depression [4].

Acknowledgements: The study was supported by the Sixth Framework Program of the Europe-



an Union, NewMood, LSHM-CT-2004-503474; by the Hungarian Brain Research Program (Grant KTIA_13_NAP-A-II/14) and National Development Agency (Grant KTIA_NAP_13-1-2013-0001); by the Hungarian Academy of Sciences (MTA-SE Neuropsychopharmacology and Neurochemistry Research Group); by the Hungarian Academy of Sciences and the Hungarian Brain Research Program - Grant No. KTIA_NAP_13-2-2015-0001 (MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group); and by the Hungarian Brain Research Program (Grant No. 2017-1.2.1- NKP-2017- 00002). Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P123 Effect of Therapy Referral Packets on Rate of Obtaining a Therapist: a Quality Improvement Project

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Background: Epidemiological studies in psychiatry consistently find that the majority of individuals with serious psychopathology do not receive needed psychiatric help[1]. Mental health providers have minimal time to conduct psychotherapy and often refer patients out to community psychotherapists. However, the rate of follow-up with psychotherapists is low. This cross-sectional study builds on prior research, to examine the relationship between psychotherapy referral materials for filtering providers in the community, and the rate of engagement in psychotherapy.

Materials and methods: Participants included new patients at an outpatient psychiatry clinic, referred to start psychotherapy. One arm of the study involved therapy referral by verbal recommendation of the Psychology Today website alone. The second arm involved various referral materials including a packet with step-by-step instructions on how to navigate the Psychology Today website.

Results: Although not statistically significant, the percent of patients who established therapy by 1 month who were verbally told about the website Psychology Today was 0%, compared to 37.5 % in the group who received referral packets.

Conclusions: We hypothesized that providing additional referral materials would increase the rate of patients initiating psychotherapy, compared to only verbally discussing resources. Although the data did not reach statistical significance, they did suggest a positive effect of providing referral packets. Future direction of research may include expanding the data collection to a year with more providers being involved, including a list of bilingual therapists, having weekly email reminders before the follow-up phone call, and surveying patients regarding attitudinal or structural barriers, to further facilitate connection with a psychotherapist.

Acknowledgements: Christine Masuda MD and Valerie Rosen MD at University of Texas Dell Medical School Psychiatry Residency Program.

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P124 Do Children's Sleep Disturbances Affect The Sexual Quality of Life Of Their Parents?

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Background: Parenthood is often accompanied with changes to the lifestyle, in general, and to the sexual life of the parents, in particular. In this study we explore whether parents' sexual quality of life is affected due to children's sleep disturbances.

Materials and methods: A sample of 43 Greek couples with children aged between 3-6 y.o. completed the Sleep Disturbances Scale for Children (SDSC), the Sexual Quality of Life Questionnaire Male & Female (SQOL-M & SQOL-F). The first measures the presence of sleep disturbances to children 3-16 y.o., the past 6 months. SQOL-M & SQOL-F evaluate the correlation between sexual dysfunction and the quality of life, at aspects such as, sexual satisfaction, psychosexual feelings and relationship satisfaction. Scales were completed by both parents. The parents were entered into the study if they had similar educational level (>9 years of education), and if they were without clinical depression, chronic disease, and alcohol abuse. Sixteen parents with children with severe sleep disturbances (SDSC score >58) were compared to 15 parents with children without sleep disturbances (SDSC score <41)

Results: There was a significant difference to the sexual quality of life between the group of mothers with children having severe sleep disturbances compared to the women of the control group (t-value =4,94 & p-value=0,00005 γ α p<05), with the first being seriously negatively affected. No significant difference has been found among the two groups of fathers (t-value =0,572 & p-value=0,28 γ α p<05).

Conclusions: Mother's sexual quality of life is shown to be more affected compared to the father's sexual quality of life due to their children's sleep disturbances. Do women carry an objectively greater burden related to their children's up-bringing? Or, maybe, their cognitions, and, therefore the way they respond to these issues are responsible for this difference? In any case, sexuality and sexual life are fundamental aspects of a relationship. A good sexual quality of life is an important milestone in a healthy parents' relationship and an overall optimal quality of life.



P125 Instrumental registration of specific oculomotor biomarkers in patients with schizophrenia

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Background: There are uncertainties in etiological and pathophysiological aspects of schizophrenia leading to limitations in the early diagnosis and treatment. A study approach towards the endophenotypes provides limited biological markers as a gene expression of certain disorder rather than the clinical phenotype [1]. Endophenotypes are measurable components, invisible to the bare eye, located between the visible manifestations and the genotype and appear to be an important concept in the study of complex neuropsychiatric disorders [1]. Dysfunction of the smooth pursuit eye movements of objects has long been connected with schizophrenia [2].

Materials and methods: In this study the investigated subjects are divided into two groups. The first consists of 107 patients with schizophrenia and the second one is a control group consisting of 110 healthy subjects. An instrumental method for registration of smooth pursuit eye movements was used. One of the device modules includes detection of horizontal eye movements characteristics - frequencies measured in Hz.

Results: In this prospective study the eye movements of investigated groups are compared by the average frequencies, detected by device during the first 30 seconds of the smooth pursuit. It was found out the average frequency in the group of schizophrenic patients was 2.013 Hz. In comparison 0.771 Hz was the average frequency measured in the control group subjects.

Conclusions: There is a significant difference between the two studied groups. The relationship between the registered changes in smooth pursuit eye movements and schizophrenia is evident - 2.6 times higher average frequency which could be considered as a reliable biomarker in schizophrenic patients.

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P126 Social, clinical and demographic predictors and determinants of mental health in End Stage Renal Disease

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Background: End Stage Renal Disease Patients face physical or mental problems such as stress, anxiety and depression.

Materials and methods: A cross-sectional design was employed in this study in which 367 End Stage Renal Disease patients undergoing Haemodialysis were participated. Data were collected by a self-administrated questionnaire consisted of two parts. A sheet containing social, demographic and clinical information and SCL-90 r. All collected data were analyzed in SPSS v. 20. Descriptive and inferential methods were used. In order to find the mental health's predictor and determinants, stepwise multiple linear regression was performed. The level of statistical significance was set to $p \leq 0.05$.

Results: From the total sample, 228 were men. The mean age was 61,80, 59,1% were married and 52,6% were dealing with an additional health problem. The prevalence of psychiatric symptomatology was 34,3%, the majority of the patients was reporting depressive symptomatology 51,5%. The less reported symptoms were those of psychotism (20,7%) and aggression(28,1%). Female, the additional health problems, living in rural areas and experiencing symptom burden were the most common predictors of poor mental health in many dimensions of psychiatric symptomatology. The models in most cases are explaining nearly the 42% of the variance.

Conclusions: Greek haemodialysis patients are reporting poor mental health and the prevalence of psychiatric symptomatology of the sample reached the 34,3%. Gender, area of residence and comorbidities were found to be associated with poor mental health.

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P127 Pre- and post-surgical assessment of mental health and quality of life in patients with epilepsy treated with mesial temporal lobectomy

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Background: Temporal lobectomy in carefully selected patients has been shown to result in seizure free outcomes in more than 70-90% of patients. Seizure freedom may improve mood, anxiety and life satisfaction. Thus, we explored the consequences of lobectomy as a treatment for focal seizures arising from the mesial temporal lobe (MTL) on anxiety and depression symptoms and quality of life (QoL) ratings in four patients.

Materials and methods: Four patients (3 women; age range: 19-47 years) with focal MTL epilepsy (3 patients with hippocampal sclerosis and 1 with an astrocytoma) were asked to complete three self-report questionnaires: the State-Trait Anxiety Inventory [1], the Beck Depression Inventory-II [2] and the Quality of Life in Epilepsy-10-P [3]. All questionnaires were completed three times: at pre-surgery, and at both one-month and three-month post-surgery follow-up. All four patients were seizure-free after the lobectomy.

Results: We found an important decrease of depressive symptoms in all patients at 1-month post-surgery, which continued until 3-month follow-up. Our findings regarding QoL and anxiety were less consistent. Health-related QoL was stable or worsened at one-month post-surgery, but improved relative to pre-surgery at the three-month follow-up. On the other hand, overall QoL was stable across all evaluations with only some minor improvement. Finally, half of the participants reported a noteworthy decrease in anxiety after the first month, which remained stable during the third month, while the rest indicated no difference.

Conclusions: Our findings demonstrate qualitative aspects of four case studies and provide preliminary information regarding mental health and QoL after epilepsy surgery. Additional cases and a follow-up examination one year post-surgery are needed in order to elucidate long-term outcome after MTLectomy for drug resistant epilepsy.

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P128 Compulsive fire-setting behaviour in patient with Klinefelter syndrome.

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Background: A young Caucasian man was admitted to a secure psychiatric unit from prison for assessment of his mental health, querying diagnoses of mental illness and personality disorder. The patient had an established diagnosis of Klinefelter syndrome since his childhood without requiring any treatment for it. He had a long history of fire-setting behaviours and charges for arson. He described his acts as impulsive. There was no history of learning disability. He responded to antipsychotic medication and psychotherapy treatment. The case triggered the team to look into the literature for a link between the syndrome and the particular offending behaviour.

Materials and methods: We went through the Pubmed and Google scholar bases for literature on “Klinefelter” AND “fire-setting” OR “arson”.

Results: We found there to be only a few articles discussing the link between the syndrome and the fire setting which were notably not very recent (1, 2). More articles were found on the connection between Klinefelter’s and overall criminality. There were some prospective studies and cohort studies, especially in secure settings. We noted a register-based cohort study (3) that showed a moderately increased risk of conviction in men however this was similar to control population when socioeconomic factors were taken into consideration and increase in different offenses which included arson.

Conclusions: The available literature is not enough to make a causal connection between the syndrome and the behaviour however there are anecdotal references and a limited amount of literature. Further research could clarify if the link actually exists.

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P129 Is bed rest helpful as an intervention in the management of severe anorexia nervosa?

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Background: Bed rest has been part of treatment of severe anorexia nervosa in hospitals both in the UK and internationally. It is commonly used on medical and paediatric wards and both the adult and Junior MARSIPAN guidelines recommend bed rest as part of nursing management of the physically compromised patient.

However, recently there has been increasing awareness of the negative effect of bed rest in other patient populations.

Aims and hypothesis

The aim of this study was to review the literature on using bed rest as an intervention in the management of severe anorexia nervosa in adolescents.

Materials and methods: We searched on HDAS NICE website the following data bases: Medline, Pubmed, Embase, PsychInfo, Cinahl, Hmic, Amed, HBE, BNI including title and abstract for the following search terms: bed rest, anorexia nervosa, randomized controlled trial

Results: 21,591 papers included the search term 'bed rest' and 56,131 'anorexia nervosa'. After exclusion of duplicates, only 17 papers included both topics. There were no randomised controlled trials. Negative physical consequences were described in a number of studies, and included lower heart rate, venous thrombosis, impaired bone turn over and increased risk of infection. Several papers showed that patients have a strong preference for less restrictive approaches. These are also less intensive in nursing time.

Conclusions: The evidence to support the use of bed rest in severe anorexia nervosa is extremely limited. Historical practices, which were based on operational conditioning principles, have now been replaced by new evidence based psychological treatment approaches. The risks associated with bed rest are significant. Given the clear risk of harm, it is difficult to recommend a randomised controlled trial on the subject, and the practice is best avoided altogether. Risks associated with initial refeeding can be managed in less restrictive manner.

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P130 Ultra-rapid cycling a clinical challenge - Case Review

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Background: Ultra-rapid cycling Bipolar Disorder is a rare, controversial entity characterized by the occurrence of more than four mood episodes per month.

Materials and methods: We represent an unusual case of a 28-year-old female patient, who was referred to our inpatient psychiatric unit by a private psychiatrist with manic episodes, for adjustment of medication. The patient was diagnosed with Ultra-rapid cycling Bipolar Disorder in America, 19 months prior to our hospitalization. In the meantime, she developed mood swings from depressive to hypomanic states at regular intervals from one month to ten days. Psychiatric treatment in America, in the form of almost all combinations of mood stabilizers and antipsychotic drugs, remained ineffective. A combination therapy approach with clozapine (100mg/day) and lithium (0,70 -0,80 was used.

Results: Within a month of hospitalization, prevailing mood was stabilized. The patient manifested visibly improving affect sufficiently balanced and euthymic round the clock after a further six months.

Conclusions: Combination of minor doses of clozapine and lithium which led to the stabilization of this patient with Ultra-rapid cycling Bipolar Disorder, might pose a pharmacological possibility. Due to lack of evidence, further scientific investigation into Ultra-rapid cycling Bipolar Disorder is needed. In addition to improving the diagnostic criteria, insight into neurophysiologic mechanisms of mood switching and episode frequency may have important implications for clinical care.



P131 Detoxification Unit of Psychiatric Department of General Hospital of Corfu - Results

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Background: Substance use, abuse and dependence do not signal a chronic, recurrent brain disorder, but rather a lifestyle which entreats as main choice, the mediation - through substances- of human relationships.

The therapeutic framework for detoxification, contributes among other, in helping patients to link external objective reality with internal psychological processes and from this point, both its structure and function are of great importance

Materials and methods: Corfu, due to its geographical position is considered a passage of addictive substances and, at the same time, due to high tourism, poses a similar availability of these substances. With increased demands for detoxification and in the absence of “dry” treatment infrastructure, in 2012, the “DIAPLOUS” Detox Unit (Psychiatric Department of General Hospital of Corfu) was established. National Health System in Greece provides exclusively public and free of charge services for the prevention, treatment and social reintegration of dependent patients.

“DIAPLOUS” Detox Unit provides treatment for drug, alcohol, internet and gambling addictions. Therapeutic approaches are multifocal with a united anthropocentric philosophy and conception, and through the basic structure of the Unit, which is the Counseling Station, Psychological Overcoming Dependence and Social Reintegration, there are sections covering the whole spectrum of substance treatment.

Results: At this stage, the unit provides only an open, external program with 24 months duration. To date, statistics show that the success rate of treatment reaches 70% (follow-up five years).

P132 Operational possibilities of Crisis Support Unit of the Psychiatric Department - General Hospital of Corfu

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Background: The emergence of natural or technological disasters can directly, indirectly and over time affect individuals and human societies.

Materials and methods: When ordinary people are confronted with unusual situations, a wide range of psychological and other problems can develop both individually and socially. In particular, we refer to psychological reactions to disasters and events involving any form of crisis and psychological syndromes that demand immediate support at all levels (interpersonal, clinical, such as prolonged mourning, post traumatic stress disorder, etc.). Additionally, we refer to the special needs of special populations during crisis and disaster, but also after the crisis and disaster. Such groups may be rescuers / assistants, children, the elderly, refugees and generally those who are direct witnesses and victims of a disaster.

Results: The above reasons led to the establishment of the Crisis Support Unit in the Psychiatric Department of General Hospital of Corfu, a unique unit in National Health System in Greece. The Unit intervenes in crises of natural, technological disasters and post-traumatic disorders.

Conclusions: An immediate priority for the Unit is the development and implementation of the basic principles of psychosocial intervention, direct psychological and psychiatric first aid and special psychological assistance techniques for specialists and non-specialists, research, education and evaluation.

The Unit is multidisciplinary and has a great deal of business and clinical experience, supporting our fellow humans in the tragedy of Norman Atlantic and elsewhere.

P133 A common mental health disorder

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Background: Is a mood disorder that causes a persistent feeling of sadness and loss of interest. Also called major depression, major depressive disorder or clinical depression, It affects how you feel, think and behave and can lead to a variety of emotional and physical problems, feeling sad, or what we may call “depressed”, happens to all of us. The sensation usually passes after a while. However, people with a depressive disorder - clinical depression - find that their state interferes with daily life. For people with clinical depression, their extent that both they and those who care about them are affected by it.

Materials and methods:

- o Feeling of helplessness and hopelessness
- o Loss of interest in daily activities
- o Appetite or weight changes. Significant weight loss or weight gain.
- o Sleep changes. Either insomnia, especially waking in the early hours of the morning, or over-sleeping
- o Anger or irritability. Feeling agitated, restless, or even violent.
- o Loss of energy. Feeling fatigued, Sluggish, and physically drained.
- o Strong feelings of worthlessness or guilt.
- o Reckless behavior. You engage in escapist behavior such as substance abuse, compulsive gambling, reckless driving, or dangerous sports.
- o Concentration problems. Trouble focusing, making decisions, or remembering things.
- o Unexplained aches and pains. An increase in physical complaints such as headaches, back pain, muscles, and stomach pain etc.

Results: Rates of depression in women are twice as high as they are in men. This is due in part to hormonal factors, particularly when it come to premenstrual syndrome (PMS), premenstrual dysphonic disorder (PMDD), post partum depression, and premenopausal depression. As for sign and symptoms, women are more likely than men to experience pronounced feelings of guilt, sleep excessively, overeat, and gain weight. Women are also more likely to suffer from seasonal affective disorder.

Conclusions: Globally depression affects 20% of people while in Pakistan. It’s more serious with an estimate of 34%. Both genetic and environmental factors play an important role in its pathogenesis. Around 3507% citizens of Karachi are affected with this mental illness, while 43% from Quetta and 53.4% from Lahore are also affected. There are a number of factors that may increase the chance of depression. Post physical, Sexual, or emotional abuse can cause depression later in life; certain medications cam increase risk of depression. Depression may result from personal conflicts or disputes with family members or friends. A family history of depression may increase the risk. A family history of depression may increase the risk. Even Good events such as starting a new job, graduating, or getting. Problems such as social isolation due to other mental illnesses or being cast out of a family or social group cam lead to depression. There are many options for treating depression including medication antidepressants, herbals,

homeopathic, medication free therapy, dietary supplements, Psychotherapy, Electroconvulsive therapy and other brain stimulation therapies.

Acknowledgements: If you know someone who is depressed, it affects you too. The most important thing you can do is help your friend or relative get a diagnosis and treatment. You may need to make an appointment and go with him or her to see the doctor. Encourage your loved one to stay in treatment, or to seek different treatment if no improvement occurs after 6 to 8 weeks.

References:

- o Offer emotional support, understanding patience, and encouragement.
- o Talk to him or her, and listen carefully.
- o Never dismiss feelings, but point out realities and offer hope.
- o Never ignore comments about suicide, and report them to your loved one's therapist or doctor.
- o Invite your loved one out for walks, outings and other activities. Keep trying if he or she declines, but don't push him to or her take on too much too soon.
- o Provide assistance in getting to the doctor's appointments.
- o Remind your loved one that with time and treatments, the depression will lift.



P134 Conservative management and drug treatment of ulnar neuropathy in amateur athletes

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Background: Aim of this study is to present the conservative management and the drug treatment of ulnar neuropathy in amateur athletes.

Materials and methods: 6 amateur male athletes (range of age 15-35) (soccer 1, basketball 1, volleyball 1, tennis 3) were treated with 1) Anti-inflammatory and pain killed combination (ibuprofen 600 mg, 3 times per day plus paracetamol 500 mg 3 times per day 2), cryotherapy and physical therapy for 21 days.

Results: All 6 of them, they return back in sports activity and every day life after the treatment following an appropriate gradual interval-throwing program plus a stretching program.

Conclusions: Accurate diagnosis, appropriate management and treatment of neuropathies sports activity, needs during multidisciplinary approach, essential step to improve optimal outcomes and safe return to sports activity.

P135 Median neuropathy in amateur female athletes .Elements of conservative plus drug treatment

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Background: Aim of this study is to present the conservative management and the drug treatment of median neuropathy in female amateur athletes.

Materials and methods: 6 amateur female athletes (range of age 20-40) (basketball 2, volleyball 2, hand-ball 1) were treated with 1) Anti-inflammatory and pain killer combination (ibuprofen 600 mg, 3 times per day plus paracetamol 500 mg 3 times per day 2), cryotherapy and physical therapy for 21 days.

Results: All 6 of them, they return back in sports activity and every day life after the treatment following an appropriate gradual interval-throwing program plus a stretching program.

Conclusions: Accurate diagnosis, appropriate management and treatment of neuropathies sports activity, needs during multidisciplinary approach, essential step to improve optimal outcomes and safe return to sports activity.



P136 Conservative management and drug treatment of tarsal tunnel neuropathy in amateur footballers

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Background: Aim of this study is to present the conservative management and the drug treatment of tarsal tunnel neuropathy in amateur footballers.

Materials and methods: 4 amateur male athletes of football “soccer” (range of age 15-35) Anti-inflammatory and pain killer combination (ibuprofen 600 mg, 3 times per day plus paracetamol 500 mg 3 times per day 2), cryotherapy and physical therapy for 21 days.

Results: All 4 of them, they return back in sports activity and every day life after the treatment following an appropriate gradual interval-throwing program plus a stretching program.

Conclusions: Accurate diagnosis, appropriate management and treatment of neuropathies sports activity, needs during multidisciplinary approach, essential step to improve optimal outcomes and safe return to sports activity.

P137 Meloxicam 15 mg as monotherapy in elderly people with chronic back pain

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Background: Aim of this study is to present the drug treatment with meloxicam 15mg as monotherapy in elderly people with chronic back pain.

Materials and methods: 10 elderly male patients (range of age 65-75) with chronic back pain were treated with meloxicam 15mg, once time per day, for 21 days. All of them (10-100%) they had cardiovascular and metabolic health problems.

Results: 8 of them (80%), they refer pain relief and amelioration of every day life activities, 1 of them(10%) moderate results and 1 of(10%) them no results.

Conclusions: We need more patients but seems that this treatment is safe and also effective for the elderly people.



P138 Controlling obsessive symptoms in patients with affective Disorder

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Background: Persistent and thoughts are one of the most common signs of an anxiety disorder. Sometimes we observe obsessive symptomatology when a patient suffers through a period of increased stress. Obsessive thoughts are the major symptom on obsessive compulsive disorder, but there are types of obsessive thoughts that are present in a variety of anxiety disorders that will not necessarily cause a diagnosis of OCD.

Materials and methods: We reviewed articles in PubMed related to how trazodone affects obsessive symptoms in patients with affective disorder. We review the case of a 21-year-old male with dependent personality traits diagnosed of recurrent depression. He was going through a period of stress with his relationship that had worsened his obsessive symptoms (primarily obsessive thoughts). We decided to treat him with trazodone to avoidance triggering sexual dysfunction as a side effect.

Results: We started treatment with trazodone reaching a dose of 150mg/day. Three weeks later the patient reported a decrease in his levels of anxiety, a slight upturn of his mood and a relieve of his obsessive symptoms.

Conclusions: Trazodone is approved for treatment of MDD. However the use of this medication is very common in other conditions (insomnia, anxiety disorders, OCD, Panic disorder, PTSD). In addition, due to its 5HT₂ receptor antagonistic action, her action seems to be free from anxiety, insomnia and sexual dysfunction, results of SSRI usage. Clinical trials needed, to evaluate off label use of Trazodone.

P139 A Complex Behavioral Characterization (focusing on memory, anxiety, depression and social behaviors) of a Rat Model of Irritable Bowel Syndrome generated by Chronic Stress Contention

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Background: Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder affecting the large intestine, characterized by abdominal pain or discomfort, gas, diarrhea and constipation, which could associated with a variety of neuropsychiatric disturbances. Currently, there are several ways to generate animal models of IBS, either by genetic manipulations, by mechanical, chemical and biological alteration of the intestinal media, or by using a variety of psychosocial stressors. However, very few aspects are known about the interactions between IBS and its associated neuropsychiatric manifestations. Thus, we describe here a complex behavioral characterization of a previous described chronic stress contention IBS rat model.

Materials and methods: We used white Wistar rats, in which IBS was induced by chronic restraint-stress, following one week (6 hours/day) of restriction in plastic containers. Controls received physiological saline (2.5 mL/kg, ip). Anxiety (measured through elevated plus maze and open field test), depression (assessed in forced swimming test), faecal output, social behaviour (as determined in three-chambered social apparatus) and spatial and immediate memory (as tested in Y-maze and radial-8-arms maze) were the main aspects measured in both groups.

Results: In the Y maze, the chronic stress exposure decreases the percentage of spontaneous alternation, an indicator of immediate spatial memory, during the Y-maze test ($p < 0.05$), while in the elevated plus maze this chronic stress exposure resulted in a significant decrease of the time spent in the open arms ($p < 0.03$), when compared to controls, suggesting anxiety-like effects. Moreover, stretching behavior in elevated plus maze was increased in IBS group ($p < 0.05$), suggesting again anxiogenic effects. Some depression-like behavior was observed in the forced swim test in the chronic stress exposure-induced IBS model as demonstrated by a significant decrease of the mobility time, as compared to control group ($p < 0.027$). However, chronic stress exposure did not significantly affect the number of reference memory errors or the time necessary for completing the task in the radial 8 arms-maze. Still, some reference memory deficits were observed in the IBS-induced group, as the number of reference memory errors was significantly increased ($p < 0.05$) in this rats vs. the controls. In the open field test, we report a decrease of the exploratory activity as reflected by reduced number of crossings, significantly

increased number of rearing suggesting higher anxiety, and altered faecal elimination in the IBS group ($p < 0.05$). Also, an increased time of grooming was observed in the open-field test in the chronic stress exposure-induced IBS model (e.g. longer grooming period during the task suggesting increased anxiety in the IBS stress-exposed group). Regarding the social behavior in three-chambered social apparatus, during the 10 min period of testing, the IBS group spend significantly more time in the empty compartment (without a stranger rat) and less time in the compartment with a conspecific of same age and weight ($p < 0.01$), which indicates decreased social motivation in the IBS group.

Conclusions: Our results suggest that the aforementioned chronic stress exposure-induced IBS model results in increased anxiety, depression, reduced social behavior and affected immediate and working memory, with no effects however on the reference memory.

Acknowledgements: Alin Ciobica and Radu Lefter are supported by a grant offered by UEFISCDI number PN-III-P1-1.1-TE- 2016-1210 called “Complex study regarding the interactions between oxidative stress, inflammation and neurological manifestations in the pathophysiology of Irritable bowel syndrome (animal models and human patients)”. The full paper of this work was sent for publication at Neurophysiology Journal in Springer, while another abstract with this data will be sent to this year ECNP Conference.

P140 Correlations between irritable bowel syndrome, neurological deficiencies and oxidative stress status

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Background: Irritable bowel syndrome (IBS) is a modern functional gastrointestinal disorders characterized by . Latest theories and results are suggesting that oxidative stress and inflammation could be involved in IBS pathophysiology.

Materials and methods: The literature search included the main available databases (e.g. ScienceDirect, Pubmed/Medline, Embase and Google Scholar) for terms such as “irritable bowel syndrome”, “gut brain axis”, “oxidative stress”, “neuroendocrine”.

Results: While no consistent evidence suggested clear pathway mechanisms, it seems that the inflammatory response may also be relevant in IBS. Also, mild implication of oxidative stress in IBS was described through clinical studies and some animal models, revealing changes in the main markers such as antioxidant status evaluation and peroxidation markers.

Moreover, it seems that the neurological structures involved in brain-gut axis may be the affected in IBS rather than the local gut tissue and functionality. Due to a gut-brain axis bidirectional communication error, a correlation between neurological impairment, emotional over-response, mild inflammatory patterns, and oxidative stress can be suggested.

Conclusions: Therefore, there is a possible correlation between neurological impairment, emotional over-response, mild inflammatory patterns and oxidative stress which are not followed by tissue destruction in IBS patients. Moreover, is yet not clear whether the oxidative stress, inflammation, or neurological impairments are key determinants or in which way these three are interacting in IBS pathology. However, the condition in which oxidative imbalance occur may be an interesting research lead in order to find possible explanations to IBS development.

Acknowledgements:

Miruna Balmus and Ciobica Alin are supported by an UEFISCDI offered grant number PN-III-P1-1.1-TE- 2016-1210 called “Complex study regarding the interactions between oxidative stress, inflammation and neurological manifestations in the pathophysiology of Irritable bowel syndrome (animal models and human patients)”. The full text of this abstract was sent for publication in the journal *Psychiatria Danubina*.



P141 Does Premature Menopause Have an Impact on Cognitive Function?

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Background: The most important difference between the world today and 150 years ago is lifespan. The average life expectancy for women in Greece is 81,59 years old, therefore, taken into consideration that the average age at menopause is 50 y.o., a woman spends a considerable time in climacteric. Positive correlations between estrogen levels and cognitive functions have been reported in several studies. This study aims to determine whether premature menopause effects women's cognitive function.

Materials and methods: A sample of 30 women, aged between 60-75 y.o., who have visited our Memory Clinic. Fifteen of them had premature menopause (<40 y.o.) and the other 15 had menopause after 50 y.o.. We included women with similar educational level (>9 y.o.), without major depression, chronic physical illness, alcohol and tobacco abuse, Mini-mental State Examination score >25, and Montreal Cognitive Assessment (MoCA) score > 26. Clinical data was gathered using the Verbal Fluency Test (VFT) and the Trail Making Test (TMT).

Results: Women with premature menopause scored at VFT Phonemic ms=34,67, at VFT Semantic ms=38.67, at TMT-A ms=39,47 and at TMT-B ms=102,4, whereas women with menopause >50 had 44,53, 44,6, 25,93, and 81,47 (t-value=3,21, 3,58, 3,97, και 4,13) respectively.

Conclusions: Results show a statistical significant difference between the two subgroups. Given the fact that premature menopause is associated with a negative impact on cognitive function it is crucial to investigate if the possible benefits from a hormone replacement therapy counterbalance the potential risk.

P142 The effectiveness of group spiritual therapy on resiliency and life expectancy among elderly people

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Background: Spirituality is generally considered to be broader than any religion one might practice, as it takes into account cognitive and philosophic areas of thought as well as aspects of emotions and behavior. People often turn to religion to seek help and counsel for many of the concerns that lead a person to seek therapy, and a person who is spiritual or religious may utilize both fields in the pursuit of healing or well-being. The goal of this research was study the effectiveness of group spiritual therapy on resiliency and life expectancy among elderly people in Emam Ali center in city of Kerman.

Materials and methods: The method research was semi- experimental. Using the experimental pretest-posttest control group design, with follow-up test, the effectiveness of group spiritual therapy was investigated among elderly people(n=20), compared with control group (n=20). 8 sessions of group spiritual therapy were introduced to the experiment group, plus treatment as usual while the control group only following treatment as usual program. Resiliency questionnaire Connor and Davidson (2003) Miller life expectancy scale(2008) were used.

Results: Findings showed that group spiritual therapy was effective in enhancing the resiliency and life expectancy. Results indicated that respondents moved to higher stages of quality of life, higher self-esteem level .Follow-up test also showed that the effects remained and maintained after three months.

Conclusions: This study reveals that group spiritual therapy method is effective in enhancing resiliency and life expectancy. Findings from this research support the development of counselors role in the process of assisting and treatment of elderly people.

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P143 Proinflammatory cytokines (IL-1 β , IFN- γ , IL-6, TNF- α) and oxidative stress decreases the dopamine precursor tyrosine uptake in human skin fibroblasts

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Background: Proinflammatory cytokines and oxidative stress responses have been extensively implicated in the pathophysiology of schizophrenia, major depressive disorder (MDD) and bipolar disorder (BD). However, the role and influences of proinflammatory cytokines, oxidative stress, and the reasons for disturbed tyrosine transport in neuropsychiatric disorders are still not evaluated.

Aims: The aim of this study was to evaluate the role of proinflammatory cytokines and oxidative stress, indicated in neuropsychiatric disorders, on tyrosine transportation, by using human skin derived fibroblasts.

Materials and methods: Fibroblasts obtained from a healthy control were used in this study. Fibroblasts were treated with proinflammatory cytokines (IL-1 β , IFN- γ , IL-6, TNF- α), their combinations and oxidative stress, to analyze the uptake of ¹⁴C-tyrosine compared to untreated controls.

Results: Proinflammatory cytokines and oxidative stress decreases the transport of tyrosine up to 47 %, respective 33%.

Conclusions: The results of this study indicate that proinflammatory cytokines and oxidative stress decreases substantial the transport of tyrosine, which can alter the dopamine synthesis. This aberrant tyrosine transport could lead to disturbed dopaminergic neurotransmission, which is attributed to the symptoms of many neuropsychiatric disorders.

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P144 Self-reported side effects and their tolerability are associated with adherence to antidepressants in older adults

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Background: In clinical trials, side effects (SE) are the primary reason for discontinuation of antidepressants (AD) [1]. Few studies however have examined this association in real-world settings. The aim of this study was to evaluate the association between the presence of SE and adherence to AD while considering their tolerability in primary care older adults.

Materials and methods: The analytic sample consisted of n=137 older adults treated with AD in the longitudinal ESA-Services cohort study (2011-2017). Adherence was measured with the Medication Adherence Questionnaire (MAQ) and total score was categorized as follows: 4 (adherent), 3-2 (partially adherent) and 1-0 (non-adherent) [2]. A list of 20 potential SE with three possible responses was also administered: no, yes but tolerable or yes but not tolerable was also administered [3]. SE were then grouped into 7 categories. Multi-level multivariate logistic regressions were conducted according to the type of medical clinic where participants were recruited.

Results: Close to 69% of participants were adherent and 31% were partially adherent to their AD. Participants reporting at least one SE, regardless of tolerability, were 50% less likely to adhere to their AD (OR=0.44, 95%CI: 0.26-0.74). SE related to the gastrointestinal system (OR=0.654, 95%CI: 0.455- 0.914), nervous system (OR=0.600, 95% CI: 0.487 - 0.739) and sleep disturbance (OR=0.58, 95% CI: 0.48-0.70) were associated with AD adherence. Participants reporting a non-tolerable nervous system SE were 65% less likely to be adherent (OR=0.36, 95%CI: 0.29-0.43); whereas those reporting a non-tolerable gastrointestinal SE were almost twice more likely to be adherent (OR=1.82, CI95%: 1.08-3.07).

Conclusions: SE and their tolerability need to be accounted when treating older adults with AD, especially for those reporting nervous system SE.

Acknowledgements: ESA-Services study supported by an operating grant from the Canadian Institutes of Health Research (CIHR)

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P145 The relationship between religious orientation, hope and spiritual intelligence with death anxiety

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Background: Death anxiety became a topic of psychological interest. The effects of religiosity on well-being appear to depend on religious orientation, with intrinsic orientation being related to positive outcomes and extrinsic orientation being related to neutral or negative outcomes. It is not clear, however, why intrinsic and extrinsic religiosity has the relationships they do.

Materials and methods: The sample consisted of 80 elderly people (36 male and 44 female) selected by applying a random sampling method, from Kerman elderly center. Participants completed three questionnaires: anxiety Templer (2010) hope Snyder (2011) Abdollahzadeh and college spiritual intelligence (2015) and Alport and Ross intelligence orientation (2006).

Results: Regression analysis indicated that there were significant negative relationships between intrinsic religious orientation, hope and spiritual intelligence with death anxiety. It was found that the hope, spiritual intelligence, intrinsic religious orientation and extrinsic religious orientation had the highest relation with death anxiety, respectively.

Conclusions: In conclusion, the religious orientation, hope and spiritual intelligence and death anxiety are significantly related to each other, especially among elderly people.

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P146 Conversion Disorder in Male

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Background: Conversion disorder is characterized by symptoms affecting motor and sensory systems. These include paresthesia of limb extremities, paralysis, abnormal jerky movements, weakness, unresponsiveness, aphonia, inability to speak and blindness. (1, 2)

Materials and methods: 32 years male, came with complaints of weakness, numbness, tingling sensation in extremities, tremors, difficulty in breathing, restlessness, heaviness of head, chest pain in right side and dizziness since 2-3 hours. Patient had a quarrel regarding money, following which he had these symptoms. Physical and neurological examination, CBC, ECG and chest x-ray were normal. On interviewing financial stressor was revealed. Since 1-2 days patient was stressed and restless. Work, sleep and appetite were normal. Started with restlessness, heaviness of head and weakness in limbs following an argument. Soon, reported weakness, numbness, tingling sensations in extremities, tremors, difficulty in breathing, dizziness and chest pain.

Results: Started on Setraline 50mg bid and Clonazepam 0.5mg bid. Jacobsons' progressive muscle relaxation (JPMR) was administered along with cognitive psychotherapy. (3, 4)

Conclusions: Diagnosis of conversion disorder gets delayed owing to apprehension of misdiagnosis and missed out in males owing to gender bias. Antidepressants and benzodiazepines are treatment of choice. Psychological interventions are also helpful.

Acknowledgements: Combined pharmacological and psychological interventions are more helpful. Need for awareness about conversion disorder in males.

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P147 Problems and Pitfalls in the Clinical Assessment Process for the Diagnosis of Specific Learning Difficulties (Dyslexia) in Greece

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Background: 'Specific Learning Difficulties' (SLD) is a general term, (often used as a synonym for Dyslexia), used to describe an extremely heterogeneous population of different age groups who struggle with several areas of learning. The heterogeneity of SLD along with several other factors often lead to a number of diagnostic and intervention pitfalls and errors (Bonti, 2013).

Materials and methods: Based on our everyday clinical practice at the State Certified Diagnostic Center for Learning Difficulties of 'Papageorgiou' General Hospital of Thessaloniki and the constant challenge of coming up with a valid clinical assessment for people with possible SLD and taking into account the relevant research, we decided to review the most important key points concerning these challenges.

Results: The numerous definitions for describing SLD (or Dyslexia), the two different models of pathogenesis, as well as the different subtypes of SLD have led to a number of diagnostic methods. As a result, multiple issues regarding diagnostic validity and reliability occur.

The non-standardized assessment tools mainly used by clinicians in Greece due to the absence of a common, standardized diagnostic tool for the diagnosis of SLD raise questions concerning the validity and reliability of diagnosis.

The inadequate staffing of diagnostic services in Greece, the lack of sufficiently trained staff, and the incomplete relevant legislation regarding the SLD population in Greece, often lead to diagnostic errors and pitfalls and to inappropriate intervention practices.

Assessment procedures in Greece often lack parts of important information regarding the developmental, educational and social record of the person being assessed, thus, providing limited information required for a safer diagnosis.

The IQ tests used for an SLD diagnosis, fail to provide the necessary information for planning a successful individual intervention program.

Differential Diagnosis is also a big challenge for the Greek diagnostic services, given their limitations mentioned above.

Poor information, ignorance, or denial factors of parents and teachers in Greece often prevent the early detection of the 'risk' signs and characteristics of possible SLD among preschool age children.

Conclusions: Diagnosis plays a decisive role in the configuration of individual identity and the quality living of people with SLD and their families.

The possible errors and pitfalls that might occur during an assessment process may have immense consequences to the learner with SLD, both at an educational, as well as at a psychological and social level. A wrong or an invalid diagnosis may convert school years to a day to day 'nightmare' and adult life to an ongoing race.

Therefore, the diagnostic procedures carried out for students with possible SLD (or other types of learning difficulties), especially in Greece, should be very carefully designed, using a combination of appropriate tools and should be carried out by a multi-professional team of different, well-trained specialists who will be able to consider all the possible pitfalls that might occur during this challenging and dynamic procedure.

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P148 Neuropsychological characteristics of children with neurofibromatosis type 1

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Background: Neurofibromatosis type 1 (NF1) is a genetic neurocutaneous disease inherited as an autosomal dominant genetic syndrome, which displays a wide range of clinical manifestations (e.g., neurological, cognitive, musculoskeletal, optic and physical abnormalities). The current review summarizes data from the recent literature in order to elucidate the cognitive characteristics of children with NF1.

Materials and methods: The present review examines the research findings from 27 empirical studies, which characterize the neuropsychological and psychiatric features of NF1. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: The hallmark of NF1 in neuropsychological assessments is the impairment in the visuospatial skills. Also, notable deficits are observed in attention, executive functions, abstract thinking, cognitive flexibility, processing speed, problem solving, working memory, inhibition, and creativity. General intelligence appears to fall within the low average/average range. Less well established are the deficits in verbal memory and fluency. According to some studies, language skills may represent a point of relative strength in this population.

Conclusions: Although neuropsychological findings in children with NF1 are generally consistent in their clinical manifestation, it is hard to establish a typical, distinct profile, as there is evidence for developmental alterations which occur in some children with time. Nevertheless, the early identification of neuropsychological deficits in NF1 leads to more effective treatment of the cognitive symptoms.

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P149 Neuropsychological and psychiatric characteristics in children with tuberous sclerosis complex

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Background: Tuberous Sclerosis Complex (TSC) is a multisystem genetic disorder. It is caused by a mutation of either two genes (TSC1,TSC2). TSC is characterized by hamartomatous growths in multiple organ systems, such as the brain and other organs (kidneys, heart, eyes, lungs, skin). The purpose of this study is to review the current research as regards the neuropsychological deficits in children with TSC.

Materials and methods: 22 studies examining the neuropsychological function in children with TSC were included. The inclusion criteria of the studies were: a) being published in peer-reviewed journals, b) the original articles written in English, c) provision of sufficient statistical and methodological information to allow replication.

Results: Children with TSC display a variety of intellectual, behavioral, psychiatric, academic, cognitive and motor difficulties. More than half of the children have mental retardation. Other cognitive difficulties involve deficits in memory, sustained attention, executive functioning (working memory, planning ability) and deficits deriving from epileptic seizures in the parietal and rolandian cortex (deficits in visuospatial ability, dyspraxia, dyscalculia, speech delay). Concerning the psychiatric profile, children with TSC display high comorbidity rates with ADHD and sleep disorders (up to 60%), as well as with ASD (17-61%). The latter explains the commonly observed problems in social behavior and communication.

Conclusions: Although the literature converges on the identification of well-established neuropsychological deficits, the configuration of a clear, distinct neuropsychological profile in TSC is rather a hard task, as there are fluctuations depending on the type of mutations and on the form of epilepsy, which is commonly observed in children with TSC.

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P150 Neuropsychological profile of girls with turner syndrome

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Background: Turner syndrome (TS) is a relatively common neurogenetic disorder affecting 1 in 2.500 females. It is characterized by complete or partial monosomy-X in phenotypic females. Patients with TS often demonstrate a neuropsychological profile that involves intact verbal abilities and deficits in visual-spatial skills. The present study reviews the results of concurrent literature (period between 2000 and 2017) as regards the cognitive profile of females with TS.

Materials and methods: Our review presents research findings from 25 empirical studies, with respect to the neuropsychological features of females with TS. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: The majority of the current literature suggests a well-established cognitive profile in females with TS, which is characterized by a relative strength in the verbal and intellectual domains as compared to the visual-spatial and executive areas, which are negatively affected. More specifically, pronounced neuropsychological deficits are identified in visual-spatial memory, visual perception and construction, motor function, nonverbal memory, executive function (working memory, flexibility), and attentional abilities. Other difficulties in females with TS involve learning disabilities related with deficits in mathematical abilities (dyscalculia), geometry, and reasoning.

Conclusions: Although neuropsychological findings in females with TS generally show a consistent pattern, methodological variations indentified in the reviewed studies (differences in cognitive testing, age range, sample sizes and genotype-mosaic, nonmosaic) make it difficult to interpret the meaning of cognitive deficits.

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P151 Psycholinguistic and cognitive profile of children with williams syndrome

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Background: Williams syndrome (WS) is a rare genetic syndrome (aprox. 1:7.500 to 1:20.000 births) that causes medical and developmental problems. WS is caused by a genetic abnormality, specifically a deletion of about 27 genes from the long arm of one of the two chromosome 7. The present review examines the research findings which characterize the psycholinguistic and cognitive features of WS.

Materials and methods: Our review presents research findings from 25 empirical studies, with respect to the psycholinguistic and neuropsychological characteristics of children with WS. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: The psycholinguistic profile in WS seems to be rather complex. Children with WS tend to develop mild to moderate intellectual disability, while at the same time exhibiting relative strengths in concrete vocabulary, phonological processing, and verbal short-term memory and relative weaknesses in relational/conceptual language, reading comprehension, and pragmatics. Many children have difficulties with finiteness marking and complex grammatical structures. Other negatively affected cognitive domains include attention and short-term memory. On the other hand, there are some cognitive areas such as speech and long-term memory, and social skills in which performance remains relatively intact.

Conclusions: The results of language studies in children with WS seem to suggest a less consistent profile, as compared to the cognitive studies. This observation is assumed to reflect rather methodological issues (small sample sizes, type of control groups, variety of measures used in language studies) than inter-individual variability issues.

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P152 Dissociative experiences do not mediate psychopathic traits and emotion regulation strategies

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Background: Psychopathy is heterogeneous and widely examined construct. According to Karpman, two different types of psychopathy exist: “primary” and “secondary” [1]. Porter suggests that primary psychopathy is a polygenic predisposition, whereas secondary psychopathy depends on social influences [2] and therefore may result from early adverse experiences, and has been proposed as a dissociative disorder. Previously callous/unemotional traits have been reported in adolescent samples as precursors of psychopathy. Emotion dysregulation [4] and blame externalisation as a cognitive emotion regulation strategy has also been suggested to play a role in the background of psychopathy with evidence from adult and adolescent samples. The aim of the current study was to examine the possible mediating effect of dissociative experiences on psychopathic traits and related emotion regulation strategies in a large general sample of Hungarian high school students.

Materials and methods: 771 students recruited from highschool classes (9-14 grades) in Budapest, Hungary, completed the Adolescent Dissociative Experiences Scale (ADES) to evaluate dissociative experiences, the Antisocial Process Screening Device (APSD) to assess psychopathic traits and the Cognitive Emotion Regulation Questionnaire (CERQ) to assess emotion regulation strategies. Mediation analyses were performed using Mplus 8 for Windows.

Results: In our study we could not identify a mediating effect of dissociative experiences on psychopathic traits and emotion regulation strategies, including separate analyses for the subscales. However, we did identify a characteristic pattern of significant correlations, with a significant and correlation between depersonalisation/derealisation and all APSD traits, and specifically a moderately strong correlation between dissociative detachment and of narcissism ($r=0.446$). Externalising blame also showed significant correlations with anamnestic symptoms ($r=0.262$) as well as all APSD traits.

Conclusions: Our study indicated that dissociative experiences do not mediate psychopathy and emotion regulation which supports results from earlier studies contradicting Porter’s theory [5], however, given the heterogeneity of theories concerning the development and factors related to psychopathy, the relationship between the investigated variables remains ambiguous warranting further research using different instruments capturing other aspects of emotion dysregulation (Difficulties in Emotion Regulation Scale), as well as related psychophysiological (International Affective Picture System) or behavioral markers (Emotional Pictures DOT-Probe).

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P153 The effectiveness of Guided Therapeutic Imagery on self-actualization and distress tolerance in juvenile delinquents with substance dependency

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Background: Guided Therapeutic Imagery(GIT) is a technique in which mental health professionals help individuals in therapy focus on mental images in order to evoke feelings of relaxation, is based on the concept of mind-body connection. GIT is a technique used in a wide range of therapeutic modalities and settings including group and individual therapy.

Materials and methods: This is a quasi-experimental study having pre test-post test-follow-up (PPF) designs with control group. Statistical society of this research included all juvenile delinquents with substance dependency resided in Kerman rehabilitation center in 2016. The studied sample of this research was constituted of the studied society by targeted sampling (with screening) and was randomly substituted in experiment and control groups, totally 40 subjects (20 in experimental group and 20 in control group) constituted the studied sample. The Inventory of the distress tolerance scale (Smaeilkhanyi, 1990) and the self-actualization scale (Sinha,1993) were used for data collection in pretest, posttest and follow-up stage. After the pretest, the experimental group was treated using GIT, this treatment program was held in eight 60-minute sessions twice per week. After about 3 months of holding posttest, the questionnaire was further implemented on the subjects of the two groups in follow-up stage (because of the drop in subjects, 2 of the experimental group and 3 of the control group). In order to analyze the data, co variance analysis was used in addition to descriptive statistical methods.

Results: The results of this research showed that GIT has been effective on enhancing self-actualization and reducing distress tolerance in follow-up stage, while the effectiveness of GIT on reducing distress tolerance behaviors is not confirmed in post test stage.

Conclusions: GIT is benefits for enhancing the self-actualization and reducing the distress tolerance. Future studies should test this quasi-experimental study model and further assess specific juvenile delinquents characteristics and personality types.

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P154 Repetitive transcranial magnetic stimulation (rTMS) in the treatment of bipolar depression: Preliminary data

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Background: There is a significant lack of effective treatment strategies for bipolar depression (BDE) [1]. While the efficacy of rTMS in major depression disorder (MDD) is well established [2], there is a substantially less evidence supporting its efficacy in BDE [3]. Based on imaging studies [4], stimulation sites routinely used in MDD (left and right DLPFC) might not be the best choice for BDE. Instead, the ventrolateral PFC (VLPFC) abnormalities have been found frequently in patients with BD.

Materials and methods: A four-week, randomized, sham-controlled, double-blind, three-group parallel study with MRI-guided rTMS was used. Patients were randomly allocated to the 3 intervention groups: active rTMS applied to the a) left DLPFC, b) right VLPFC, and c) sham rTMS. Stimulation parameters were: 10Hz, 100% MT, 2s on, 8s off, 10 minutes duration; 1200 pulses/session, 20 sessions. Patients were clinically assessed by Montgomery and Asberg Rating Scale (MADRS) and Young Mania Rating Scale (YMRS) at baseline and weekly during the four weeks of treatment.

Results: 23 out of 25 enrolled patients were included into ITT analysis. Two patients drop out within first week (one on DLPFC and one on VLPFC). The final sample was 23 (8 on VLPFC, 7 on DLPFC, 8 on sham). The treatment groups did not differ in age, gender, duration of episodes, as well as in baseline MADRS and YMRS. Both active rTMS shown better improvement (as assessed by MADRS) compared to sham rTMS after four weeks. The standardized difference was moderate in VLPFC (Cohen's $d = 0.75$) and only small in DLPFC ($d=0.30$). The response rate across the sample was 35%, and there was no difference in response rates across the groups. YMRS remained unchanged within the study time (2.2 to 3.4) and no switch to hypomania were observed.

Conclusions: Our preliminary data confirmed the effect of active rTMS protocols. rTMS applied to the right VLPFC was more effective than the left DLPFC application. These results are consistent with current functional imaging findings in BD patients.

Acknowledgements: Supported by AZV 16-31380A.

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P155 Psycholinguistic and neuropsychological profile in children with Klinefelter syndrome

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Background: Klinefelter's syndrome (KS) is one of the most common chromosomal disorders, occurring in 1 to 2 per 1.000 live male births and is associated with sterility. KS is a genetic disorder characterized by gynecomastia, small testes and infertility resulting from an extra X chromosome. In many cases, the syndrome remains undiagnosed. The aim of this review is to summarize data from the recent literature in order to elucidate the cognitive characteristics of children with KS.

Materials and methods: The current review examines the research findings from 20 empirical studies, which analyze the psycholinguistic and neuropsychological features of KS. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: General intelligence appears to fall within the low average/average range. The hallmark of KS in neuropsychological assessments is the impairment in verbal memory. Also, notable deficits are observed in language skills, such as joint difficulties, phonological processing, and expressive problems. Pragmatics and semantics are also impaired. Deficits in verbal fluency, attention and processing speed seem to be established and recognizable. Fine and gross motor are deteriorated. Moreover, some studies suggest that children with KS display learning disabilities, such as spelling disorders and dyscalculia.

Conclusions: Findings from psycholinguistic and neuropsychological research suggests the presence of well-described impairments. However, these deficits often can be overcome through early intervention. Thus, early neuropsychological diagnosis plays an important role in the selection of the appropriate type of cognitive rehabilitation.

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P156 Effects of parental migration on clinical profiles in schizophrenia

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Background: Migration is described as leaving one's residence to go to a different place. This complex phenomenon largely impacts mental health of the migrants and also affects second-generation migrants. Thus, it is associated and often considered as a risk factor for mental disorders including schizophrenia [1, 2]. Although its direct impact on the occurrence and clinical features of schizophrenia has often been studied; little work has been done to study the effect of maternal migration on the clinical profile in schizophrenia in the offspring [3, 4].

Materials and methods: 103 patients with schizophrenia were included. Groups were defined according to the mother's migratory status. Patients with maternal migration after their birth were excluded. The groups were compared based on clinical characteristics and evaluations (The Positive and Negative Syndrome Scale (PANSS), Calgary depression scale (CDS)) and cognitive assessments.

Results: There were 31 patients with no history of maternal migration and 72 patients with maternal migration.

Untreated psychosis duration was longer in patients whose mothers migrated during pregnancy than in those with no history of maternal migration ($p = 0.05$).

A significant difference was found between the two groups regarding the mode of onset of schizophrenia, with a more frequent progressive onset mode in patients with a history of maternal migration ($p = 0.004$).

A triggering factor was more frequently found in patients with no history of maternal migration ($p = 0.007$).

No significant differences were found in the different evaluation scales.

Discussion: Family history of migration is a high risk factor for schizophrenia. Strong evidence are against selective migration as the explanation. The explanation for these findings is uncertain. [2] Findings suggests that severe stress to a mother during the first trimester may alter the risk of schizophrenia in offspring [4].

Gene-environment interplay, especially as demonstrated with the maternal immune activation model, showed a greater effect on risk of schizophrenia because of its important role in the immune regulation, but also in brain development and functioning [3].

Conclusions: Environmental factors exposures has garnered increased attention as risk factors for schizophrenia especially maternal stressors during the fetal and perinatal life. A more thorough genetic, neurobiological and immunological study appears necessary.

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P157 Effect of parent child relationship management on social skills and emotional regulation of children with attention deficit hyperactivity disorder

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Background: Some of the psychological interventions such as Parent-Child Relationship Management (PCRM) included in total focus have always been recommended as part of a treatment plan for a child with Attention Deficit Hyperactivity Disorder (ADHD) due to research based on the use of this techniques in a group setting. However, newer research indicates that when this technique is implemented through a parent/child collaborative approach to behavior they can be very effective.

Materials and methods: Twenty-four school -age children with ADHD and their parents participated in 12 sessions of PCRM (last for 12 weeks) and 30 health controls (HC) were also recruited. Training effects were explored using both Lucker Social Skills Scale (2010) and Gantry Children Cognitive Critical Adjustment (2010) scales.

Results: The results (before vs. after PCRM) showed that after intervention, the children with ADHD presented better performances both in social skills and emotional regulation. Parents reported that this program was feasible to administer and acceptable.

Conclusions: The PCRM was feasible and acceptable to children with ADHD and parents. PCRM can help children learn new behaviors. In PCRM, the therapist discusses and models appropriate behaviors important in developing and maintaining social relationships. This method helps the child to develop better ways to play and work with other children.

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P158 Cognitive and behavioural dysfunction in children with severe mental disability: The case of Angelman syndrome

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Background: Angelman Syndrome (AS) was first introduced by Harry Angelman in 1965. Also known as the “Happy Puppet Syndrome”, AS is a neurodevelopmental disorder caused by genetic abnormalities. More specifically, AS is characterized by severe intellectual delay, learning difficulties, seizures, ataxia, dysmorphic facial features and a happy social disposition accompanied by laughter. The present review aims to summarize data from the literature in order to clarify the cognitive and behavioral profile of children with AS.

Materials and methods: The review examines recent research findings on AS from 15 studies published between 1992-2017. Data were collected from PsycINFO, Expanded Academic, Web of Science, PubMed. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: The most characteristic cognitive impairment in AS is the intellectual delay along with the absence of speech. Low IQ affects significantly other executive cognitive functions such as attention, working memory, and visual-spatial skills. Children with AS are almost fully dependent on assistance with everyday activities (toileting, feeding etc.). The absence of speech is usually overlapped by non language communication. Children often smile, laugh in order to show their cheerful disposition and cry, yell, bite objects or people and cause self-injuries when they experience feelings of anxiety or as a response to their frustration. Children with AS often present ADHD symptoms. Finally, other disabilities include motor disorders, ataxia, jerking and difficulties in walking and running.

Conclusions: The severe intellectual delay and speech impairments sometimes confuse the diagnostic identification of AS. However, the neuropsychological examination show to benefit children with AS through a detailed and individualized, both understanding and treatment, of their cognitive and behavioural symptoms.

P159 Neuropsychological functioning in child and adolescent offspring of parents with bipolar disorder

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Background: Although a positive family history is the strongest predictor for bipolar disorder (BD), most offspring of parent with BD (OBP) will not develop the illness. Therefore, an identifying markers of vulnerability is essential for the individual risk estimation. Besides a number of candidates, worse cognitive performance is considered to be a plausible marker of risk for BD development.

Materials and methods: Sixty OBP (47% girls; 11.7±3.2y) and 42 control offspring (OHP) with comparable gender proportion (45% girls, $p=.89$) and age (12.4±3.0, $p=.27$), were assessed using the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS). The General Behavior Inventory (GBI) was applied to detect subthreshold mood symptoms. Subsequently, they were tested by Raven's Progressive Matrices, the Developmental Neuropsychological Assessment battery (NEPSYII), the D2 test of Attention, and the Amsterdam Neuropsychological Tasks (ANT).

Results: Thirty-eight OBP (63%) and 8 controls (19%) met the criteria for current DSM-5 diagnosis with anxiety disorders as the most frequent. Despite extensive morbidity in OBP, groups did not differ in intelligence, neither in performance in any test of neuropsychological battery (Hedge's g ranged -0.21 to 0.39). Even a subsequent comparison of OBP with mood symptoms (N=17) and matched OHP failed to find significant differences.

Conclusions: Contrary to some of the previous findings, we failed to confirm that cognitive performance might be a promising marker or endophenotype for bipolar disorder.

Acknowledgements: Study was funded by the Ministry of Health of the Czech Republic grant nr. 17-32478A.

P160 Cognitive and behavioural phenotype in children with prader willi syndrome

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Background: Prader-Willi Syndrome (PWS) is a developmental genetic disorder caused by the deletion of the parental copies of genes located on chromosome 15 in the region 15q11q13. This rare syndrome (birth rate: 1: 15.000 to 1: 20.000) is characterized by severe neonatal hypotonia, early onset of hyperphagia, hypogonadism, dysmorphic features, and short stature.

Materials and methods: The current review examines the research results of 27 empirical studies from 1990 to 2007, which analyze the cognitive and behavioural phenotype in children with PWS. The following criteria of inclusion were used: a) publications only in peer-reviewed journals, b) original articles written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: As regards the cognitive phenotype, children with PWS are at risk of learning (i.e., in arithmetic and writing abilities) and attention difficulties. Varying degrees of learning disability are associated with their IQ, which usually indicative of mild to moderate intellectual disability. Other cognitive deficits include delayed receptive/expressive language along with specific language difficulties (dyslexia, understanding metaphors, narrative skills), executive dysfunction, especially with verbal material, and short-term memory limitations. The behavioral phenotype of PWS patients is characterized by severe psychiatric symptoms (temper tantrums, emotional fluctuation, perseverations, self-injury, rigid thinking, compulsions and ritualistic behaviour, low tolerance, aggression, ADHD).

Conclusions: Both the cognitive and behavioral profile of children with PWS seems to be well-described in literature. However, still some variability exists which is related to differences between the UPD and 15q deletion subtype.

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P161 Developing a model for predominant polarity in mice

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Background: Significant clinical data suggest that the polarity of episodes of bipolar patients, over the course of the disorder, as well as the polarity of initial or index episode may be strong predictors of recurrence to a specific episode. Around one-half of patients were reported to present predominant polarity and a number of studies demonstrated clinical differences between predominantly manic and predominantly depressed patients.

Thus, at the clinical level, predominant polarity should be taken into account when deciding on maintenance therapy of bipolar disorder. In that context, important work was invested to develop a polarity index measure for drugs that can assist clinicians in selecting the most appropriate treatment for patients. However, the underlying biology of predominant polarity had not been studied yet. One way to begin such studies is to utilize animal models but there are no available models for predominant polarity.

Materials and methods: The current study is designed in an attempt to develop such model. Specifically, the most frequently used screening model for mania-like behavior is amphetamine-induced hyperactivity (AIH) whereas the most frequently used screening model for depression-like behavior is the forced swim test (FST). In the current study we repeatedly treat a cohort of mice with amphetamine and measure their response. Mice are then withdrawn from amphetamine, a procedure known to induce depression-like behavior. Mice are then be tested in the FST and later again in the AIH. If indeed mice show predominant polarity, we expect that the most active mice in the AIH (mania-like) will be also the most active in the FST (least depression-like) and vice versa therefore identification of discrete more manic-like versus more depression-like sub-groups.

Results: Results showed significant correlation in the behavior of mice in the AIH across tests but no relationship between the behavior in the AIH and the FST.

Conclusions: It is therefore suggested that the susceptibility to the mania-like behavior induced by amphetamine is stable across individuals but that there are no relationship in the mice between mania-like and depression-like behaviors.

Acknowledgements:The authors thank Ms. Maya Alfie for her technical assistance.

P162 Individual variability in female and male mice in a test-retest protocol of the forced swim test

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Background: The challenges to embody the complexity of mental symptoms and underlying biological mechanism of affective disorders questions the value of animal models as well as their reproducibility and validity. The validity is further hindered by the individual variability in many models. Whereas individual variability is a challenge, it can also be used to study susceptibility and resistance. One of the frequently used models for screening antidepressants and other interventions related to depression is the forced swim test (FST). The FST is usually performed only once however, several observations showed that repeating the FST, prolongs immobility time.

Materials and methods: Relating to the issues of both repeated testing, validity and individual variability, the current study was designed with a number of objectives: (1) Examine the group effects of repeated FST with and without chronic lithium (Li) treatment. (2) Examine the interaction between sex and repeated FST and (3) examine the consistency of individual variability across test and retest in the FST, with and without chronic Li treatment.

Results: As expected, repeated exposure to the FST resulted in increased immobility across exposures with no sex effect. Moreover, a significant correlation was established between the behavior in the second and third exposures suggesting an establishment of individual response to the test. As expected, chronic Li treatment resulted in a significant decrease in immobility time across exposures and sexes with a significant correlation between the performance of mice in the FST across exposures for both control and Li mice.

Conclusions: These results suggest that at group level, immobility time increases across exposures although not always by the second exposure. Li is equally effective across exposures therefore it is possible that repeated testing protocols will have predictive validity. Additionally, mice show a consistent individual pattern of responding that is established either after 1 or 2 exposures therefore demonstration individual susceptibility or resilience to the test.

Acknowledgements: The authors would like to thank Ms. Sofi Pologonkin and Ms. Anat Dafna for their technical assistance.

P163 Analyzing test batteries in animal models of psychopathology with multivariate analysis of variance (MANOVA): one possible approach to increase external validity

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Background: One concern regarding animal models of psychopathology is unclear external validity. One way to establish external validity is to examine measures representing separate facets of the pathology with a battery of tests in the same cohort of animals. Additionally, utilizing the same animals in a battery of tests can help to reduce the number of animals in research. However, issues had been raised regarding the analysis of data coming from batteries and the standard practice is to analyze each test separately. This approach introduces two problems: (1) the analysis answers the question regarding separate tests but not regarding the general effect; (2) there is no correction for multiple comparisons. One way to overcome these challenges is to use transformations to Z-scores. We suggest an additional approach, analyzing test batteries with multivariate analysis of variance (MANOVA).

Materials and methods: To compare the outcomes of Z-score analysis and MANOVA we re-analyzed two published studies where data were initially analyzed separately for each test. Additionally, we computed effect sizes.

Results: The first study tested interaction between sex and lithium in a battery of manic-like behaviors, the second study tested asenapine in a battery of anxiety-like behaviors. For the first study, the MANOVA analysis indicated no effects of sex and a significant antimanic-like effect of lithium and for the second study, the MANOVA indicated a significant anxiolytic effect of asenapine. Z-scores analysis resulted in a significant general antimanic-like effect in the lithium study but failed to demonstrate the anxiolytic effects of asenapine in the second study.

Conclusions: It is possible to suggest that MANOVA is an appropriate way to analyze data from test batteries and that its use, when appropriate, can increase the validity, predictability and reproducibility of results.

P164 Neurological and cognitive characteristics of females with rett syndrome

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Background: Rett syndrome (RTT) is a progressive neurodevelopmental disorder almost entirely confined to females (1/10000-25000 births). It is a sporadic disorder caused by de novo mutations in X-linked MECP2 gene, encoding methyl-CpG-binding protein 2 leading to male lethality. The syndrome is characterized by early neurological regression affecting motor, cognitive, behavioral and communication skills. RTT is the first neurodevelopmental disorder associated with a deficient transcription of methylated DNA. The present study reviews concurrent literature regarding neurological and cognitive characteristics of females with RTT.

Materials and methods: Our study presents research findings from 28 empirical studies, for the period between 2001 and 2018. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

Results: Rett syndrome is one of the most frequent reasons for complex disability in girls and the second most prevalent cause of mental retardation, resulting from stagnation of intellectual function. Thus, cognitive level is usually equal to the age of regression. The most distinctive feature of RTT is severe motor regression. Stereotyped movements replace purposeful hand movements and gait abnormalities, such as ataxia and apraxia. RTT patients present reduced head growth, loss of speech, difficulties in comprehension, delay in acquiring new skills, response delay and epilepsy in 80% of the cases. Epilepsy characteristics may be considered as prognostic factors in neuropsychological outcome. However, individuals exhibit good visual attention, in addition, they are able to learn to discriminate complex stimuli and their long-term memory is also well-preserved.

Conclusions: Progress on the field of neurophysiology shed light to the pathology of the syndrome and made early diagnosis and treatment feasible, but relatively large knowledge gaps still remain. The studies reviewed, highlighted that the clinical course of the syndrome differs a great deal among patients because of interpersonal and personal differences.

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P165 Evolution of bipolar disorder diagnosis: About Tunisia

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Background: Bipolar disorder (BD) is a complex disorder which diagnosis has always evolved through time. Diagnosing and treating bipolar disorder offers quite challenges to the clinicians. In fact, with its various clinical presentations it can be often misdiagnosed and it wasn't that long ago when bipolar disorder was confused with other disorders. As psychiatric expression is constantly evolving, it seems important to ask what the current status of BD is.

Materials and methods: We conducted a longitudinal descriptive retrospective and a comparative study of two groups of patients who were hospitalized in psychiatric ward in Razi Hospital at two different periods. The first period extends from 1999 to 2001 and the second one from 2009 to 2011.

Results: The mean age of onset of bipolar disorder was 25 years (comparable in both groups). 50% of patients had an addictive comorbidity
Early primary symptoms were noticed for patients of the second group ($p=0,124$).
Psychiatric care was significantly delayed for patients in the second group ($p=0,02$).
The diagnosis initially established was: bipolar disorder (52,8%) followed by depressive disorder (27,8%).
A better diagnostic assessment of patients with depressive onset was noted in the second group ($p=0,018$).
In most cases, hospitalization was followed by a manic episode.

Conclusions: Even if Bipolar disorder diagnosis is getting more precise, early detection, comorbidities treatment and use of psychoeducational strategies remain important for helping to improve its prognosis.



P166 Facebook use and mental health statuses among Tunisians users

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Background: Online social networking sites have become an integral part of our everyday life. Nowadays, Facebook represents the most popular social networking platform. Its excessive use has become an intriguing phenomena and a major concern by health care professional.

Materials and methods: We performed an online survey including five sections: demographic data; motives for Facebook uses; Facebook addiction scale short version; depression scale short version (CES-D10); and Satisfaction with life scale short version (SWLS).

Results: A total of 150 Facebook users participated to the study (mean age 29.7 ± 9 years; 70.7% were women). Fifty seven per cent of the respondents were single. Among our cohort, 95.3% had university level and 69. 3% had a professional activity. Relationship maintenance and passing time were the most advanced reasons to use Facebook. We noticed that 8% of the participants had maladaptive use of Facebook. Based on CES-D10, depressive symptoms were observed in 45.3% of participants. Participants were for 68% satisfied with their lives whether 28.7% were dissatisfied. Maladaptive use of Facebook was correlated with low satisfaction with life ($r = -0.227$; $p < 0.001$), as well as with low self esteem ($r = -0,347$; $p < 0.001$).

Conclusions: Our study showed that maladaptive use of Facebook might be associated with mental health disorders. Further studies are needed to better investigate the relationship between Facebook use and mental health issues.

P167 Language deficits in children with Fragile X Syndrome

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Background: Fragile X Syndrome (FXS) is the second most common inherited cause of mental retardation after Down syndrome. FXS is typically due to an expansion of the CGG triplet repeat within the Fragile X mental retardation 1 (FMR1) gene on the X chromosome. Although FXS occurs in both genders, males are usually more severely affected than females. Our review presents current research findings on language deficits reported in children with FXS.

Materials and methods: The review was based on recent academic articles (from 2008 to 2018) obtained from large scientific databases (i.e., Pubmed, Scopus) using the following keywords: Fragile X Syndrome, Language, and Autism.

Results: Children with FXS are characterized by intellectual disability (mild to severe) and delay in language acquisition, which both are already apparent at the age of 3 years. More specifically, children face important linguistic weaknesses, such as delay in vocabulary development, comprehension, use of morphology and syntax. Significant weaknesses in pragmatics and reading skills are also observed. Some language deficits in FXS are assumed to have a cognitive basis (i.e., impairments in working memory affect reading and comprehension of complex sentences). Despite the above mentioned difficulties, there is evidence for intact cognitive areas in which children with FXS display relative strengths, such as simultaneous processing and long-term memory abilities. Finally, co-morbidity between FXS and autism is relatively high (20-30%). However, when compared to autistic children, children with FXS demonstrate strengths in conversational turn taking, adequate speech intelligibility and the decoding of whole real words is better than expected based on the nonverbal cognitive abilities.

Conclusions: There are many factors that influence language development in children with FXS. Although the existing literature describes meticulously the languages deficits observed in FXS, it still lacks in providing a unifying theory that would explain all language deficits in FXS.

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P168 Neurological soft signs significantly differentiate schizophrenia patients from healthy controls

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Objective: Neurological soft signs (NSS) are a group of minor non-localisable neurological abnormalities found more often in patients with schizophrenia. The aim of the current study was to test for the effect of gender, age, parental age, age at onset and clinical symptomatology on NSS. **Material and methods** The study sample included 133 patients suffering from schizophrenia according to DSM-IV-TR (77 males and 56 females; aged 33.55±11.22 years old) and 122 normal controls (66 males and 56 females; aged 32.89±9.91 years old). The assessment included the Neurological Evaluation Scale (NES), and a number of scales assessing the clinical symptoms and adverse effects especially extrapyramidal. The statistical analysis included exploratory t-test, simple linear regression analysis, analysis of covariance and the calculation of correlation coefficients.

Results: The results of the current study confirm that NSS are more frequent in patients with schizophrenia in comparison with normal controls (Wilks=0.622, $p<0.0001$), but do not support an effect of gender, age, age at onset, paternal or maternal age, education, medication status or clinical subtype of schizophrenia on NES scores. **Discussion** Overall these results suggest that NSS constitute an independent (from the rest of symptoms), core (present in the vast majority of patients) and trait (unrelated to age and probably to the stage of schizophrenia) symptom of schizophrenia which could be of value in the clinical assessment and research of schizophrenia. Overall these results are not in full accord with the literature, but they could serve to fill in gaps and inconsistencies observed so far.

P169 Paternal and maternal age as risk factors for schizophrenia: a case-control study.

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Objective: Advanced parental age might constitute a generic risk factor for mental and somatic disorders. The current study tested whether this concerns also patients with schizophrenia.

Methods: A total of 231 schizophrenic, 56 other severe mental disorders patients and 204 controls were diagnosed according to DSM-IV-TR. Data were tested with ANOVA models including relative risk and odds ratios.

Results: Patients with schizophrenia manifested higher paternal (32.55 ± 6.35 vs. 29.42 ± 6.07 , $p < .001$) and maternal age (27.66 ± 5.57 vs. 25.46 ± 4.52 , $p < .001$). Patients with other mental disorders had higher paternal (33.29 ± 8.35 ; $p = .001$) but not maternal age (26.69 ± 5.89 ; $p = .296$) compared to controls. There was no difference between the two patient groups concerning either paternal or maternal age ($p > .05$). There seems to be a higher risk for the development of schizophrenia in offspring with paternal age above 25 years and maternal age above 22 years at delivery.

Conclusions: The current study provides further support for the suggestion that advanced paternal age constitutes a risk factor (in a non-dose dependent and gender-independent way) for the development of schizophrenia but also for other mental disorders. In contrast, advanced maternal age characterises schizophrenia specifically. The higher risk is evident after 25 years of paternal and 22 years of maternal age, respectively.



P170 Mood Symptoms in Stabilized Patients with Schizophrenia: A Bipolar Type with Predominant Psychotic Features?

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Background: Schizophrenia (SZ) and bipolar disorder (BD) are traditionally distinguished on the basis of progressive deterioration and long-term outcome, but a more dimensional approach is warranted. There are limited data on the occurrence of manic symptoms in patients with schizophrenia. The aim of the current study was to search for patterns in the clinical symptomatology, which may suggest the presence of one or several mood disorders under the label of schizophrenia.

Subjects and methods: Hundred-seventy-five patients diagnosed with schizophrenia according to DSM-5 were included in the study. The psychometric assessment included the Positive and Negative Syndrome Scale, Young Mania Rating Scale, The Montgomery-Åsberg Depression Rating Scale and the Calgary Depression Scale. The statistical analysis included MANOVA, Pearson Correlation coefficient and principal components analysis.

Results: Significant subthreshold manic symptoms were present in 25.14% of patients. Mood symptoms correlated with positive symptoms. The PCA revealed a complex structure with 15 factors (one positive, negative, somatic, anxiety, neurocognitive, disorganization and manic, five depressive and three psychomotor/excitement/hostility/violence).

Conclusion: Psychotic mood disorders are often phenotypically indistinguishable from schizophrenia, so it is likely that psychotic affective patients have been misdiagnosed with schizophrenia. The current study suggests that there seem to be patients with mania misdiagnosed as 'schizophrenics' because of the presence of psychotic features, a condition better described as 'schizophreniform bipolar disorder'.

P171 Higher than recommended dosages of antipsychotics in male patients with schizophrenia are associated with increased depression but no major neurocognitive side effects: Results of a cross-sectional pilot naturalistic study

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Introduction: The current small pilot naturalistic cross-sectional study assesses whether higher dosages of antipsychotics are related to a satisfactory outcome concerning symptoms of schizophrenia but also to a worse outcome in terms of adverse events and neurocognitive function.

Material and methods: 41 male stabilized hospitalized schizophrenic patients were assessed by PANSS, Calgary Depression Rating Scale, UKU and Simpson-Angus Scale and a battery of neurocognitive tests. Medication and dosage was prescribed according to clinical judgement of the therapist.

Results: Clinical variables and adverse events did not differ between patients in the recommended vs high dosage groups. Higher dosage correlated with depressive symptoms but there was no correlation with neurocognitive measures except for impaired concentration.

Discussion: Results suggest that it is possible to achieve a good clinical response in refractory patients by exceeding recommended antipsychotic dosages at the price of depression and possible mild isolated concentration deficits but not other neurocognitive or extrapyramidal adverse events. Currently clinicians prefer first-generation antipsychotics when high dosages are prescribed, but considering the more favorable adverse effects profile of newer agents, it is important to study higher dosages of these agents and to test whether they should be preferably given when high dosages are necessary.



**P172 Differential correlation of suicide and homicide rates according to geographical areas:
A study with population-level data**

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The current study investigated the relationship of suicide and homicide rates internationally. WHO database mortality data for 82 countries concerning suicide, homicides, and cancer and traffic accidents as controls were used. The analysis included Pearson correlation and multiple linear regression analysis. Worldwide homicidal rates explained 55.42%, 43.86% and 41.7% of male and 22.0%, 22.14% and 13.25% of female suicides for 2000, 2005 and 2010 respectively. In Europe there was a positive correlation between male suicide rates and all homicide rates including homicide rates in both genders, in male victims, and in female victims. In America there is no significant correlation. In Asia there is a significant correlation of male suicidal rates only with homicide rates of female victims. We observed marked and interesting differences in the pattern of association between Europe and the Americas. Overall the current paper suggests that at least in some human populations, suicidality and homicidality share common etiopathogenetic substrates and could be triggered by the same internal or external events or might develop based on common genetic background. Empirically it has been suggested that suicide is related to higher living standards while murder is related to poor quality of life and lower living standards.

P173 Could PANSS be a useful tool in the determining of the stages of schizophrenia? A clinically operational approach

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Staging in schizophrenia might be an important approach for the better treatment and rehabilitation of patients. The purpose of this study was to empirically devise a staging approach in a sample of stabilized patients with schizophrenia. One hundred and seventy patients aged ≥ 18 years (mean = 40.7, SD = 11.6) diagnosed by DSM-5 criteria were evaluated with the Positive and Negative Syndrome Scale (PANSS). Principal components analysis (PCA) with varimax rotation was used. The model was examined in the total sample and separately across a hypothesized stage of illness based on three age groups and between the two sexes. The PCA revealed a six factor structure for the total sample: 1) Negative, 2) Positive, 3) Depression and anxiety, 4) Excitement and Hostility, 5) Neurocognition and 6) Disorganization. The separate PCAs by stage of illness and sex revealed different patterns and quality of symptomatology. The Negative and Positive factors were stable across all examined groups. The models corresponding to different stages differed mainly in terms of neurocognition and disorganization and their interplay. Catatonic features appear more prominent in males while in females neurocognition takes two forms; one with disorganization and one with stereotype thinking with delusions. This study suggests that the three arbitrary defined stages of illness (on the basis of age) seem to reflect a progress from a preserved insight and more coherent mental functioning to disorganization and eventually neurocognitive impairment. Sexes differ in terms of the relationship of psychotic features with neurocognition. These results might have significant research and clinical implications.

P174 Fake news: Is it a social phenomenon based on neuropsychologically determined self- or other-deceptive mechanisms? Some suggestions from the insight and self-awareness area

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Fake news is intentionally misleading and deceptive news that is written and published with the intent to damage an entity or a person. Fake news is a type of yellow journalism that consists of deliberate misinformation or hoaxes spread via traditional print or online social media. They may contain false, misleading, imposter, manipulated or fabricated content.

In neuropsychiatry, the concept of self- or other-deception is defined as the eclectic and self-motivated absence of understanding of material that is psychologically comprehensible. It has been theorized as a deviant expansion of insight or self-awareness. The following process describe the phenomenon of self-deception: (1) the person has two mental contents, that are conflicting when expressed as propositions, (2) these two mental contents occur simultaneously, (3) the person is not aware of one of the two mental contents, (4) the process that defines which mental content is subject to awareness depends on the individual’s motivation. Multiple neuropsychological theories of awareness emphasize the role of an error-monitoring system, which is primarily linked with the hippocampal system, while other brain areas involved are the dorsolateral prefrontal cortex, the supplementary motor area and the anterior cingulate gyrus.

People with high levels of self-deception simply deny or minimize their perception of symptoms, negating the presence of symptoms primarily to themselves. This absence of denial could be conceptualized as a form of depressive realism. Conversely, good insight can be viewed as an example of “depressive realism”. Higher levels of self-deception are associated with less or less severe symptoms of depression. The phenomenon of self-awareness in affective disorders can be viewed on a continuum, with severe depression occupying one end, followed by mildly depressed patients with low levels of self-deception (the so-called depressive realism), and in the other end of the spectrum a group of healthy individuals with high levels of self-deception. Interestingly, this continuum seems to be independent of the psychotic process.

In conclusion, self-deception process may have a protective role against depression, since patients with poor insight manifest less depressive symptoms, while depression on its own may reduce mechanisms of self-deception. We may suggest that underlined neuropsychological processes, probably based on biologically determined self- or other-deceptive mechanisms, could serve in the development, and even the conservation, of at least some of the social behaviors related to the fake news phenomenon.

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P175 Donepezil can paradoxically induce tardive dyskinesia

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Background: Tardive dyskinesias (TD) are repetitive, involuntary, purposeless movements of the tongue, lips, face, trunk, and extremities that occur usually in patients treated with long-term dopaminergic antagonist medications. Certain patients are more vulnerable in developing TD, like patients with neuropsychiatric disorders such as schizophrenia, schizoaffective disorder, or bipolar disorder who have been treated with antipsychotic medication for long periods. The pathophysiology of TD is not well understood. TD has been associated with polymorphisms of both the dopamine receptor D2, D3, the dopamine transporter (DAT) gene, and the manganese superoxide dismutase (MnSOD) gene and therefore it is considered that central dopamine blockade plays a role in the pathogenesis of this condition. Besides typical neuroleptics several other drugs have been linked to the development of TD, but cholinesterase inhibitors may improve it. We present a case in which donepezil seems to provoke TD.

Case report: We have encountered a case of a 70 years old female patient received donepezil for 18 months because of dementia (MMSE 23/30). Twelve months after receiving the medication she started experiencing annoying and persistent orofacial hyperkinesias that progressively spread to other parts of the body, mainly on the trunk. Tongue protrusion and facial grimacing made her speech almost incomprehensible and she felt very embarrassed. She was receiving citalopram, too. Although no previous reference has been made linking donepezil to TD, we tried to stop this medication (instead of citalopram). Three months after stopping donepezil, dyskinesias were considerably eliminated and the patient felt relieved. Quetiapine was administered (25 mg BID) and further but not total improvement was achieved.

Discussion: Donepezil has been tested as a possible agent to treat TD on the basis that cholinesterase inhibitors, may improve TD by directly increasing cholinergic synaptic transmission and decreasing dopaminergic activity. Upregulation or supersensitivity of the dopaminergic receptors in the nigrostriatum has been considered a likely mechanism, as well as the imbalance of the dopaminergic/cholinergic systems and dysfunction of GABAergic neurons in the nigrostriatum. In our case donepezil had the opposite effect. On the other hand, atypical antipsychotics, like quetiapine have also been implicated as both producing and alleviating TD. Further randomized trials are needed to explore the role of cholinesterase inhibitors in the occurrence and managing of TD.

Keywords: dementia, donepezil, tardive dyskinesia

P176 The effect of genetic variant rs324420 of anandamide fatty acid amide hydrolase (FAAH) on resting-state connectivity in migraine

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Background: In the development of migraine and during its chronification an endocannabinoid system deficit is hypothesized but the exact nature of it is not clear. Anandamide degrading enzyme (FAAH) gene has a functional polymorphism, rs324420. Individuals carrying the A allele have a reduced enzyme activity and thus have a higher anandamide level.[\[1,2\]](#)

Methods: In this study the effect of FAAH rs324420 polymorphism was investigated on the brain resting-state functional connectivity in migraineurs and healthy individuals. Notably the strength of the functional connectivity between the periaqueductal gray matter (PAG) and brain regions responsible for pain transmission or modulation was studied with functional magnetic resonance imaging (fMRI).

Results: The rs324420 polymorphism and the migraine diagnosis did not show any major influence on the investigated brain connections. At the same time significant interaction was present between the rs324420 and migraine on the connectivity of right PAG and right insula, and additionally of the sensory-motor network (SMN) and PAG. The right insula and right PAG showed less synchronized resting-state activity in migraineurs carrying the A allele whereas CC homozygous migraineurs showed enhanced connectivity between these two regions. A significantly altered connectivity was shown between the SMN (gyrus postcentralis, gyrus precentralis and supplementary motor area) and PAG synchronization in CC homozygous migraineurs compared to migraineurs carrying the A allele.

Conclusion: Our results suggest that the FAAH rs324420A allele is a potential protective factor in migraine, since in individuals who suffer from migraine but carry the A allele the pain neuronal-matrix connectivity is less strong. However, further studies are needed to understand the role of FAAH and the examined functional polymorphism (rs324420) in migraineurs.

Acknowledgement: The study was supported by Hungarian Brain Research Program - Grant No. KTIA_NAP_13-2-2015-0001 (MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group), by the Hungarian Academy of Sciences (MTA-SE Neuropsychopharmacology and Neurochemistry Research Group), and by the Hungarian Brain Research Program - Grant No. 2017-1.2.1-NKP-2017- 00002 (SE-NAP2 Genetic Brain Imaging Migraine Research Group). Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P177 A Study on Irritable Bowel Syndrome (IBS) in Mental Health Professionals and the Psychosocial Factors Affecting This

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Background: The present study investigates irritable bowel syndrome in mental health professionals and the characteristics of psychosocial factors that affect this.

Materials and methods: The present study selected an irritable bowel syndrome group among 291 mental health professionals based on the Rome III criteria, and investigated demographic variables. The Hospital Anxiety Depression Scale (HADS), Psychosocial Well-being Index (PWI), and Korean Occupational Stress Scale (KOSS) were used to evaluate psychosocial factors. An independent t-test and chi-square test were used to determine differences between the groups, and a logistic regression analysis was used to determine the odds ratio (OR) of IBS based on occupational stress. SPSS 21.0(IBM Statistical Package for the Social Sciences 21.0) was utilized for all statistics.

Results: Differences in demographic variables based on IBS group were not statistically significant. Depressive symptoms ($t=-4.767$, $p<0.001$) and anxiety ($t=-4.068$, $p<0.001$) were higher in the IBS group, and psychosocial well-being was lower. The OR of IBS based on depressive symptoms ($t = 2.288$, $p<0.05$) was 5.737 (95% CI=2.24-14.69). There were significant differences in occupational stress based on IBS within the subordinate domains of physical environment($t=-3.160$, $p<0.01$), job demand ($t=-3.273$, $p<0.01$), interpersonal conflict ($t=-2.295$, $p<0.05$), job security ($t=-3.005$, $p<0.01$), and lack of reward ($t=-2.046$, $p<0.05$). The OR of IBS based on the subordinate domains of occupational stress was 3.708 (95% CI=1.20-11.41) in physical environment, and 3.759(95% CI=1.33-10.56) in job demand.

Conclusions: The results of the present study verify that psychosocial factors in mental health professionals have a close correlation with IBS. Accordingly, improvements in both IBS symptoms and quality of life should occur through proactive intervention in these variables.

Keyword: Irritable bowel syndrome (IBS), Depressive symptoms, Anxiety, Occupational stress, Psychosocial- wellbeing

P178 Associations between polymorphisms of glucocorticoid receptor gene (NR3C1) and brain emotional stress processing in migraine

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Background: Stressful life events are inevitable in everyday life, among them pain is a strong and frequently unpredictable stressor. Migraine patients suffer from repeated migraine attacks that stimulate biological pathways related to stress response. Under stress hypothalamo-pituitary-adrenal axis (HPA) is activated which results in cortisol release. The function of the HPA axis is controlled by brain regions, for example by the amygdala and the prefrontal cortex, and by the released cortisol that binds to glucocorticoid-receptors and exerts negative feedback regulation during the stress response.

Methods: In this study brain activation to fearful-faces was measured by functional magnetic resonance imaging (fMRI) and migraineurs were compared to control subjects. Looking at fearful-faces activates brain regions that play important roles in stress response. Association of five polymorphisms throughout the glucocorticoid receptor gene (*NR3C1*) and migraine was investigated with a logistic regression model. In addition, we studied how *NR3C1* and migraine influence migraine-specific brain activation by means of general linear model.

Results: Using full-brain analysis, increased activation was observed in the right medial frontal gyrus to fearful-faces in migraineurs. Genetic variations of *NR3C1* showed a significant relationship to migraine when the effects of all polymorphisms were analysed in one model. Based on further analysis, it could be established that the SNPs which are significant in migraine do not influence the examined brain regions neither as main effect nor in interaction with migraine.

Conclusion: In conclusion, the variants of *NR3C1* gene are presumably contribute to the development of migraine, but this effect is most likely independent from the observed brain emotional stress processing differences between migraineurs and controls.



Acknowledgement: The study was supported by Hungarian Brain Research Program - Grant No. KTIA_NAP_13-2-2015-0001 (MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group), by the Hungarian Academy of Sciences (MTA-SE Neuropsychopharmacology and Neurochemistry Research Group), and by the Hungarian Brain Research Program - Grant No. 2017-1.2.1-NKP-2017- 00002 (SE-NAP2 Genetic Brain Imaging Migraine Research Group). Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P179 Prevalence of distorted body image in young Koreans and its association with age, sex, body weight status, and disordered eating behaviors

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Purpose: To define the prevalence of distorted body image in 10-24-year-old Koreans and determine its relationship with sex, age, body weight status, and disordered eating behaviors.

Methods: A total of 3,227 young Koreans were recruited from elementary, middle, and high schools, as well as from universities. The participants completed a self-reported questionnaire on body image, eating behaviors (Eating Attitude Test-26), and body weight status.

Results: The prevalence of a distorted body image in males was 49.7% and that in females was 51.2%. Distorted body image was more frequent in adolescents (age, 10-17 years) than in young adults (age, 18-24 years). The highest prevalence (55.3%) was reported in female elementary school students (age, 10-12 years). Distorted body image was associated with disordered eating behaviors and abnormal body weight status.

Conclusion: These results suggest that distorted body image is a public health problem, given its high frequency in young Koreans, and that it is associated with abnormal body weight status and disordered eating behaviors.

Keywords: distorted body image, weight status, disordered eating behaviors, young Koreans, Eating Attitude Test, BMI

P180 Adherence and quality of life in End Stage Renal Disease patients undergoing haemodialysis

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Background: Adherence to therapeutic regimen is an important predictor of quality of life for haemodialysis patients. This study aimed to explore the impact of adherence on quality of life among haemodialysis patients.

Materials and Methods: In this cross-sectional study, 321 haemodialysis patients were participated. GR-Simplified Medication Adherence Questionnaire-HD (GR-SMAQ-HD) and Missoula Vitas Quality of Life Index-15 (MVQoLI-15) were used to measure adherence and quality of life, respectively. Demographic and clinical data was, also, recorded. Descriptive statistics were used. Linear regression analysis using the stepwise procedure was used to find independent factors associated with the study scales from which dependency coefficients (b) and their typical errors were occurred. The statistical program SPSS 19.0 was used for the analysis. The statistical significance was set up at 0.05.

Results: From the total sample, 206 were men. The mean age was 57.5 (SD=10.0), 57.7% were married. The daily number of pills was 7.1 (SD=5,4) while 64.5% used fistula for haemodialysis. The total score as well as the dimensions "Symptoms" and "Interpersonal" of MVQoLI-15 were independently associated to the participants' total GR-SMAQ-HD score ($p=0.025$, $p=0.004$, $p=0.010$, respectively). Age was independently associated to the "Transcendent" dimension ($p<0.001$) of MVQoLI-15. Age ($p<0,001$), years of diagnosis of End Stage Renal Disease ($p=0.025$), the daily number of pills ($p=0.029$) and marital status ($p=0.037$) were independently associated with the dimension "Well-Being".

Conclusions: The high level of adherence to therapeutic regimen is associated with better perceived quality of life. The old age and the large number of pills are associated with poor "Well-being" of MVQoLI-15.

P181 Blonanserinaugmentation in patients with schizophrenia - who is benefited from blonanserin augmentation? : An open-label, prospective, multicenter study

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Background: Evidences for antipsychotics augmentation for schizophrenic patients with suboptimal efficacy have been lacking although it has been widespread therapeutic strategy in clinical practice. The purpose of this study was to investigate the efficacy and tolerability of blonanserin augmentation with an atypical antipsychotics (AAPs) in schizophrenic patients

Materials and methods: A total of 100 patients with schizophrenia partially or completely unresponsive to treatment with an AAP recruited in this 12-week, open-label, non-comparative, multicenter study. Blonanserin was added to existing AAPs which were maintained during the study period. Efficacy was primarily evaluated using Positive and Negative Syndrome Scale (PANSS) at baseline, week 2, 4, 8, and 12. Predictors for PANSS response ($\geq 20\%$ reduction) was investigated.

Results: The PANSS total score was significantly decreased at 12 weeks after blonanserin augmentation (-21.0 ± 18.1 , $F=105.849$, $p<0.001$). Response rate on PANSS at week 12 was 51.0%. Premature discontinuation was occurred in 17 patients (17.0%) and 4 patients among them discontinued the study due to adverse events. Nine patients experienced significant weight gain during the study. Response to blonanserin augmentation was associated with severe (PANSS >85) baseline symptom (OR=10.298, $p=0.007$) and higher dose ($>600\text{mg/day}$ of chlorpromazine equivalent dose) of existing AAPs (OR=4.594, $p=0.014$).

Conclusions: Blonanserin augmentation improved psychiatric symptoms of schizophrenic patients in cases of partial or non-responsive to an AAP treatment with favorable tolerability. Patients with severe symptom despite treatment with higher dose of AAP were benefited from this augmentation. These results suggested that blonanserin augmentation could be an effective strategy for specific patients with schizophrenia.

P182 The role of melatonin and melatonin agonists in counteracting antipsychotic-induced metabolic side effects: a systematic review

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Background: Melatonin administration to high cholesterol-treated and high fat-treated rats has been shown to suppress body weight and visceral adiposity. In addition, in various animal models related to obesity, metabolic syndrome, and diabetes, melatonin has beneficial efficacy in ameliorating various metabolic symptoms, including attenuating weight gain, lowering blood pressure (BP), and improving insulin resistance. This systematic review aims to investigate whether melatonin or melatonin agonists significantly attenuate metabolic side effects among psychiatric populations treated with atypical antipsychotics.

Materials and methods: Four randomized controlled trials were identified through a comprehensive literature search using MEDLINE, EMBASE, and the Cochrane Library on 22 October 2015. These four trials (including three melatonin studies and one ramelteon study) included 138 patients, of whom 71 were treated with melatonin or ramelteon and 67 were treated with a placebo. Because of high heterogeneity, we did not carry out a meta analysis.

Results: Melatonin was beneficial in lowering blood pressure among bipolar disorder patients; this blood pressure-lowering effect was not prominent among schizophrenic patients. Melatonin appeared to improve lipid profiles and body composition and attenuated weight gain among both schizophrenic and bipolar disorder patients. Ramelteon showed a significant efficacy in lowering total cholesterol level.

Conclusions: Despite the few studies included, this systematic review provided promising evidence of the potential benefits of melatonin and its agonists in attenuating one or more components of metabolic syndrome among psychiatric patients using atypical antipsychotics.

P183 Evaluation of affective temperaments, depression and anxiety in white-coat, well-treated and resistant hypertension and in healthy controls

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Background: Hypertension and mood disorders both increase the frequency of cardiovascular events. Affective temperaments are related to mood disorders, however, less data are available about the relationship between affective temperaments and cardiovascular diseases. The aim of this study was to evaluate affective temperament scores, depression, anxiety, hemodynamic and arterial stiffness parameters in healthy subjects (Cont), as well as in chronic, well-treated (Chr), chronic, resistant (Res) and white-coat (Wh) hypertensive patient populations.

Methods: In our study, 262 patients were included: 148 Chr, 29 Res, 18 Wh and 67 Cont subjects. The patients completed the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Autoquestionnaire (TEMPS-A), the Beck Depression Inventory (BDI) and the Hamilton Anxiety Scale (HAMA). Blood pressure was measured with a validated oscillometric device (Omron M3) and arterial stiffness was examined with tonometry (PulsePen).

Results: Significant differences were found between the Cont, Chr, Res and Wh in brachial systolic blood pressure (121.44±11.1, 131.66±12.16, 151.1±27.92, 136.31±12.31 mmHg, respectively) and in pulse wave velocity (7.78±1.39, 9.24±2.19, 10.49±2.76, 8.06±1.61 m/s, resp.). In cyclothymic affective temperament scores we found significant differences between the Cont, Chr and Res groups (2(0-4), 3(1-5), 4(3-8), resp.). In BDI scores also significant differences were found between Cont, Chr and Res (3(0-5), 5(2-9), 7(4-12.5), resp.), while in HAMA scores differences between Cont, Chr, Res and Wh (3(1-6), 5(2-9), 12 (6-19.5), 8(5-10.5), resp.) groups were found.

Conclusion: Evaluation of affective temperaments might be helpful in identification of high-risk subgroups of hypertensive patients. However, prospective studies are required to confirm this observation.

Keywords: hypertension, affective temperaments, depression, anxiety, arterial stiffness, cardiovascular risk

Acknowledgement: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.



P184 Low Cardiac Vagal Tone via Frequency Analysis of Heart Rate Variability Differentiates Bipolar from Major Depression

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Objective: Major depressive disorder (MDD) and depression in bipolar disorder (BDD) generally have similar phenomenologies prior to the onset of a manic episode which leads to frequent misdiagnoses. Autonomic nervous system (ANS) dysregulation is associated with various depressive symptoms and inflammatory response disinhibition. The beat-to-beat pattern of heart rate (Heart Rate Variability, also known as HRV) provides a noninvasive portal to ANS function and has been proposed as a reliable index of resting cardiac vagal tone. Changes in inflammatory biomarkers may indicate inflammatory response disinhibition influenced by vagal mechanisms. We quantified HRV and measured inflammatory biomarkers in MDD and BD patients in an effort to derive potential diagnostic criteria for MDD and BD.

Methods: Sixty-four MDD and thirty-seven BDD patients were enrolled. HRV was assessed and blood was drawn at baseline after washout of antidepressant medication and prior to initiation of study medication. HRV was quantified and corrected for artifacts using an algorithm that incorporates time and frequency domains to address non-stationarity of the beat-to-beat heart rate pattern.

Results: MDD subjects had significantly higher baseline RSA ($p=0.05$) and LF-HRV ($p<0.01$) in comparison to BD subjects. In comparison to MDD subjects, BDD subjects had significantly higher baseline levels of IL-10 ($p<0.01$) and MCP-1 ($p<0.01$). In the MDD group only, baseline LF-HRV was significantly positively correlated to baseline levels of IL-10 ($r=0.47$, $p<0.01$).

Conclusions: Reduced vagal tone and higher levels of inflammatory biomarkers may distinguish BDD from MDD and reveal an underlying pathophysiology of depressive illness involving ANS dysfunction and immune response with associated chronic pro-inflammatory status.

P185 Effects of Inflammation Modulation on Brain-derived Neurotrophic Factor in Treatment-resistant Bipolar Depression

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Background: Neuroplasticity refers to the central nervous system's ability to adapt and form new neural connections in response to environmental stressors. Brain-Derived Neurotrophic Factor (BDNF), an important neurotrophin in regulating neuroplasticity, is highly expressed in the cerebral cortex and hippocampus. Neurogenesis in these structures is important for learning, memory, cognitive and emotional function. Negative stimuli, such as stress and neuroinflammation, are thought to downregulate BDNF expression and thereby play a role in the pathophysiology of mood disorders. The relationship between peripheral BDNF and bipolar disorder (BD) has been extensively studied, and the overwhelming conclusion is that BDNF levels vary depending on disease severity and mood state, as depressive and manic episodes have decreased expression of BDNF when compared to a state of euthymia. Multiple studies have also shown inflammation to influence mood state in BD, as inflammatory markers are increased during both the manic and depressive phase of illness. When attempting to determine if BDNF can serve as a biomarker for bipolar disease activity and response to treatment, findings have been inconsistent.

The scientific literature increasingly supports the theory that inflammation contributes to the neuroprogression of BD, and treatment-resistance in bipolar depression may be the consequence of a chronic proinflammatory state. Celecoxib (CXB), a cyclooxygenase type-2 selective inhibitor, may halt BD disease progression by suppressing neuroinflammatory and possibly neurodegenerative pathways. Therefore, we hypothesized that in treatment-resistant bipolar depressed patients, using escitalopram (ESC) in conjunction with CXB will enhance therapeutic response by stimulating expression of BDNF. Since BDNF levels vary depending on mood state, those who respond to treatment should have a change from their baseline serum BDNF level.

Methods: 70 patients (35 in each arm) with treatment-resistant bipolar depression were enrolled in a double-blind, two-arm, placebo controlled study and randomized to receive ESC + CXB or ESC + placebo (PBO). Serum BDNF levels were measured at baseline, week 4, and week 8 of treatment. The Hamilton Depression Rating Scale (HAM-D) was used to assess response to treatment, with a 50% reduction from baseline indicating treatment response and a HAM-D < 7 indicating remission.

Results: Of the 70 total subjects, 47 had serum BDNF levels assessed, with 27 receiving ESC + CXB and 20 receiving ESC + PBO. When comparing the two arms, there was no significant difference in serum BDNF values amongst non-responders, responders, or those in remission at baseline, week 4, or week 8. Further analysis comparing serum BDNF in subjects in the same treatment arm found no significant difference in non-response, response, and remission.

Conclusion: Addition of CXB to ESC did not significantly alter serum BDNF after week 8. Because there was great variability in baseline serum BDNF values, further analysis should focus on subtyping groups based on a median baseline value. A robust clinical response was noted in subjects receiving CXB, as 17 out of 27 had HAM-D scores <7 by week 8, indicating remission of depressive symptoms. By contrast, only 2 of 20 receiving ESC + PBO were in remission at the end of the study. This finding warrants further study and suggests a benefit to utilizing CXB in treatment-resistant bipolar depression. Failure to detect any changes in BDNF may be due to the relatively short observation period,

P186 CASE REPORT: First Psychotic Episode in patient with type 1 Diabetes mellitus

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N was born in 1999 to a middle-class family, he was the eldest of two children (he has a 3-years-younger sister). He had normal birth, development and social integration.

At the age of 4, he developed Diabetes mellitus type I and began to take insulin, initially via injections and then with an insulin pump. He gradually obtained good adaptability to his disease; in the recent years he has controlled glucose levels on his own and adjusted the insulin pump. He is described as an introvert and quiet child. Over the past 6 years, his father's unemployment has seriously upset the family's balance due to financial problems. There were tensions, emotional outbursts and, subsequently, isolation among family members.

In 2015, his younger sister was diagnosed with a psychotic episode including visual hallucinations and self-injuries, followed by medication and psychiatric follow-up. The incident appeared to have left our patient indifferent, although it disturbed the functioning of the family.

There is no incident in the family history other than the psychosis of the patient's sister and his personal history had been clear.

Last year, while in the final year of high school, he gradually started withdrawing from friends and acquaintances; his school performance began to decline; he became distant and reactionary, disobedient to his teachers, and spent over 15 hours gaming and navigating on the Internet. It is reported that he changed his innermost circle, began to talk only to people who were cannabis users and started smoking 4-5 cigarettes of THC daily.

He entered the University because of his medical problem (there is a law stipulating favourable university entry conditions for diabetes patients) and he had to move to another city in Northern Greece to study Electrical Engineering.

On September 17, in an attempt to be adapted to the new living conditions, he began to develop highly paradoxical behaviors: he gradually stopped going out because he was afraid of the demons, he thought that objects were moving although they were immovable, etc. He asked his parents to take him back to his family home, and when they went to get him, he was extremely scared and hiding behind various objects.

In October they visited a psychiatrist for the first time while the symptoms were still weak as he felt he needed treatment; he was going through a transition. At the second visit to the psychiatrist he was administered 50 mg quetiapine, which was progressively increased to 150 mg.

On December 17, the treatment changed to Invega (paliperidone) 9mg, but his condition was gradually worsening. He began to develop a religious addiction, although he had never showed any interest in religion before. He held the icon of Virgin Mary shaking; he filled the house with icons; asked to have the mirrors covered with fabrics, and requested that the TV, their mobile phones, the router and even the house power mains be switched off. He thought his neighbors were talking about him behind his back, started hearing voices that nobody else could hear, and sprinkling his mother with water telling her that it was Holy water. He could not sleep at night, and stated that he would commit suicide, because he "was hearing voices and something weird was happening". On the last day before his hospitalization he had pissed on him, did not allow his parents to change the wet clothes, opened the balcony doors wide and sat in the middle of

the living room with his hands open at a temperature of 4 degrees Celsius.

He urgently called for a priest to «cleanse the house of evil demons» and wanted to go to church to pray in the evening.

He was taken to hospital by his parents in this severe clinical condition, wearing inappropriate clothes for the time of the year and holding the bible tightly in his arms. He avoided eye contact, his face was frozen and briefly answered few questions.

The patient was clinically examined and it was deemed necessary to be injected with Haloperidol, Diazepam, Levopromazine, every 8 hours for 24 hours. There was some improvement and he then started oral treatment with Haloperidol 20 mg / d, Biperiden 4 mg / d, Olanzapine 10 mg /d and Amisulpride 800 mg /d.

The patient progressively recognized the absurdity of his ideas and actions, acquired good insight and was discharged from hospital after 65 days of hospitalization with psycho-education. He has gradually tried to acquire a normal sociability, has concentration deficit and mood swings. Additionally, there are minimal acoustic hallucinations in the evening hours before bed time.

Thus, the question arises as to how this first psychotic episode is related to cannabis abuse, excessive gaming or heredity.

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2. Results from a pilot study of a computer-based-role playing game for young people with psychosis *Early Interv Psychiatry* 2018 Mar 15 Olivet J, Haselden M, Piscitelli S, Kenney R, Shulman A, Medoff D, Dixon L.

Summary: The occurrence of an initial psychotic episode in 19year old patient suffering from diabetes mellitus, following cannabis use and gaming for long periods.

The patient was hospitalized for 65 days during which there was satisfactory improvement in his positive symptoms and some improvement in his negative and cognitive symptoms. He has been on a treatment with three antipsychotic medicines and frequent follow up. The question remains what triggered the episode, i.e. heredity, cannabis use, gaming or all of the above.

P187 Celecoxib Augmentation of Escitalopram in Treatment-Resistant Bipolar Depression and the Effects on Quinolinic Acid in the Kynurenine Pathway

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Background: In bipolar disorder, the depressive phase most adversely impairs the individual's quality of life. Failure to respond during anti-depressant therapy has been reported to be 3.4 times more common in bipolar depressed patients. The chronic pro-inflammatory state associated with stress and depression is believed to lead to a pathological shunt of tryptophan metabolism toward the Kynurenine Pathway and thereby interfere with drug efficacy. The purpose of this study was to determine if modulation of the inflammatory response via inhibition of cyclooxygenase-2 (COX-2) would exert a normalizing effect on specific tryptophan catabolites (TRYCATS), especially the neurotoxic Quinolinic Acid (QA). It was hypothesized that co-administration of the anti-inflammatory agent, celecoxib (CBX), with the SSRI antidepressant, escitalopram (ESC), would reverse treatment resistance in bipolar depression and demonstrate an augmented response while decreasing QA blood levels over time.

Methods: This randomized, double-blind, two-arm, placebo-controlled study consisted of a screening visit, a 2-week washout, and a 1-week placebo run-in phase. Subjects underwent a physical exam, medical history, laboratory tests, and completed several rating instruments. At their baseline visit, they were rated in a blinded manner. If they continued to score ≥ 18 on the 17-item Hamilton Depression scale (HAM-D), they were randomized to receive escitalopram + celecoxib, or escitalopram + placebo. The overall study was powered for 70 patients to complete 8 weeks of active medication. Blood levels of inflammation biomarkers and metabolites were determined at baseline and weeks 4 and 8. A Wilcoxon Rank Sum test assessed differences in QA levels between treatment groups at baseline. Univariable exact logistic regression analyses compared rates of treatment response or remission by drug therapy. A linear mixed effects model estimated QA values over time by drug therapy after adjusting for sex, age, and body mass index.

Results: The combination of escitalopram with celecoxib over 8 weeks led to decreased levels of patient-reported depressive symptoms vs. escitalopram with placebo. Patients receiving celecoxib were 4.13 (95 CI: 1.03-18.48) times more likely to respond to treatment compared to those receiving placebo ($p = 0.04$), and 14.34 (95 CI: 2.59-153.17) times more likely to experience remission compared to those receiving placebo ($p < 0.001$). Overall, patients receiving celecoxib (mean = 55.69, standard error [SE] = 6.27) had comparable QA values to patients receiving placebo (mean = 64.90, SE = 7.20, $p = 0.34$). QA values did not change significantly over time independent of which therapy the patients received ($p = 0.28$).

Conclusion: In a prior study of major depressive disorder, we had demonstrated reduction of neurotoxic metabolites, indicating that escitalopram may exert its antidepressant effect in part through inhibition of synthesis of neurotoxic metabolites and through reduction of the inflammatory response. Although normalization of metabolites including QA did not occur in this study, there were greater symptom response and remission in the escitalopram+celecoxib group at 8 weeks, showing the effects of modulating the inflammatory response on the efficacy of an anti-depressant.

P188 Evaluation of Vascular Endothelial Growth Factor as a Potential Biomarker in Bipolar Depression

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Background: Vascular Endothelial Growth Factor (VEGF) is involved in brain plasticity and neurogenesis. It has been implicated in the neurotrophic model of depression, which is based on the finding that stress can cause a decline in levels of neurotrophins. In contrast, VEGF may increase in mood disorders. Some studies show VEGF levels are increased in patients with bipolar disorder and decreased after successful treatment with lithium. We explored this relationship and hypothesized that modulation of inflammation by co-administration of a cyclooxygenase (COX-2) inhibitor, celecoxib, would enhance this neurotrophic factor in the depressive phase of treatment resistant bipolar depression.

Methods: Participants were bipolar depressed patients whose depression had failed to respond fully. In a double-blind placebo-controlled study, patients were placed on escitalopram and randomized to receive add on celecoxib (27 participants) or placebo (21 participants). There were 42 healthy controls. Plasma levels of VEGF were drawn at three time points over eight weeks. A univariable exact logistic regression analysis was used to assess associations between remission and drug therapy. A Wilcoxon Rank sum test and univariate logistic analysis were used to compare VEGF levels. A linear mixed effects model was used to estimate VEGF values over time by drug therapy after adjusting for sex, age, and BMI.

Results: Patients receiving celecoxib were 14.34 (95 CI: 2.59-153.17) times more likely to experience remission compared to those in the placebo arm of the study ($p < 0.001$). The Wilcoxon Rank sum test showed that bipolar patients had significantly higher levels of VEGF at baseline compared to healthy controls ($p=0.01$). The logistic regression showed that the AUC is 0.67 (95 CI: 0.54-0.80) and the VEGF cut point is 8.21 (sensitivity: 0.86, specificity:0.50). Patients' baseline VEGF scores were compared and found to be equivalent ($p=0.99$). At all time points, patients receiving celecoxib (mean=16.10, standard error=1.43) had comparable VEGF values to patients receiving placebo (mean=14.51, SE+1.75, $p=0.49$). The interaction between drug therapy and time was not significant ($p=0.27$), indicating VEGF values did not change significantly over time based on drug therapy. Baseline VEGF was a poor predictor of treatment response (OR=0.97, 0.90-1.05, $p=.44$) with an AUC of 0.53 (95 CI: 0.33-0.73).

Discussion: The success of the add on celecoxib suggests that the disease was modulated through inflammatory mechanisms. Increased VEGF levels during the depressive phase of bipolar disorder agree with similar findings in major depression. A high VEGF level tended to accurately predict bipolar disorder, although not all patients had high VEGF levels, suggesting differential VEGF expression. One possible explanation is that VEGF levels could be increased through a neuroprotective mechanism in a disease state, allowing for neurogenesis to occur. Another possibility is that high VEGF levels could indicate a predisposition to mood disorders. Plasma measures of VEGF may have diagnostic utility and help guide personalized treatment. Treatment response was not predicted by baseline VEGF, which is different than what was found in a study on major depression in the same lab. VEGF levels did not change with the study treatment for either study group or the total cohort. Extending the length of the study may allow detection of changes in neurogenesis. Findings may also differ in the manic phase of bipolar disorder.

P189 Dissociative experiences do not mediate psychopathic traits and emotion regulation strategies

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Introduction: Psychopathy is heterogeneous and widely examined construct. According to Karpman, two different types of psychopathy exist: “primary” and “secondary” [1]. Porter suggests that primary psychopathy is a polygenic predisposition, whereas secondary psychopathy depends on social influences [2] and therefore may result from early adverse experiences, and has been proposed as a dissociative disorder. Previously callous/unemotional traits have been reported in adolescent samples as precursors of psychopathy. Emotion dysregulation [4] and blame externalisation as a cognitive emotion regulation strategy has also been suggested to play a role in the background of psychopathy with evidence from adult and adolescent samples [5,6]. The aim of the current study was to examine the possible mediating effect of dissociative experiences on psychopathic traits and related emotion regulation strategies in a large general sample of Hungarian high school students.

Material and Methods: 771 students recruited from highschool classes (9-14 grades) in Budapest, Hungary, completed the Adolescent Dissociative Experiences Scale (ADES) to evaluate dissociative experiences, the Antisocial Process Screening Device (APSD) to assess psychopathic traits and the Cognitive Emotion Regulation Questionnaire (CERQ) to assess emotion regulation strategies. Mediation analyses were performed using Mplus 8 for Windows.

Results: In our study we could not identify a mediating effect of dissociative experiences on psychopathic traits and emotion regulation strategies, including separate analyses for the subscales. However, we did identify a characteristic pattern of significant correlations, with a significant correlation between depersonalisation/derealisation and all APSD traits, and specifically a moderately strong correlation between dissociative detachment and of narcissism ($r=0.446$). Externalising blame also showed significant correlations with amnesic symptoms ($r=0.262$) as well as all APSD traits.

Discussion: Our study indicated that dissociative experiences do not mediate psychopathy and emotion regulation which supports results from earlier studies contradicting Porter’s theory [7], however, given the heterogeneity of theories concerning the development and factors related to psychopathy, the relationship between the investigated variables remains ambiguous warranting further research using different instruments capturing other aspects of emotion dysregulation (Difficulties in Emotion Regulation Scale), as well as related psychophysiological (International Affective Picture System) or behavioral markers (Emotional Pictures DOT-Probe).

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P190 5-HTTLPR shows association with younger age at suicide: preliminary results from the Hungarian suicide biobank

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Background: Although the majority of suicides are committed by psychiatric patients, suicide is a multicausal phenomenon with a strong biopsychosocial background, including a significant contribution of genetic factors. As suicide still contributes to a large number of unnecessary, and possibly preventable deaths worldwide, constituting the leading cause of death among young males, we lack effective methods for predicting, screening, and preventing suicide. Thus our aim is to develop a complex model incorporating several levels of evidence from genetics through biochemistry as well as social and psychosocial determinants of suicidal behaviour. The *5-HTTLPR* polymorphism of the serotonin transporter gene has previously been implicated in suicidal behaviour and violent completed suicides. The aim of our present study was to investigate the association between *5-HTTLPR* and suicidal behaviour in our currently developing suicide biobank.

Methods: During autopsy sample DNA samples were obtained for *5-HTTLPR* genotyping from 200 subjects deceased due to suicide and 200 controls deceased due to other causes. Chi-square tests and logistic regression analyses were performed according to additive, dominant and recessive models to analyse the possible association between *5-HTTLPR* genotype distribution and suicide.

Results: Ratio of violent and non-violent suicides was 81% and 19% in our suicidal subsample, respectively. No significant difference was found in the distribution of *5-HTTLPR* genotypes between the suicidal and control samples according to any genetic models (additive: $\chi^2=0.602$, $p=0.740$; dominant: $\chi^2=0.404$; $p=0.525$; recessive $\chi^2=0.457$; $p=0.499$). No difference was found between violent and nonviolent suicides with respect to genotype distribution within the suicidal sample (additive: $\chi^2=1.771$, $p=0.412$; dominant: $\chi^2=1.555$, $p=0.212$; recessive $\chi^2=0.913$; $p=0.339$). Using logistic regression, a significant association was found between *sl* genotype and suicide at a younger age in the suicidal subsample according to the additive model (OR=1.037; $p<0.001$; $df=1$; $B=0.036$).

Conclusions: Although our preliminary study found no evidence for an association between *5-HTTLPR* genotype and suicide, a significant association was found between the *sl* genotype and younger age at suicide, indicating an important role of this genetic variant in the emergence of suicidal behaviour which may deepen our understanding of the dynamics of suicide risk and may help us identify targets for early screening and intervention. Several limitations must be mentioned possibly contributing to our negative results. Our control group included subjects deceased due to accidents where suicidal intent cannot be ruled out. Furthermore, due to a lack of suicidal autopsy we could not gain data concerning psychiatric illness in our suicidal sample and we could not gather information on distal and proximal life stressors which are known to play a role in the effect of *5-HTTLPR* at least in depression. Given the difficulty of studying suicidal behaviour due to the relatively low number of cases, our results argue for the further development of our suicide biobank and the investigation of further novel genotypes associated with endophenotypes of suicidal behaviour in living subjects.

Acknowledgement: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

P191 A novel target for focusing on neurocognitive symptoms in depression: *ATP6V1B2* rs1106634 is associated with hippocampal dysfunction and lifetime depression

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Background: Current understanding and treatment in depression still focuses on the monoaminergic theory and is far from adequate due to limited efficacy and significant side effects. It would be valuable to investigate SNPs with weak but replicable effects in GWAS-s to identify new molecules of vulnerability, mechanisms, and targets of treatment. While there is a general failure to find replicable associations with genome-wide significance in GWAS in depression, recently a metaanalysis implicated rs1106634 in the *ATP6V1B2* gene encoding the B subunit of the vacuolar H⁺ pump ATP-ase with a suggestive significance ($p=6.78 \times 10^{-7}$) [1], and this SNP also exhibited a suggestive p value in another metaanalysis in schizophrenia and bipolar disorder [2]. This subunit is part of a transmembrane complex contributing to proton gradient generation across synaptic vesicle membranes, playing a role in synaptic vesicular reuptake, accumulation and storage, thus management and maintenance of neurotransmission, and its function is therefore vital for the central nervous system. Furthermore, variations of vacuolar ATPases are also associated with oxidative stress, known to play a role in both depression and neurocognitive dysfunction and disorders. The aim of the present study was to investigate the association of *ATP6V1B2* rs1106634 with depression-related phenotypes including current and lifetime depression as well as neurocognitive phenotypes reflecting hippocampal and prefrontal deficits in a large, non-clinical European population.

Methods: After genotyping, association of rs1106634 with self-reported lifetime depression and BSI depression score reflecting current depression was investigated in a sample of 2226 subjects using logistic and linear regression models. Subsequently, in a subsample association of the investigated polymorphism with performance on neurocognitive tests reflecting frontal (Stockings of Cambridge, SOC) and hippocampal (Paired Associates Learning, PAL) function was analysed with multivariate general linear models.

Results: rs1106634 of the *ATP6V1B2* gene had a significant effect on lifetime ($t=3.591$, $OR=1.465$, 95% CI: 1.189-1.804, $p<0.001$) but not current depression ($t=0.965$, $\beta=0.042$, $p=0.335$), and

also on the hippocampal (PAL-memory: $F=15.159$; $p<0.001$; PAL-errors: $F=9.350$; $p=0.003$; PAL-required trials: $F=8.546$; $p=0.004$) but not frontal cognitive performance (SOC-ITT: $F=0.612$; $p=0.435$; SOC-correct trial rate: $F=2.039$; $p=0.155$) suggesting a brain-region specific effect. All results are shown for dominant models.

Discussion: Our findings indicate that variation of the vacuolar ATPase may indicate a new molecular mechanism playing a role in the long-term risk of depression and also hippocampal neurocognitive deficits often associated with affective disorders. As neurocognitive dysfunction is often overlooked both in the diagnosis and treatment of depression, contributing to significant residual symptoms severely and negatively impacting functional recovery and long-term well-being of patients, identifying genetic variation and molecular targets which may be a converging point of cognitive deficits and mood disorders may pave the way for targeting new systems for treatment that could provide for full functional recovery in depression treatment that goes beyond alleviation of mood symptoms.

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Acknowledgements:

The study was supported by the MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group (KTIA_NAP_13-2-2015-0001); by the National Development Agency (KTIA_NAP_13-1-2013-0001), Hungarian Brain Research Program (KTIA_13_NAP-A-II/14); and the MTA-SE Neuropsychopharmacology and Neurochemistry Research Group. Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

P192 Plasma C-reactive protein levels in bipolar depression during cyclooxygenase-2 inhibitor combination treatment

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Introduction: Immune system activation and neuroinflammation appear to play a key role in the pathophysiology and treatment of bipolar depression (BDD). Many patients diagnosed with stress-related mood disorders have increased levels of pro-inflammatory mediators, such as C-reactive protein (CRP). This study is the first to analyze blood levels of C-reactive protein (CRP) in bipolar disorder patients treated with the cyclooxygenase-2 inhibitor, celecoxib (CBX). Levels of the pro-inflammatory cytokine interleukin-6 (IL-6) were also assessed because IL-6 is known to induce the transcription of CRP.

Methods: In this randomized, double-blind, two-arm, placebo-controlled study, 47 consenting patients with BDD were randomized to receive either the SSRI escitalopram (10mg twice/day) + CBX (200mg twice/day), or escitalopram + placebo (twice/day). Plasma CRP levels were measured in both patient groups at baseline, week 4, and week 8, and in a healthy control (HC) group of subjects (N=35) once. CRP concentrations were measured using sandwich ELISA, and interleukin-6 (IL-6) concentrations were measured using Biochip Array Technology. Depression and associated symptoms were quantified using the 17-item Hamilton Depression Scale (HAMD-17).

Results: The CBX group had significantly lower HAMD-17 scores vs. placebo at week 4 ($P=0.026$) and week 8 ($P=0.002$). Baseline CRP levels were significantly increased amongst BDD patients versus HC subjects ($P=0.044$). No significant differences in CRP levels were measured between CBX and placebo groups at baseline ($P=0.156$), but by week 8 CRP was significantly decreased in the CBX group vs. placebo ($P=0.003$). CRP and IL-6 levels were positively correlated in the CBX group, and CRP levels were positively correlated with body mass index (BMI).

Discussion: Based on reductions in measured HAMD-17 scores, SSRI + CBX combination is more effective than SSRI + placebo in reversing treatment resistance and augmenting antidepressant response in BDD. CRP may be a useful biomarker for BDD, evidenced by its elevated plasma levels in BDD patients vs. HC subjects. Since CRP decreased significantly with CBX treatment compared to placebo, CRP may be a useful biomarker for monitoring treatment response in BDD patients during SSRI + CBX combination treatment. The correlation of CRP and IL-6 in the CBX group, but not the placebo group, may have occurred due to their synchronized down-regulation mediated by COX-2 inhibition. Since CRP was correlated with BMI, it is important to consider the patient's BMI when assessing their CRP levels before and after treatment. In the future, stratifying patients by BMI may help clinicians tailor more personalized treatment plans.

P193 Effects of parental migration on clinical profiles in schizophrenia

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Background: Migration is described as leaving one's residence to go to a different place. This complex phenomenon largely impacts mental health of the migrants and also affects second-generation migrants. Thus, it is associated and often considered as a risk factor for mental disorders including schizophrenia [1, 2]. Although its direct impact on the occurrence and clinical features of schizophrenia has often been studied; little work has been done to study the effect of maternal migration on the clinical profile in schizophrenia in the offspring [3, 4].

Materials and methods: 103 patients with schizophrenia were included. Groups were defined according to the mother's migratory status. Patients with maternal migration after their birth were excluded.

The groups were compared based on clinical characteristics and evaluations (The Positive and Negative Syndrome Scale (PANSS), Calgary depression scale (CDS)) and cognitive assessments.

Results: There were 31 patients with no history of maternal migration and 72 patients with maternal migration.

Untreated psychosis duration was longer in patients whose mothers migrated during pregnancy than in those with no history of maternal migration ($p = 0.05$).

A significant difference was found between the two groups regarding the mode of onset of schizophrenia, with a more frequent progressive onset mode in patients with a history of maternal migration ($p = 0.004$).

A triggering factor was more frequently found in patients with no history of maternal migration ($p = 0.007$).

No significant differences were found in the different evaluation scales.

Conclusions: Environmental factors exposures has garnered increased attention as risk factors for schizophrenia especially maternal stressors during the fetal and perinatal life.

A more thorough genetic, neurobiological and immunological study appears necessary.

Acknowledgements: There is no potential conflict of interest for this work

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P194 History of Evidence-based Medicine. The establishment of scientific medicine, 1815-1875: from resistance to endorsement

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Background: The first half of the nineteenth century saw a rise in experimental medicine. Scientific discoveries altered the way that medical students were trained and the way that doctors thought about disease and health. Cell theory triumphed, the word ‘scientist’ was coined, and medical advances were accompanied by considerable professional evolution. Education and research became a priority.

Trinity College Dublin was founded in 1592 by Elizabeth I of England. With the development of a medical school in 1711, ideas and discoveries from Padua and Leiden slowly impacted on the school. However, early nineteenth-century medical science was contested. Ideas and discoveries from laboratories and research institutes were resisted. Though the medical school located in Trinity was initially perceived as foreign and alien, by 1875 the school, with its new scientific ethos, had become fully accepted by the College.

Research Aims: This project will have a number of key foci: the significant impact of Continental medicine on the Dublin medical school; the important scientific innovations introduced from 1813; the resistance of Trinity College to the medical school’s emphasis on anatomical dissection, scientific method, experimental chemistry, and bedside medicine; and the eventual acceptance of the medical school, in 1875, by Trinity College Dublin.

Sources: The primary sources will be accessed in the Manuscripts and Early Printed Books Department of Trinity College Dublin, the Manuscripts and Archives Research Library of Trinity College Dublin, the Irish Architectural Archive, the Irish National Archive, the Library of the Royal College of Physicians in Ireland, and the Medical College Library of St. Bartholomew’s Hospital, London. This archival research will be supplemented by research in Edinburgh, London and St Andrew’s, Scotland. Relevant electronic databases will be accessed, including the Lind Library, The Cochrane Library, Medline, Embase, and other electronic databases using appropriate search engines.

Results: Significant material will be brought together in a new context and the history of the medical school will provide a way into assessing the impact of science on both medical practice and medical education.

During the period under investigation, a scientific ethos was adopted at the Dublin medical school. Trinity began appointing dynamic professors who had trained on the Continent. These doctors regularly visited Leiden, Berlin, and Paris. They made the Trinity medical school equal to the institutions that they had experienced elsewhere and they instigated a series of substantial improvements in the materials, curriculum and buildings of the Dublin school. Emphasis was placed on the utilization of the most recent research and the creation of new knowledge. Ideas and discoveries from laboratories and research institutes on the Continent were adopted. Regular autopsies were conducted. Pathology and midwifery were introduced into the curriculum, together with the use of English, rather than Latin, in the final written medical examinations.



Conclusion: The number of students from England, Scotland, and America grew considerably, with up to 90 students enrolled annually following the introduction of scientific innovations. This research project will establish how medical education and practice became increasingly science-based during the nineteenth century, forming a platform for the dynamic evidence-based movement of the twenty-first century.

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P195 Improving the uptake of systematic reviews: a systematic review of intervention effectiveness and relevance

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Objective: Little is known about the barriers, facilitators and interventions that impact on systematic review uptake. The objective of this study was to identify how uptake of systematic reviews can be improved.

Selection criteria: Studies were included if they addressed interventions enhancing the uptake of systematic reviews. Reports in any language were included. All decision-makers were eligible. Studies could be randomised trials, cluster-randomised trials, controlled trials, and before and after trials.

Data sources: We searched 19 databases including PubMed, EMBASE and The Cochrane Library, covering the full range of publication years from inception to December 2010. Two reviewers independently extracted data and assessed quality according to the Effective Practice and Organisation of Care criteria.

Results: 10 studies from 11 countries, containing 12 interventions met our criteria. Settings included a hospital, a government department and a medical school. Doctors, nurses, mid-wives, patients and programme managers were targeted. Six of the studies were geared to improving knowledge and attitudes while four targeted clinical practice.

Synthesis of results: Three studies, of low-to-moderate risk of bias, identified interventions that showed a statistically significant improvement: educational visits, short summaries of systematic reviews and targeted messaging. Promising interventions include e-learning, computer-based learning, interactive workshops, use of knowledge brokers, and an e-registry of reviews. Juxtaposing previously identified barriers and facilitators alongside the identified interventions, it was clear that the three effective approaches addressed a wide range of barriers and facilitators.

Discussion: A limited number of studies were found for inclusion. However, the extensive literature search is one of the strengths of this review.

Conclusions: Targeted messaging, educational visits, and summaries are recommended to enhance systematic review uptake. Identified promising approaches need to be developed further. New strategies are required to encompass neglected barriers and facilitators. This review addressed effectiveness and also appropriateness of knowledge-uptake strategies.

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P196 Insight and manic symptoms in patients with chronic schizophrenia in the Korean community

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Objective: Insight about the illness is very important factor for the management of schizophrenia. Manic symptoms can be identified occasionally even in schizophrenia. To examine the relationship among the insight, the psychotic and manic symptoms, and clinical variables.

Methods: Seventy-four participants (male 44, female 30) with chronic schizophrenia in community mental health facilities have been evaluated with the Scale to assess Unawareness of Mental Disorder (SUMD), the Mood Disorder Questionnaire (MDQ), and the Brief Psychiatric Rating Scale (BPRS).

Results: The mean number of previous admission was 3.85. Their drug adherence was favorable (6.73 day/week). Mean CGI-S score was 3.8. Thirty-five percent of subject were MDQ positive (cutoff point = 7 or more). Among SUMD, "awareness of effect of medication" showed significant negative correlation ($r = -0.33$) with total MDQ score not with total BPRS score. The negative correlation was more obvious in participants with negative MDQ (total MDQ score 6 or less, $r = -0.31$). Several MDQ items (irritability, $r = -0.25$; decreased sleep, $r = -0.27$; thought racing, $r = -0.28$; and easy distractibility, $r = -0.40$) negatively correlated with "awareness of effect of medication". In contrast, only one item (guilt feeling, $r = -0.27$) of BPRS revealed this correlation. Individual items in MDQ and BPRS rarely correlated with each other. Total MDQ score was not correlated with duration of illness and medication adherence.

Discussion: Manic symptoms were frequently detected even in schizophrenia as reported in previous studies. This made it difficult to differentially diagnose the disorder using only the total MDQ score. There was possible relationship between these manic symptoms and their insight. Identifying manic symptoms in schizophrenia would be considerable in clinical setting.

Keywords: Schizophrenia, insight, manic symptom

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P197 Interleukin1 β as Inflammation Biomarker in Unipolar and Bipolar Depression

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Introduction: IL1 β is a proinflammatory cytokine and a potent mediator of the inflammatory response. It is involved in neurodegeneration, both acute and chronic, it induces inflammation through activation of cyclooxygenase-2 (COX-2), activates the HPA axis, and produces behavioral depression in mice. Additionally, IL1 β decreases the bioavailability of serotonin by increasing serotonin reuptake. Based on these findings, we hypothesized that elevated IL1 β is a key contributor to treatment resistance in depression. IL1 β blood levels have been found in most studies to be elevated in both major depressive disorder (MDD) and in bipolar disorder (BD). However, there are discrepant findings whether its levels normalize upon successful antidepressant treatment in either mood disorder. Accordingly, we undertook two separate studies and measured levels of IL1 β before and after antidepressant treatment.

Methods: A total of 30 MDD patients participated in the first study. They were treated with escitalopram (ESC) on an open label basis for 12 weeks. Twenty patients completed the minimum 8 weeks to be considered completers. Plasma levels of IL1 β were measured at baseline and weeks 8 and 12. The second study was a randomized, double-blind, two-arm, placebo-controlled study and 47 patients with bipolar depression (BDD) were randomized to receive either ESC+Placebo or ESC+celecoxib (CBX). IL1 β was measured at baseline, week 4, and week 8. There was also a group of a healthy control (HC) subjects (N=35). Depression and associated symptoms were quantified using the 17-item Hamilton Depression Scale (HAM-D-17). IL1 β concentrations were measured using the Randox Biochip Array Technology.

Results: In the MDD group IL1 β was significantly higher than in HC subjects. However, levels did not normalize after 12 weeks of ESC treatment whether the patient had responded or not. Compared to HC, BDD patients had significantly higher levels of IL1 β at baseline and week 8 ($P=0.0003$, $P=0.0017$). The magnitude of change in IL1 β between baseline and week 8 in the ESC+CBX group was larger than that of the ESC+Placebo group. Those patients who received ESC+CBX showed a decrease in IL1 β over the 8 weeks of treatment that trended toward significance ($P=0.0897$). The ESC+Placebo cohort did not ($P=0.9216$).

Discussion: In two separate studies of MDD and BDD, we have confirmed that IL1 β is reproducibly elevated. However, antidepressant treatment by itself does not normalize this cytokine within 8-12 weeks, if administered by itself. In patients who achieved full remission, IL1 β changed significantly. We propose this was due to the COX-2 inhibitor modulating the inflammatory response thereby allowing the antidepressant to exert its full therapeutic efficacy. Since neuroinflammation may account for disease progression, our studies indicate that IL1 β , and possibly other proinflammatory modulators, are a prime target for future therapy.



P198 Relationship between Suicidal Ideation and Plasma C-Reactive Protein Level in General Population: The Korean National Health and Nutrition Examination Survey

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Objectives: The purpose of this study is to inquire into the relationship between suicidal ideation and plasma C-reactive protein level in general population.

Methods: This study selected a total of 5,090 subjects who has responded to the survey item on suicidal ideation status, and received the plasma C-reactive protein test, as a research subject using the 2015 data of the national health and nutrition survey. This study conducted covariance analysis by correcting a potential influence of demographic and hematological factors. Besides, this study intended to define the cut-off value of the optimum plasma C-reactive protein level which can distinguish between a subject with and without suicidal ideation using the decision tree.

Results: The Plasma C-reactive protein level of a subject having suicidal ideation was significantly higher than the one having no suicidal ideation in covariance analysis ($P = 0.046$). In addition, the proper cut-off value of the plasma C-reactive protein level between the subjects with and without suicidal ideation was found to be 1.30 mg/L ($P = 0.003$).

Conclusions: High plasma C-reactive protein level showed a significant correlation with suicidal ideation. In addition, this study has significance in that it presented that the plasma C-reactive protein concentration has the possibility as a marker of suicidal ideation.

Keywords: C-reactive protein(CRP), decision tree, general population, plasma, suicidal ideation

P199 Tumor Necrosis Factor-alpha in Depression: Effects of Antidepressant Treatments

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Background: The number one cause of disability in the United States is Major Depressive Disorder (MDD) between the ages of 15 and 44 years. MDD also affects more than 16.1 million American adults, approximately 6.7% of the U.S. population age 18 or older in a given year¹. The link between MDD and neuroinflammation has been addressed by the Inflammation Hypothesis of Depression. Depression has been associated with changes in peripheral biomarkers indicative of a chronic pro-inflammatory state. Increases in pro-inflammatory cytokines in depression have been well documented in literature (Halaris, et.al, 2015). The goals of this study were to 1) confirm the presence of an increased pro-inflammatory state in MDD patients by focusing specifically at tumor necrosis factor alpha (TNF- α) 2) determine if MDD patients treated with escitalopram or quetiapine had a decrease in their TNF- α levels over a 12-week period and various dosing schedules. . The purpose of this study is to provide insight on the inflammatory pathogenesis of MDD through TNF- α with the goal of developing biomarkers to provide more efficacious treatment for this heterogeneous mental illness.

Methods and Results: To answer our first question of whether there was an increase of the pro-inflammatory cytokine, TNF- α , in MDD patients compared to health controls, a retrospective statistical analysis was performed. A Wilcoxon Rank Sum test was used to assess for differences in patients' TNF- α levels at baseline (N=105). MDD patients in both treatment groups (quetiapine or escitalopram) recorded significantly higher TNF- α levels at baseline compared to healthy controls ($p=0.002$)

TNF- α was studied to determine whether it would be a good biomarker to predict MDD. Univariable logistic regression analysis was used to assess associations between treatment group (MDD and Healthy Control) and baseline TNF- α levels. The TNF- α cut point to maximize sensitivity and specificity is 1.52 (Sensitivity: 0.73; Specificity: 0.63). These results indicate that baseline TNF- α plasma levels do discriminate reasonably well between healthy and patient groups.

A linear mixed effects model was used to estimate patients' TNF- α scores over time by drug therapy after adjusting for sex, age, and BMI. Patients' TNF- α scores at eight and twelve weeks were compared between quetiapine and escitalopram therapy groups. Overall, patients receiving escitalopram had comparable TNF- α scores to patients receiving quetiapine ($p=0.32$)

Limitation: To determine significance of TNF- α outcomes between drug therapy groups a larger sample size is needed. Trends were determined but did not reach statistical significance.

P200 The Tryptophan-Kynurenine Pathway in Bipolar Depression: Effects of Inflammation Modulation

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Background: In connection with the emerging link between treatment resistance and neuroprogression in bipolar disorder, it is increasingly apparent that clinical remission is achieved in part through pharmacologically induced arrest of neuroprogression. Literature increasingly suggests that bipolar and unipolar depression are chronic inflammatory states that drive underlying abnormalities in the tryptophan-kynurenine pathway (TRYCATs). Specific pro-inflammatory cytokines are potent upregulators of indoleamine-2,3-dioxygenase (IDO) activity. IDO is a rate-limiting enzyme that shunts tryptophan from 5-HT synthesis towards neurotoxic and excitotoxic TRYCATs. Since the cyclooxygenase type 2 (COX-2) selective inhibitor, Celecoxib (CXB), can reduce the pro-inflammatory drivers of IDO, we hypothesized that TRYCAT levels over the treatment course may serve as candidate biomarkers for the 4.13-fold ($p=0.04$) and 14.34-fold ($p<0.001$) increase in response and remission rates, respectively, we have observed.

Methods: This was a randomized, double-blind, two-arm, placebo-controlled study consisting of a screening visit, a 2-week washout, and a 1-week placebo run-in phase. Subjects who met study criteria and were not placebo-responders were randomized to receive escitalopram (ESC) + CBX, or ESC + placebo. The entire cohort of 70 patients (35 in each arm) received 8 weeks of treatment to qualify as study completers. A database of normative (untreated) data was already collected in a previous study. Serum inflammation biomarkers, TRYCATs, and CBX and ESC were determined at baseline, weeks 4 and 8. A Wilcoxon Signed Rank Sum test assessed for intra-arm and inter-arm differences in TRYCAT metrics between baseline and week 8 of treatment, and with respect to response or remission status after treatment.

Results: Kynurenine, Tryptophan, and kyn/tryp ratio level change scores did not vary by treatment arm. Kynurenine and kyn/tryp also showed no significant difference in change scores or inter-group levels with respect to treatment response or remission status, within the ESC + CBX arm. Tryptophan was significantly reduced within the ESC + CBX arm with respect to both treatment response ($p=0.05$) and treatment remission ($p=0.03$), confirmed by a significant reduction in tryptophan change scores according to treatment response ($p=0.02$) and remission ($p=0.02$).

Conclusion: The robust clinical response to CXB (in preparation) supports the concept that inflammation modulation strategies can help overcome refractoriness to antidepressant treatment in bipolar depression. Here we sought to determine whether the benefit of CXB augmentation is predicted and/or mediated by mechanisms involving the kynurenine pathway. Interestingly, we found that IDO activity and TRYCAT levels were stable over treatment course, while tryptophan levels decreased. These results suggest that the benefit of CXB augmentation, while uncaptured at the level of IDO activity, may be mediated through activity downstream of IDO or even through a separate immune-related tryptophan utilizing pathway altogether.

P201 Neosensitization to Multiple Drugs following Drug Reaction with Eosinophilia and Systemic Symptoms Syndrome(DRESS)

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Background: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome is associated with severe skin eruptions, fever, hematological abnormalities, and multi-organ involvement. Although aromatic anticonvulsant drugs have been frequently associated with the manifestation of DRESS syndrome, its induction following treatment with nonaromatic anticonvulsants, such as valproate, has rarely been reported. Moreover, there are limited data regarding the development of neosensitization related to chemically unrelated drugs following an episode of DRESS syndrome.

Methods: Here, a case of neosensitization to multiple drugs is described. The present case report describes a female patient who experienced neosensitization to amoxicillin, olanzapine, and quetiapine following the manifestation of DRESS syndrome induced by valproate.

Results: A 50-year-old woman with a 15-year history of schizophrenia was being treated with lithium (1200 mg) and quetiapine (600 mg) about 1 month, but due to high lithium serum concentrations, the lithium was changed to valproate (600 mg). Seven days later, the patient developed a whole-body skin rash, facial edema, and hyperthermia. Laboratory tests revealed an abnormal white cell count ($25.2 \times 10^3 / \mu\text{L}$ with 6% eosinophils) and aspartate transaminase (AST) and alanine transaminase (ALT) concentrations of 2729 IU/L and 2749 IU/L, respectively. At that time, the patient had no any other medical history including drug allergy. A diagnosis of DRESS syndrome due to valproate treatment was established by a consulting dermatologist. As a result, all medicines were discontinued because of severe hepatitis, and intravenous methylprednisolone (60 mg per day) was administered for 1 week. The skin rash, fever, and liver dysfunction progressively disappeared. After discharge, the patient was treated with quetiapine (200 mg). However, she became lost to follow up after 6 months. Approximately 3 years later, the patient was admitted to a local hospital for psychotic symptoms aggravation because she was not taken antipsychotics for 3 years. She treated with lithium (900 mg), sulpiride (600 mg), risperidone (2 mg), and quetiapine (100 mg) for 2 weeks. Additionally, the patient initiated treatment with amoxicillin for acute tonsillitis. On the first day of amoxicillin intake, she developed fever, diffuse erythematous macules on her trunk, and facial edema, and she was transferred to a general hospital via the emergency department. To control her psychotic symptoms she is prescribed olanzapine, haloperidol and quetiapine step by step but all these medications develop fever, skin rash and abnormal AST/ALT. Finally she was given amisulpiride which had not been previously prescribed. Within 2 months, the patient's psychotic symptoms had gradually decreased and ultimately remitted.

Discussion: To our knowledge, this is the first case report of neosensitization to multiple drugs after valproate-induced DRESS syndrome. A thorough search of Pubmed was performed to identify similar cases, which confirmed that no cases of hypersensitivity to amoxicillin or neosensitization to multiple drugs after a valproate-related DRESS episode have been reported. Furthermore, only two studies have reported possible neosensitization to amoxicillin following DRESS episodes induced by carbamazepine, and only one case reported neosensitization to amoxicillin following a DRESS episode induced by allopurinol.

Keyword: DRESS, Neosensitization, Valproate, Amoxicillin, Olanzapine, Quetiapine

P202 Modulation of the Inflammatory Response Exerts Beneficial Effects on Anger in Treatment-Resistant Bipolar Depression

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Background: Anger can worsen a person's emotional state and increase the severity of an individual's mood state, notably depression. The State-Trait Anger Expression Inventory (STAXI) assessment tool has proved useful for assessing the experience, expression, and control of anger in normal individuals, and in evaluating anger experienced by patients with a variety of psychological and medical disorders. Since its creation, STAXI has been utilized in various studies involving substance abuse and major depressive disorder; however, anger has never been studied in the context of bipolar depression.

Scientific evidence supports the hypothesis that immune system activation, reflected in its inflammatory response, contributes to the pathophysiology and phenomenology of bipolar disorder (BD). However, there is limited research showing a correlation between the treatment of BD utilizing anti-inflammatory approaches and its concurrent effects on anger, which prompted this investigation. This study introduced the idea of using a specific anti-inflammatory agent, celecoxib (CBX), along with escitalopram (ESC), a selective serotonin reuptake inhibitor (SSRI) to treat patients suffering from bipolar depression that were shown to be treatment resistant. CBX is a fairly specific inhibitor of a critical enzyme, cyclooxygenase-2 (COX-2) that plays a critical role in the inflammatory pathway involving prostaglandin E2. We hypothesized that combination treatment would lead to a qualitatively and quantitatively augmented response in alleviating bipolar depression and that it would not only result in a greater number of responders and remitters compared to ESC monotherapy, but it would also show a reduction of anger symptoms as assessed by STAXI from beginning to end of treatment.

Methods: In this randomized, double-blind, two-arm, placebo-controlled study, 65 consenting patients with BDD were randomized to receive either ESC (10 mg twice/day) + CBX (200 mg twice/day), or ESC + placebo (twice/day). The Hamilton Depression Rating Scale (HAM-D17) was used to assess response to treatment, with a 50% reduction from baseline indicating treatment response and a HAM-D score < 7 indicating remission. State and trait anger were assessed using the 57-item scale, STAXI, at baseline and week 8 of treatment.

Results: There was no statistically significant difference in state anger and trait anger from baseline to week 8 for patients who did not have a response to either treatment arm. Of the 47 subjects who were judged to be study completers, a total of 43 subjects in both arms showed some response to treatment. Trait anger remained unchanged regardless of the addition of CBX. However, there was a marginal difference in state anger for the group that responded to treatment with the combination of ESC with CBX.

Conclusion: Anger paralleled the subjects' depressive symptoms from the start to the end of treatment. The addition of CBX helped reduce state anger by the end of treatment. There was no difference in trait anger for both treatment responders and non-responders. Interestingly, a positive strong correlation by the end of treatment suggested that when the subjects' depression lessened in.



P203 Should we consider sleep disturbances as predictors of suicidal behavior?

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Introduction: Suicidal behavior is one of the leading cause of death and is associated with a significant disability and psychosocial impairment worldwide. Suicide is a complex issue involving a number of psychological, social, cultural, and biological factors [1, 2]. Several risk factors including sleep disturbances have been associated with suicidal behavior. There are studies showing that patients with insomnia are at an increased risk of experiencing suicidal ideation and/or making a suicide attempt [3, 4]. Overall, the presence of sleep disturbances has been significantly associated with suicidality but the exact nature of this association needs to be further elucidated.

Aims: Given this background, first the present study aimed to examine the correlation between sleep disturbances and suicidal behavior. Moreover, sleep disturbances have been analyzed as possible predictors of suicide behavior.

Methods: We recruited 299 inpatients with a mean age of 48 (± 17.01) years. Participants have been assessed using the Pittsburgh Sleep Quality Index (PSQI), Beck Hopelessness Scale (BHS), Scale for Suicide Ideation (SSI), and Intent Score Scale (ISS). All the analyses were performed using the Statistical Package for Social Sciences (SPSS) for Windows 20.0.

Results: Suicide thoughts/wishes derived by the BDI-II resulted significantly associated with the subjective sleep quality ($r=.221; p=.01$), sleep latency ($r=.311; p=.01$), habitual sleep efficiency ($r=.283; p=.01$), sleep disturbances ($r=.220; p=.01$), daytime dysfunction ($r=.354; p=.01$), and global PSQI total score ($r=.315; p=.01$). The subjective sleep quality was also related to suicide intent ($r=.302; p=.01$) and suicide thoughts ($r=.201; p=.01$). Suicide thoughts were associated with sleep latency ($r=.230; p=.01$), daytime dysfunction ($r=.198; p=.01$) and global PSQI total score ($r=.203; p=.01$) as well. Daytime dysfunction was a significant predictor of suicide thoughts/wishes ($p=.004$) and subjective sleep quality ($p=.008$) while daytime dysfunction ($p=.015$) and global PSQI total score ($p=.020$) predicted active suicide intent, respectively. Finally, active suicide ideation was also predicted by sleep latency ($p=.047$).

Conclusions: The present study is limited by the small sample size and cross-sectional study design that did not allow the generalization of the main findings. However, according to our results, a significant relation emerged between sleep disturbances and suicidal behavior. The



present findings confirmed the results of a meta-analytic study demonstrating that sleep disturbances are strongly associated with suicidal ideation, suicide attempts, and completed suicide [5]. Sleep quality and its related disturbances should be carefully and systematically investigated in clinical practice in order to reduce suicide risk. Importantly, assessing the mental health of patients with sleep disturbances should be not only part of the routine clinical evaluation but also a fundamental aspect of the systematic suicide risk assessment. Clinicians should also evaluate not only the existence of insomnia but also the subjective sleep quality and the complex psychosocial dysfunctions associated with this disabling condition in psychiatric samples.

Keywords: Suicide thoughts/wishes; suicide intent; suicide ideation; subjective sleep quality; daytime dysfunction

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Acknowledgement: Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.



P204 The association between traumatic childhood experiences, sensory processing patterns, and quality of life among unipolar and bipolar outpatients

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Introduction: Suicidal behavior is one of the leading cause of death and is associated with a significant disability and psychosocial impairment worldwide. Suicide is a complex issue involving a number of psychological, social, cultural, and biological factors [1, 2]. Several risk factors including sleep disturbances have been associated with suicidal behavior. There are studies showing that patients with insomnia are at an increased risk of experiencing suicidal ideation and/or making a suicide attempt [3, 4]. Overall, the presence of sleep disturbances has been significantly associated with suicidality but the exact nature of this association needs to be further elucidated.

Aims: Given this background, first the present study aimed to examine the correlation between sleep disturbances and suicidal behavior. Moreover, sleep disturbances have been analyzed as possible predictors of suicide behavior.

Methods: We recruited 299 inpatients with a mean age of 48 (±17.01) years. Participants have been assessed using the Pittsburgh Sleep Quality Index (PSQI), Beck Hopelessness Scale (BHS), Scale for Suicide Ideation (SSI), and Intent Score Scale (ISS). All the analyses were performed using the Statistical Package for Social Sciences (SPSS) for Windows 20.0.

Results: Suicide thoughts/wishes derived by the BDI-II resulted significantly associated with the subjective sleep quality ($r=.221; p=.01$), sleep latency ($r=.311; p=.01$), habitual sleep efficiency ($r=.283; p=.01$), sleep disturbances ($r=.220; p=.01$), daytime dysfunction ($r=.354; p=.01$), and global PSQI total score ($r=.315; p=.01$). The subjective sleep quality was also related to suicide intent ($r=.302; p=.01$) and suicide thoughts ($r=.201; p=.01$). Suicide thoughts were associated with sleep latency ($r=.230; p=.01$), daytime dysfunction ($r=.198; p=.01$) and global PSQI total score ($r=.203; p=.01$) as well. Daytime dysfunction was a significant predictor of suicide thoughts/wishes ($p=.004$) and subjective sleep quality ($p=.008$) while daytime dysfunction ($p=.015$) and global PSQI total score ($p=.020$) predicted active suicide intent, respectively. Finally, active suicide ideation was also predicted by sleep latency ($p=.047$).

Conclusions: The present study is limited by the small sample size and cross-sectional study

design that did not allow the generalization of the main findings. However, according to our results, a significant relation emerged between sleep disturbances and suicidal behavior. The present findings confirmed the results of a meta-analytic study demonstrating that sleep disturbances are strongly associated with suicidal ideation, suicide attempts, and completed suicide [5]. Sleep quality and its related disturbances should be carefully and systematically investigated in clinical practice in order to reduce suicide risk. Importantly, assessing the mental health of patients with sleep disturbances should be not only part of the routine clinical evaluation but also a fundamental aspect of the systematic suicide risk assessment. Clinicians should also evaluate not only the existence of insomnia but also the subjective sleep quality and the complex psychosocial dysfunctions associated with this disabling condition in psychiatric samples.

Keywords: Suicide thoughts/wishes; suicide intent; suicide ideation; subjective sleep quality; daytime dysfunction

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Acknowledgement:

Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

P205 Survey of Depression in the Elderly Patients with Chronic Obstructive Pulmonary Disease

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Objectives: Depression is commonly comorbid in the elderly patients with physical illness. This study examined the prevalence of depression in the elderly with chronic obstructive pulmonary disease (COPD).

Methods: The eighty-seven patients with COPD were enrolled. The subjects are over 60 years old. The medical and psychiatric history, Hamilton Rating Scale for Depression (HDRS), Patient Health Questionnaire-9 (PHQ-9), Patient Health Questionnaire-2 (PHQ-2), Geriatric Depression Scale-Short form Korean (GDS-SF-K), Mini-Mental Status Exam Korean version (MMSE-KC) were investigated. Global Initiative for Chronic Obstructive Lung Disease (GOLD), which predicts the severity of COPD, also investigated.

Results: The prevalence of depression was estimated to be 24.7% (male 19.3% ; female 35.7%) in HDRS, 31.0% (male 24.6% ; female 43.3%) in PHQ-9, 8.0% (male 10.5% ; female 3.3%) in PHQ-2, 23.0% (male 17.5% ; female 33.3%) in GDS-SF-K. The severity of COPD (GOLD) was associated with the prevalence of depression (HDRS, $p=0.027$; PHQ-9, $p=0.045$; PHQ-2, $p=0.112$; GDS-SFK, $p=0.089$).

Conclusion: The prevalence of elderly depression with COPD ranged from about 20% to 30%, the prevalence of depression is nearly two times more common in women. The severity of COPD (GOLD) was associated with the prevalence of depression. The self-reporting scale, such as GDS-SF-K, PHQ-9 and PHQ-2 is the effective screening test of depression.

P206 The prevalence of adult ADHD risk group and it's related factors in college students in Jeju, Korea

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Aim: To identify prevalence rate and its related factors in adult ADHD risk group of college students in Jeju.

Background: Even though risk of adult attention deficit hyperactivity disorder (ADHD) has not been studied extensively, the prevalence rate has been reported to be 1% in Korean adult ADHD risk group. Due to lack of clinical manifestation of symptoms representing ADHD risks in college students and misdiagnosis as other psychiatric disorders, it is important to make an appropriate diagnosis as adult ADHD in the critical period of their lives.

Methods: The study was done from March 2015 to September 2015 with 1050 undergraduate students of Jeju National University. Proportional stratified sampling of the participants was performed according to individual schools, majors, and gender. To see the risk of adult ADHD they were evaluated by Korean-Wender Utah Rating Scale (K-WURS) and Conners Adult Attention Problem Rating Scale - Korean version (CAARS-K). The operational definition of adult ADHD risk group include those participants scored in the upper 13% of both K-WURS and CAARS-K. This study was approved by the Jeju National University Hospital Review Board.

Results: Prevalence of adult ADHD risk group in college student in Jeju was 6.84% (95% C.I. 5.18~8.49). ADHD risk was more prevalent in older age(OR 0.842 95% CI 0.726-0.975), in students whose academic achievements(2.574 95% CI 1.222-5.420) was better than average or worse than average, and in students who have alcohol abuse(OR 2.818 95% CI 1.433-5.541), comorbid mental disorders(OR 1.944 95% CI 1.057-3.574), and lower family support(OR 3.237 95% CI 1.264-8.290).

Conclusions: Prevalence of adult ADHD risk group in college student in Jeju was 6.84% (95% C.I. 5.18~8.49).It was higher than the 1% from the report previously published in Korea and the 4~5% from other international reports on adult ADHD. Early intervention is required in older ages, comorbidity of other psychiatric disorders, or substance abuse because their prevalence rate was relatively higher. In addition, future studies need to focus on influence of family support as protective factor and association with desire for academic achievement.

P207 Dose Trends of Aripiprazole from 2004 to 2014 in Psychiatric Inpatients in Korea

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Background: The purpose of the present study was to evaluate the initial and maximum doses of aripiprazole over a decade to estimate appropriate dosage in clinical practice. We hypothesized that there was a measurable change in dosing patterns during 2004-2014 in Korean psychiatric inpatients.

Materials and methods: In this retrospective study, we reviewed the medical records of patients who were hospitalized in the psychiatric ward of five university hospitals in Korea from March 2004 to December 2014. The patients were at least 18 years of age, prescribed aripiprazole during the index hospitalization and were given at least one prescription for oral aripiprazole. We compared baseline demographic variables among Waves 1 (2004-2006), 2 (2007-2010) and 3 (2011-2014) using univariate one-way analysis of variance (ANOVA) with Bonferroni correction for continuous variables and a chi-square test for categorical variables.

Results: There was a significant difference in mean age among waves ($p = 0.012$). The use of concomitant medications with aripiprazole was significantly different among waves, as well. The use of other atypical antipsychotics in Wave 1 was 27.0% ($n = 20$) and 27.4% ($n = 55$) in Wave 2 and increased to 36.5% ($n = 129$) in Wave 3, but the difference between Waves 1 and 3 ($p = 0.118$) and 2 and 3 ($p = 0.027$) did not reach statistical significance after Bonferroni's correction. In total, the initial dose of aripiprazole was significantly lower in Wave 3 (7.0 ± 3.9 mg/day) when compared to Waves 1 (10.9 ± 4.6 mg/day, $p < 0.001$) and 2 (10.7 ± 5.6 mg/day, $p < 0.001$). The initial doses of aripiprazole in all diagnostic groups were significantly lower in Wave 3 than in Wave 2.

Conclusions: The results from the present study show that the initial doses of aripiprazole, and not the maximum doses, decreased in hospitalized psychiatric patients with the accumulation of clinical experience in aripiprazole use.

P208 The Factor Structure of the Hamilton Depression Rating Scale in Major Depression Patients with Anxious Distress Specifier in DSM-5

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Background: Several studies have validated the factor structure of the Hamilton Depression Rating Scale (HDRS) in patients with major depression, and reported adequate reliability. This study aimed to apply factors of the HDRS in major depression patients with anxious distress specifier in DSM-5, and then evaluate the predictive value of factors for anxious distress group.

Materials and methods: Retrospective chart review of patients admitted to a university hospital with a primary diagnosis of MDD in a period from March 2012 to June 2015 was conducted. We reviewed anxious distress symptoms, detailed clinical information, and assessment tools, the major measures being the HDRS. We examined 5 factor structures (anhedonia/retardation, guilt/agitation, bodily symptoms, insomnia and appetite) of the HDRS being applied a confirmatory factor analysis (CFA) in anxious distress group and non-anxious distress group. The association of factors with anxious distress specifier was assessed by using receiver operating characteristic curve (ROC) analysis and by calculating the area under the ROC (AUC).

Results: There were differences in HDRS (27.8 ± 5.2 vs. 23.4 ± 5.2 , $p < 0.001$), BDI (31.0 ± 7.7 vs. 26.7 ± 7.8 , $p < 0.001$), GAF (31.4 ± 5.1 vs. 35.4 ± 7.6 , $p < 0.001$), and CGI-S (5.9 ± 0.4 vs. 5.6 ± 0.6 , $p < 0.001$) between anxious distress and non-anxious distress at index episode. The 'guilty/agitation' factors were significantly higher in anxious distress than other factors, and exhibited 'good' predictive efficiency at baseline (AUC = 0.804, 95% CI: 0.735-0.861). In predictive efficiencies of factors following treatment, 'guilty/agitation' factor (AUC=0.743, 95% CI: 0.668-0.809) were better than 'anhedonia/retardation' factor (AUC=0.730, 95% CI: 0.655-0.797) at week 1, and 'guilty/agitation' factor (AUC=0.790, 95% CI: 0.709-0.857) remained better than 'anhedonia/retardation' factor' (AUC=0.789, 95% CI: 0.708-0.856) at week 2.

Conclusions: This study provide that anxious distress specifier in DSM-5 might be worthwhile to be further evaluated as a diagnostic entity. These findings proposed that 'guilty/agitation' factor may be a promising marker for distinguishing anxious distress group from other subtypes of major depression, especially for anxious distress group at baseline.

P209 Angioedema in larynx as immune reaction induced by Long-Acting Injectable Paliperidone Palmitate - A case-report

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Objective: Angioedema is a rare but serious immune reaction which is reported to be associated with various drugs mainly with angiotensin-converting enzyme inhibitors, but also with antipsychotics. It is a potentially life-threatening adverse effect which affects deep dermal and subcutaneous tissues, characterized by transient oedema resulting from increased vascular permeability and mediated by inflammatory modulators.

Case: We present the case of a 30-year-old patient with paranoid schizophrenia. This patient reported occasional bouts of breathing difficulty during co administration of risperidone and lamotrigine. He improved after the discontinuation of medications and then he took oral paliperidone for 2 months, followed by long-acting paliperidone palmitate (intramuscularly 150 mg once a month) since patient had poor adherence to medication. No other medications were administered and after 2 months he suddenly collapsed after a dramatic sensation of suffocation. He developed angioedema of the larynx and sudden acute upper airway obstruction. He was intubated due to coma and respiratory arrest. No medical history of angioedema due to allergies or other underlying conditions, or family history of allergic reactions were reported. Naranjo scale was performed and the score (5) indicated a probable adverse drug reaction. On the third day at the ICU, the patient redeveloped upper airway obstruction after haloperidol intravenously (IV) administration.

Discussion: Psychiatrists should be fully aware of the diverse adverse effects, especially those that could be turned to a potentially lifethreatening medical condition. Immune reactions could be triggered in certain patients treated with long-acting, second generation antipsychotics. When a serious adverse effect like angioedema appears, the coadministration with other antipsychotics is advised to be avoided.



P210 Psychosocial factors influencing Breast Cancer prevention and early detection

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Objective: Breast Cancer is the most common cancer in women worldwide. It is estimated that one in eight women will be diagnosed with this type of cancer at some point in their life. Being a multifactorial disease, prevention and early detection are key factors in breast care. The aim of this study is to explore the psychosocial factors which could influence the prevention of breast cancer in women in relation to their lifestyle habits.

Method: The sample comprised 286 women from the general population, aged from 20 to 75 years old. The assessment included questions regarding their lifestyle, diet, physical exercise, smoking habits, alcohol intake, and family history of breast cancer. Furthermore, psychological factors (i.e. specific phobias, somatization) as well as social factors (i.e. social stigma of the illness and its impact on family, sexuality and on women’s employment) were examined. The psychometric tool was an ad hoc questionnaire of 47 topics.

Results: We found statistically significant associations between lifestyle, environmental and psychosocial factors within our sample. Especially, it emerged that women perform different prevention behaviors in relation to their age. Moreover, a statistically significant and positive correlation between mental health and perceived control over life and health was revealed. Our findings also indicate that the majority of women are particularly positive about participating in new educational programs for the prevention and early detection of Breast Cancer.

Conclusions: Our findings highlight the necessity of designing and implementing educational programs, especially in the female adolescent population. Moreover, in the context of prevention strategies they could, in long term, have beneficial effects in relation to the adoption of a healthier lifestyle.

P211 Functional neurological symptoms - Differentiating between structural and functional myoclonus: a case report

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Background: Functional neurological symptoms are common not only in patients of psychiatrists but also in neurologist 'patients. Their diagnosis and management are challenges for clinicians that should be aware of the clinical signs of these disorders.

Clinical Case: We present the case of a 36yo woman who had episodes of axial and leg jerking, mainly before the sleep onset which started 6 months ago and were reported to increase in frequency and intensity during the last 2 days. During physical examination the arrhythmic flexor leg jerks increases in frequency. Other symptoms include persistent headaches for the last months and several episodes of vomiting during her hospitalization in the neurology clinic. Additionally, she had been diagnosed with panic disorder several years ago and for that reason she was taking sertraline for two years. The results of physical and laboratory examinations (renal, hepatic, and thyroid function tests; electrolytes; autoantibodies; brain computed tomography (CT), LP sample, electroencephalography (EEG) were normal.

Discussion: These findings are consistent with the diagnosis of functional myoclonus or idiopathic propriospinal myoclonus. Myoclonus can be organic or functional, distinguished by the absence of findings from the imaging, laboratory and electrophysiological tests. Premovement potential (Bereitschaftspotential) on the EEG could help in the identification of this disorder. Functional neurologic symptom disorder in DSM-V does not require a specific psychological stressor, as was required for the diagnosis of conversion disorder in DSM-IV. Nonetheless the literature emphasizes on the role of traumatic events in the pathogenesis of these disorders through changes in the response of the HPA axis and in functional connectivity. Changes in these networks seem to be associated with alterations in cognitive control of affective stimuli, sense of agency and of movement's preparation.

P212 Arterial Stiffness as an Index of Inflammation in Patients with Bipolar Depression

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Introduction: Arterial stiffness has been correlated with increased risk of stroke, heart disease, and death over a 10 to 12-year period. Aging, hypertension, and dyslipidemia contribute to the stiffening of the arterial wall. Additionally, inflammation is associated with endothelial dysfunction and arterial stiffness beyond the expected stiffening due to natural aging processes and other cardiovascular risk factors. Psychiatric illnesses, including bipolar disorder (BPD), have been associated with a pro-inflammatory state and thus assessment of arterial stiffness may be an important factor in overall diagnosis and treatment. Non-invasive techniques, such as applanation tonometry (AT), are useful in evaluating arterial stiffness by reflecting intra-arterial pressure. Pulse wave velocity and Augmentation Index (AIx) serve as indicators of elasticity or rigidity of the arterial wall. We measured AIx in patients with BPD and healthy controls, to establish a potential link between inflammation and cardiovascular risk. Due to the established link between depressive illness, inflammation, cardiovascular risk and overall anti-depressant drug response, we designed a study with the COX-2 inhibitor Celecoxib (CBX) to modulate immune response.

Methods: Forty-seven treatment resistant BPD patients were enrolled in a double blind study design and received Escitalopram (ESC) + CBX or ESC + Placebo over an eight-week treatment period. AIx was measured at baseline and end of treatment. Twenty-seven patients with complete data sets were included in the present analyses. Thirty-nine healthy subjects served as controls. Comparisons of AIx were conducted between BPD and healthy subjects at baseline, between treatment groups, and between baseline and end of treatment in all BPD subjects.

Results: We examined age, BMI, MAP, total cholesterol, LDL, HDL, triglycerides, tobacco use, and menopausal status as possible confounding variables in all study subjects. Both female and male BPD patients had a higher AIx than their healthy control counterparts, but when controlling for the confounding variables, no statistically significant difference emerged. Amongst the confounding variables assessed, age consistently emerged as a significant variable in both sexes, but more so in males. When age effect was further analyzed by subgrouping into <39 and ≥39 years of age, the effect of depression as a key contributory factor in AIx was unmasked in the younger age group. Amongst lipids, triglycerides were a significant confounding factor ($p=0.017$) in males. AIx in the ESC+ Placebo group trended toward decrease at the end of treatment ($p<0.076$). No correlation was determined between severity of depression and anxiety, as assessed by HAM-D 17, HAM-D 21, HAM-A or MADRS and AIx at baseline.

Conclusions: We propose that AIx, as a marker of arterial stiffness, cannot be independently attributed to inflammation in bipolar depression. Our study has confirmed age as a significant variable in arterial stiffness measured by AIx. In subjects under 39, the contributory effect of age on arterial stiffness is minimized, thereby allowing the effect of depression to be unmasked. Assessment of augmentation index among young BPD patients may be an important area of focus, highlighting the potential utility of AT in overall treatment and intervention.

P213 Inflammatory processes from a neuropsychiatric point of view

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Introduction: Many researches have hypothesised the significant role of inflammatory pathways in the pathomechanism of neuropsychiatric disorders. Our aim was to further investigate the effect of cytokines on depression and anxiety.

Methods: In a Hungarian population cohort the impact of proximal and distal life stress on the effect of two single nucleotide polymorphisms (SNPs) in the *IL-1B* gene (rs16944 in the promoter, rs1143643 in the intron region) was investigated in relation to depressive and anxiety symptoms [1]. In addition, the influence of the SNP rs1800795, situated in the promoter region of the *IL-6* gene, was analysed on depressive symptoms, as well as the SNP's interaction with proximal life stress and painful events was studied [2]. Our other objective was to examine whether social support reduces the psychological side effects of low dose interferon-alpha treatment in melanoma patients [3].

Results: Minor allele carriers of rs16944 showed higher depressive and anxiety scores when high stress exposure was present. Also a weak protective function of the allele was found when coupled with low stress exposure. Rs1143643 interacted significantly with recent life stress only on depressive symptoms [1]. The rs1800795 polymorphism affected depressive symptom scores in connection with both recent life stress and painful physical conditions, but it played a notable role in developing somatic symptoms than emotional-cognitive symptoms [2]. Melanoma patients with higher social support scored lower on the depression scale compared to patients with less social support [3].

Conclusion: As negative environmental factors, both psychological and physical stress induce depressogenic effects through modulating neuroinflammatory signaling mechanisms on a genetic level [4]. Contrarily, positive environmental effects such as the presence of social support can reduce symptoms of depression [4].

Acknowledgement: The study was supported by the Sixth Framework Program of the European



Union, NewMood, LSHM-CT-2004-503474; by the Hungarian Brain Research Program (Grant KTIA_13_NAP-A-II/14) and National Development Agency (Grant KTIA_NAP_13-1-2013-0001); by the Hungarian Academy of Sciences (MTA-SE Neuropsychopharmacology and Neurochemistry Research Group); by the Hungarian Academy of Sciences and the Hungarian Brain Research Program - Grant No. KTIA_NAP_13-2-2015-0001 (MTA-SE-NAP B Genetic Brain Imaging Migraine Research Group); and by the Hungarian Brain Research Program (Grant No. 2017-1.2.1- NKP-2017- 00002). Xenia Gonda is recipient of the Janos Bolyai Research Fellowship of the Hungarian Academy of Sciences.

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P214 SUBJECTIVE VIEW ON ALCOHOL INTOXICATION IN GENDER ASPECT

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Manifestation of alcohol intoxication and aspects of perception of physiological and psychological changes is a complex process, which depend of inside and outside factors. Some differences of objective and subjective view is a start for possible inadequate actions, and it can be as in quiet situation, as in dangerous situation.

The purpose of the research was identification of gender features of subjective feeling of physiological and psychological changes at alcoholic intoxication.

For achievement of this purpose we have developed an algorithm of an objectification of assessment of personal changes in alcoholic intoxication.

Algorithm can help to estimate changes of physiological and psychological functions with use of ball assessment of the main signs which analyzing at survey on alcohol intoxication.

We can make it by filling of Questionnaires of value assessment of alcohol intoxication with purpose of points, which estimate improvement or deterioration of functions. It can show individual social position and can help to prevention of deviant behavior.

So, each individual have "psychological prevention", which explained by characterologic features and ethics which can promote changes real results (to make less or exaggerate) some of symptoms and alcoholic functions of an organism. So, for weakening "psychological prevention" we suggest to fill "Scale of objectification of personal assessment of alcohol intoxication". This scale suggest after filing of "Algorithm of objectification of assessment of personal changes in alcohol intoxication". To examined person suggested without the completed questionnaire to answer repeatedly the questions concerning individual changes in state of intoxication, but estimate signs not in points, he can noting their changes on a scale, which has the central tag corresponding to normal value (assessment in a sober state), with marks to the right or to the left, which correspond less or exaggerate to values of sign. When the research is ended, we compare signs with a possibility of quantitative assessment of "increase" / "decrease" in expressiveness of sign.

Comparison of the data submitted in "Algorithm of objectification of assessment of personal changes in alcohol intoxication" and Scale of objectification of personal assessment of alcohol intoxication" on identical questions, but unexpected for the most surveyed and estimated by him in the different ways, gives the chance of objectification of assessment and also identification of attempt of purposeful or unconscious "aggravation" or "simulation" of answers.

We have examined 91 persons aged from 18 up to 29 years - all the students of the medical university of Arkhangelsk, from them female - 70,3% (average age of 19,5+2,1 years), male - 29,7% (average age of 19,7+1,8 years).

When filling surveyed by "Algorithm of objectification of assessment of personal changes in alcohol intoxication" distribution of psychoemotional signs has shown almost identical tendencies of the gender changes which are characterized, first of all, by increase in mood.

It is indicative that the maximum changes have been noted at respondents on increase in appeal of persons of an opposite sex, at the same time young men were more categorical ("improvement" of sign 76,0% of young men while girls only of 58,7% (p <0,05), and 6,5% have

noted his “deterioration” have noted.

More expressed gender difference is noted in the description of vegetative reactions. In general, they were more often noted by girls. So, almost twice more often they have stated emergence of face reddening of the person including in her maximum manifestation (girls have 4,35% against absence that at young men); also twice among girls increase in appetite prevailed in intoxications, and the tendency of subjective increase of thirst has been expressed.

Almost indetical of the young man and girl noted increase such vegetative signs as heartbeat and dizziness

A certain difference in answers of young men and women has appeared in assessment of some motive signs. Males didn't notice some changes of a mimicry and gesticulation, but at the same time girls noted their revival reaching the maximum values more often

Assessment of intellectual signs - concentration of attention, memory and working capacity - has shown almost identical tendencies of decrease in values of all parameters among all respondents.

Thus, assessment of behavior of the person at alcoholic intoxication - as parts of a wide behavioural complex which isn't always followed by predictable actions - can be differently. In this research we have considered him with the most often applied. The analysis of gender features of reaction on alcoholic has shown intoxication how relative similarity in psychoemotional estimates on surrounding and an easy tendency of deterioration in intellectual functions, and more expressed difference in manifestation of vegetative reactions and in changes of movement skills. At the same time, it is interesting that males, without arranging, answer questions almost equally more often, and among females the bigger dispersion of answers to the same questions is noted considerably.

P215 Cardiomyopathy and Bipolar Disorder in a patient newly diagnosed with Systemic lupus erythematosus (SLE) - A case report

I. Kampouras, A. Papadopoulou, I. Tollos, A. Karvouni, K. Gkikas, G. Tzinakou, I. Theodoridou, K. Koumantaki, A. Douzenis, E. Rizos

2nd Department of Psychiatry, "Attikon" General Hospital, National & Kapodistrian University of Athens, Medical School, Athens, Greece;

Introduction: Systemic lupus erythematosus (SLE) is an autoimmune, inflammatory, multi-systemic disorder. Neuropsychiatric systemic lupus erythematosus (NPSLE) refers to the various psychiatric and neurologic manifestations that occur as a result of inflammatory cytokines, autoantibodies, and immune complexes in CNS. These clinical features are common in women (25-70%) and may be primary manifestations of SLE.

Material and methods: We present a case of patient who was newly diagnosed suffering from SLE with concurrent mood disorder.

Results: A 48-year-old woman, without previous psychiatric history, was hospitalized in the cardiology clinic due to cardiomyopathy of an unknown cause. At the same time, the patient occurred psychomotor agitation and sleep disturbances and the Consultation-Liaison Psychiatry team was called for a psychiatric evaluation. After a positive test for antinuclear antibodies, the patient was diagnosed with SLE. During this evaluation, the patient was agitated and was talking very fast. Also, she was having racing thoughts and irritable mood as well as loss of social inhibitions. In addition, grandiose delusions and delusions with religious content were present. A sudden onset of the above clinical signs and progressive deterioration have been described. These symptoms were in accordance with a manic episode. Aripiprazole and lorazepam were administered and instructions were given for further monitoring.

Conclusions: Psychiatric symptoms of SLE are quite common and may occur at a primary stage of the disorder. According to current knowledge, strong association exists between the occurrence of neuropsychiatric symptoms and the presence of antineuronal antibodies or other antibodies. In addition, drug-induced psychosis or mood disorder may occur as side effect of corticosteroids administered. Therefore, medical specialties have to cooperate in order to early diagnosing SLE as well as to successfully treat the psychiatric disorder associated with SLE.



psychiatry
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The screenshot displays the homepage of psychiatry.gr. At the top, there is a navigation bar with the site logo and a search bar. Below this, a main banner features a cityscape at night with the text: "2nd Congress on Evidence-Based Mental Health: From research to clinical practice! July 26 - July 1, 2018 Kavala, Kavala, Greece". To the right of the banner is a vertical menu for the International Congress of Psychopharmacology (ICMP) from 2017 to 2020, and the 2018 Congress of the Hellenic Psychiatric Association (COPSA).

On the left side, there are several social media and newsletter links, including Facebook, Twitter, and a "Sign up for our newsletter" button. Below these are sections for "Recommended Links" and "Recommended Books".

At the bottom of the page, there is a search bar, a "Sign up" button, and a "Log out" button. The footer contains the website's name and contact information.

www.psychiatry.gr

Contributors



Agorastos, Agorastos

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Germany

Dr. Agorastos is Assoc. Professor for Psychiatry and Psychotherapy and former Head of the Department of Psychiatric Outpatients Services at the University Medical Center of Hamburg, Germany. He received his MD at the University of Vienna, his doctoral degree and clinical specialization at the University of Hamburg, his postdoc specialization at the VA Center of Excellence for Stress and Mental Health at the University of San Diego, La Jolla, CA, and his Master Diploma in affective Neuroscience at the Universities of Maastricht and Florence. Fields of clinical expertise include stress- and trauma-related disorders, anxiety disorders, OCD and treatment-resistant/post-partum depression, while his current research Focus centers in stress neurobiology with particular emphasis on psychoneuroendocrinological, neurophysiological and -immunological aspects of PTSD and depression, as well as in circadian rhythms and chronodisruption. Dr. Agorastos has received a large number of sholarships, grants, awards and honors, has published a large number of scientific articles in high-rank scientific journals and is active member of several international professional societies, as well as president of the German-Greek Association of Psychiatry and Psychotherapy. Dr. Agorastos has been recently elected Ass. Professor of Psychiatry at the Aristoteles University of Thessaloniki.



Angeletti, Gloria

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Gloria Angeletti, medical doctor and psychiatrist, is Aggregate Professor of Psychiatry at the School of Medicine and Psychology of Sapienza University, Rome, Italy, Department of Neurosciences, Mental Health, and Sensory Functions (NESMOS) Past Vice Director of the Psychiatry Residency Training Program. He is author or co-author of more than 50 international, peer-reviewed publication, 10 book chapters. His research activity mainly focuses on clinical aspects of mood disorders, with particular reference perinatal disorders with particular reference to psychogeriatry, clinical psychiatry and physical treatments, epistemology. She was actively interested in psychotherapy. He carried-out continuous clinical assistance activity since 1992, currently at the Sant'Andrea Hospital, as well as in private structures (at the Lucio Bini Centre, Rome) within the National Health System of the Lazio region.



Antoniou, Ioannis

Co-founder and Director of the Inter-Faculty Graduate Studies Program on “Complexity and Networks” of the Aristotle University of Thessaloniki, Greece

Diploma in Physics from the University of Athens, PhD in Mathematical Physics from the University of Brussels (ULB) on Statistical Physics of Complex Systems.

After graduating from the Physics department of the University of Athens, Ioannis Antoniou investigated different aspects of Complexity together with Ilya Prigogine at the Solvay Institutes, Brussels. Since 2001 he is teaching Information Theory and Chaos, Quantum Information Processing, Network Dynamics, Knowledge Representation, Mathematical Modeling and Statistics at the Mathematics Department and the Biology Department of the Aristotle University of Thessaloniki.

Ioannis Antoniou has directed 8 PhD Theses, 55 MSc Theses and 20 Graduation Theses. He has also served as a Member of the Examination Committee of 51 PhD theses, 101 Ms Theses. He has coordinated 14 RTD Projects (EC:9, IST Luxembourg:4, INTAS:1), 4 International Research Collaborations and participated in 6 RTD Projects (EC:2, NATO:2, INTAS:2). He has organized 25 Conferences and participated in more than 250 Conferences. He is the author of 150 papers in journals, 51 papers in conference proceedings, 18 research reports, co-editor of 11 books, 5 translations, 10 letters, 2 patents,

Ioannis Antoniou has served as Referee in 14 Journals, Member of the Editorial Board of 9 Journals, Reviewer of RTD Projects (EC, NSF, DOE, Guggenheim, NATO, UNESCO).

Research, Expertise, Experience:

Complex Systems, Networks and Web, Dynamical Systems, Chaos, Resonances, Stochastic Processes, Statistical Physics, Mathematical Physics, Computational Mathematics, Relativity, Functional Analysis and Operator Theory, Project Management.

Administrative Positions

Ioannis Antoniou has served as

- Deputy Director of the International Solvay Institutes of Physics and Chemistry in Brussels (1992-2003),
- Member of the Scientific Council of the International Joint Institute for Nuclear Research (JINR) in Dubna (2000-2015), Russia
- Head of the Mathematics Department of the AUTH (2007-2009),
- Vice-President of the Hellenic Mathematical Society (2013-2017),
- Co-founder and member of the Administrative Council of the Center for Aristotelic Studies of the Aristotle University (2012-present)
- Co-founder and Deputy Director of the Semantic Web Unit of the Aristotle University (2012-2014).

- Director of the Graduate Studies Program of the Mathematics Department of the Aristotle University (2004-2010)
- Co-founder and Director of the Inter-Faculty Graduate Studies Program on “Complexity and Networks” of the Aristotle University (2009-present)

Awards, Prizes

2011-09-21 Excellency Price for the development of an innovative System extending DBpedia from English to Greek and any other Language, Aristotle University of Thessaloniki.

2009-11-08. Excellency and Innovation Price for International Recognition for the year 2009, Aristotle University of Thessaloniki.

2008-09-24. Prigogine Price for the year 2008, Wessex Institute (UK) and University of Siena (Italy),

2003-01 JINR Applied Physics Research Price for the year 2002, for the development of “A Statistical Model of Network Traffic”.

1999-01-28. Kapitza Medal, Russian Academy.

1994-12-10. De Donder Prize for the period January 1991 - December 1993, Académie Royale des Sciences, Lettres et des Beaux-Arts de Belgique

Distinctions

Professor Honoris Causa, Department of Physics, St. Petersburg State University, Russia, 21-11-2000

Professor Honoris Causa, Lomonosov University of Moscow, Russia, 18-06-1998, Department of Mathematics and Mechanics



Aricioğlu, Feyza

Professor of Pharmacology
Marmara University, School
of Pharmacy, Department
of Pharmacology and
Psychopharmacology Research Unit,
Haydarpasa, Istanbul, Turkey

Dr. Aricioğlu was born in İstanbul in 1963. She graduated from Istanbul University, Faculty of Pharmacy and obtained her MSci (1989) and PhD (1993) degrees from Istanbul University Faculty of Medicine, Department of Clinical Pharmacology. She began to work at Marmara University since 1994 and became Assoc. Prof. in 1997 and Professor in 2004. She has worked in several universities as a faculty and visiting scientist such as; Cornell University Department of Neuroscience, University of Mississippi Medical College, Department of Psychiatry, Max-Planck Psychiatry Institute-Munich and University of London, Department of Pharmacology.

The research interest of Dr. Aricioğlu is neuro- and psychopharmacology. She is still working in Marmara University, Faculty of Pharmacy as a Professor in Department of Pharmacology and Director of Psychopharmacology Research Unit, ORPHEUS Ambassador for Turkey, The International College of Neuropsychopharmacology (CINP) Education Committee Member and International Education Ambassador for Turkish Association for Psychopharmacology.



Arisoy, Ozden

Associate Professor of Psychiatry,
Department of Psychiatry, Abant Izzet
Baysal University, Turkey

Dr. Ozden Arisoy was born in Afyon in 1973. She graduated from Hacettepe University Medical Faculty in 1997 and completed her psychiatry residency in Bakırköy Research and Education Hospital for Psychiatric and Neurological Disorders in 2004. She completed her obligatory service in Unye State Hospital on 2006. She began her academic career in 2006 in Abant Izzet Baysal University in Bolu and became Associate Professor in 2015. She has worked in several universities as a visiting scientist, such as Loyola University Chicago Strich School of Medicine, Department of Psychiatry and Behavioral Neurosciences and Ludwig- Maximillians University- Department of Psychiatry and Psychotherapy-Munich. The research interest of Dr. Arisoy is psychoneuroimmunology and neuropsychology. She is still working in Abant Izzet Baysal University, Department of Psychiatry as an Associate Professor of Psychiatry.



Athanasiadis, Loukas

Associate Professor in Psychiatry-
Psychosexuality, Aristotle University
of Thessaloniki, Medical School,
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Papageorgiou General Hospital,
Thessaloniki, Greece

Dr. Loukas Athanasiadis is Associate Professor in Psychiatry-Psychosexuality at the Aristotle University of Thessaloniki (AUTH) Medical School (1st Psychiatric Department, Papageorgiou General Hospital, Thessaloniki, Greece). His areas of special interest are Sexology-Sexual Medicine, Addiction and Psychotherapy. Dr. Athanasiadis completed his medical studies at the AUTH and specialized in Psychiatry. He won a State Scholarship and completed a Clinical Diploma in Behavioural & Cognitive Psychotherapy and an MSc Degree (Human Sexuality, St. George's Hospital Medical School, University of London, UK). He worked, in various clinical and academic positions for the University of London and the British NHS. He also worked for the Greek NHS, he completed his PhD research, and he has been working for the AUTH since 2005.

Dr Athanasiadis is FECSM (UEMS) and ECPS (EFS/ESSM) member and is involved in various clinical, research, and teaching activities. He is currently Chairman of the Sexuality-Interpersonal Relationships Section of the Greek Psychiatric Society.



Athanasiou, Maria
Psychiatrist, Greece

Dr. Athanasiou is a Psychiatrist. She studied medicine in Plovdiv Medical School. After her graduation she specialized in Psychiatry in the Psychiatry Department in Alexandroupolis University Hospital. She completed her specialization in 2017. She has also a masters degree in Social Psychiatry from Democritus University of Thrace. She is currently training in animal assisted therapy in Frances' National Animal Assisted Therapy institute in Lyon France. She had made a number of scientific announcements in national and international conferences.



Belzung, Catherine
Senior Professor at Institut
Universitaire de France, France

Born June 14, 1962 (Basel, Switzerland)
Citizenship: French

UMR 1253 Inserm Imaging and brain (iBrain), UFR Sciences et
Techniques, Parc de Grandmont, 37200 TOURS

Professional positions

2014-2019 Senior Professor at Institut Universitaire de
France

2002- Professor in Neurosciences, Université de Tours,
Tours

1989-2001 Assistant Professor in Neurosciences, Université
de Tours

Titles, Scholarships

2015 Professor "classe exceptionnelle 2" (ranking at na-
tional level, it is the highest level for full profes-
sors in France)

2014 Senior Profesor at Institut Universitaire de France

2011 Professor 'classe exceptionnelle 1' (ranking at the
national level, only 2 or 3 such positions per years
for the whole country in Neurosciences)

2004 Professor 1ère classe (ranking at national level)

2002 Professor 2ème classe

1997 Habilitation à diriger des recherches

1988-1989 Post-doc, CNR, Rome (Fellowship from European
Union/Italian Ministry of Foreign Affair)

1985-1988 PhD, University Louis Pasteur, Strasbourg (Vali-
dation of an unconditioned conflict test to study
anxiety behavior in mice), cum laudatio.

1985 Master degree, Neurosciences, University Louis
Pasteur, Strasbourg

1983 Bachelor Degree (Psychology and Archeology)



Boksay, Istvan J.E.
Clinical Professor of Psychiatry,
Geriatric Psychiatrist, NYU, USA

Istvan J.E. Boksay MD PhD is a Clinical Professor of Psychiatry at School Of Medicine, New York University (NYU), U.S.A. where he is a member of the Pharmaceutical and Therapeutic Committee, The Quality Assurance Committee and the Medication Safety Committee. He was a president of the New Jersey Psychiatric Association. Dr. Boksay is a Distinguished Life Fellow of the American Psychiatric Association. He served several years as a member of the Council on Aging. Dr. Boksay is a geriatric Psychiatrist, published extensively and lectured worldwide. He did major contributions to describe the course of Dementia and the effect of medical conditions on the course of Dementia. He was the first who reported stage specific medical conditions in demented patients and reported behavioral and cognitive aspects of patients with NPH before and after VP shunt. He

graduated Summa Cum Laude from the Semmelweis University of Medical Sciences in Budapest, Hungary and obtained a Doctor of Pharmacology and Toxicology from the University of Frankfurt in Germany.



Brakoulias, Vlasios

Senior Lecturer, Sydney Medical School - Nepean, The University of Sydney, Senior Staff Specialist, Nepean Hospital, Penrith NSW, Australia Editor, Australasian Psychiatry

Dr Vlasios Brakoulias is a conjoint senior lecturer in Psychiatry at the Sydney Medical School - Nepean of The University of Sydney and he is a senior staff specialist at the Nepean Hospital in Sydney, Australia. Dr Brakoulias directs the Nepean Obsessive-Compulsive and Related Disorders University Clinic and he is the chief investigator of a major longitudinal study assessing people with obsessive-compulsive disorder called the Nepean OCD Study.

Dr Brakoulias is involved in teaching and training of medical students with the Sydney Medical School and psychiatry trainees with the Royal Australian and New Zealand College of Psychiatrists where he is a member of the Committee for Examinations and Chair of the Sydney West and Greater Southern Network Governance Committee.

Dr Brakoulias is currently the Editor in Chief of the Psychiatric journal called Australasian Psychiatry.



Britton, Briana

Medical Student, Loyola University Medical Center, USA

Briana Britton is originally from Santa Cruz, California, and is currently a third-year medical student at Loyola University Chicago, Stritch School of Medicine. Her primary research interests include the dynamic between mood disorders and underlying physiology, particularly heart rate variability and inflammatory biomarkers. Her previous projects have evaluated the differences in sympathetic drive between major depression and bipolar depression, and she is currently proceeding with a project evaluating the inflammatory biomarkers of peripartum depression. Her work has been published in The World Journal of Biological Psychiatry and Frontiers in Public Health and has been featured in Neuroscience News, Science and Technology Report, Pysch Central, Bustle, and Science Daily.





Chourdaki, Evgenia

Head of Psychiatric Dept. of General
Hospital of Heraklio "Venizeleio",
Greece

Dr Evgenia Chourdaki was born in Canea, Crete, Greece. She graduated from the Medical School of University of Crete in 1991.

She had been trained as resident in Neurology in Gen. Hosp. of Heraklio "Venizeleio". As resident in Psychiatry, she worked in Univ. Hospital of Heraklio Crete, in Mental Illnesses Hospital of Canea, and in Kapodistrian University of Athens (Eginitio hospital)

She earned her PhD Thesis in 2007, from University of Crete. with the subject: "Psychophysiological experimental study of Fear -Inhibited Light reflex in man".

She has worked as consultant psychiatrist in Private Care, in University General Hospital of Heraklio and in General. Hosp. of Heraklio."Venizeleio"

She worked in Psykiatri Vest, Herning Danmark, at the Clinic for Elucidation and E4 Ambulant for new patients

Now she is Head of Psychiatric Dep. Of General Hospital of Heraklio. "Venizeleio"

She took post-graduated education in NDI Group Psychotherapy from prof. Michel Lobrot (Paris VIII), in Family Psychotherapy from Mental Illnesses Hospital of Canea, Education in Adolescent Psychiatry Psychiatric Dep. Of Kapodistrian University of Athens, in Cognitive Behavioral Psychotherapy from Psychiatric Dep. Of Kapodistrian University of Athens

Brief training in Psychoanalytic Psychotherapy, from Hellenic Psychoanalytic Company, Athens and from Lacanian psychoanalytical school.

She has been involved in psychiatric lessons and supervision in Students of Medical School , Faculty of Medicine, Univ. of Heraklio, students of nurse's school of T.E.I. of Heraklio and of General Practicians

She participated in several Multicenter Clinical Trials

She is Reviewer in PLoS ONE

Her Practical experience is on Adults Psychiatry (Inpatient and outpatient hospital care), Emergency Psychiatry, Day Hospital, Liaison -Consultant Psychiatry, Forensic Psychiatry, Elderly Psychiatry, Adult patients with ADHD and AUTISM Spectrum diagnose

She has participation in the Hellenic Alcohol Prevention Network and lately in Hellenic Network of Depot Clinic.

In the past she was President in Social cooperatives of patients with psychiatric disorders. She is member of scientific committees of hospital and other organizations in Heraklio.



Chrousos, George P.
Professor of Pediatrics and
Endocrinology, Chairman of the First
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Dr. George Chrousos is Professor of Pediatrics and Endocrinology and Chairman of the First Department of Pediatrics at the National and Kapodistrian University of Athens School of Medicine, Athens, Greece, and former Chief of the Pediatric and Reproductive Endocrinology Branch of the National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, Maryland. Dr. Chrousos pioneered studies that elucidated the effects of stress on the organism at the behavioral, neuroendocrine, cellular and molecular levels and made fundamental contributions to the understanding, diagnosis and treatment of pituitary, adrenal and stress-related pathologies, i.e., major depression, obesity/metabolic syndrome, and autoimmune/inflammatory, reproductive and sleep disorders. He made seminal observations in the glucocorticoid signaling system and deciphered some of its key clinical implications. Dr. Chrousos is universally regarded as one of the most prominent paediatricians and endocrinologists. His work has been cited over 132,000 times (H-index >179), making him one of the most cited physician-scientists in both Clinical Medicine and Biology and Biochemistry and the top cited clinical pediatrician or endocrinologist in the world. He has received numerous major awards, including the Fred Conrad Koch Award, the highest award of the US Endocrine Society. He is a member of the Academia Europaea and the US National Academy of Medicine.



Çolak, Burçin
Psychiatrist, Department of
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Dr. Çolak is specialized at adult psychiatry. He received his medical degree from Ankara University School of Medicine in 2009 and completed her Psychiatry trainee at Department of Psychiatry in Ankara University School of Medicine in 2015. He worked at an oncology research hospital for two years in both in and out patient psychiatry clinic. Since 2017 August, he has been working as a psychiatrist at the Department of Psychiatry in Ankara University School of Medicine. He has a bachelor degree in Philosophy and he is also a PhD student in Ankara University Department of Philosophy and Religious Studies. His thesis topic is about neuroimaging on neural correlates of religious belief. He is working in outpatient adolescent unit of Ankara University School of Medicine. He is mainly interested in adolescent and young adult mental health and social aspects of psychiatric disorders. He is also the moderator of philosophy and psychiatry workgroup of Turkish Association of Psychiatry. He has also interest in group psychotherapy and is the active secretary of Turkish Group Psychotherapy Association.



Dalla, Christina
Assistant Professor of
Psychopharmacology, President of
the Hellenic Society for Neuroscience
Dept. of Pharmacology, Medical
School, National & Kapodistrian
University of Athens, Greece

Pharmacology, Medical School, National and Kapodistrian University of Athens. She has almost 20-year research experience in psychopharmacology, specifically on sex differences in animal models of depression and cognition, as well as screening of CNS-acting compounds and neurochemical/neurobiological studies. Dr. Dalla received her first diploma from the Pharmacy School of the National and Kapodistrian University of Athens in 2000 and continued her studies in Neuropsychopharmacology, Behavioral Neuroendocrinology and Neurosciences in Athens, in Belgium and at Rutgers University of New Jersey, U.S.A. with two EU Marie Curie Fellowships. Dr. Dalla has 49 research papers, 9 invited chapters in international and Greek books, over 2300 citations and more than 100 abstracts and talks at international and national conferences. She has published research papers in high-impact scientific journals, such as PNAS and Neuropsychopharmacology and her work has been covered by the Greek and US media. She serves as a peer-reviewer in 18 scientific journals, as well as in Greek, USA and European grants (e.g. COST and IMI) and as an external evaluator for the Greek National Organization for Medicines (EOF). Dr. Christina Dalla has participated and led several research grants (Greek GSRT grants such as Co-operation 2009 and 2011, IBRO, IKYDAD 2015) with European and Greek collaborators from the academia and the industry. She has received numerous awards and distinctions, such as the “L’Oreal-Unesco” for Greek Women in Science and the ECNP fellowship award in 2015. The same year, she joined the European College of Neuropsychopharmacology (ECNP) Preclinical Data Network Forum and she is participating actively at its activities. Dr. Dalla is teaching at the Medical School of Athens since 2008 and she is currently responsible faculty member for the Pharmacology course, as well as co-coordinator of the elective course “Addictive substances”. She is also coordinator of the master course Neuropsychopharmacology and she teaches in more than 10 master programs. Dr. Dalla has supervised ~ 30 Greek and international students (pre-graduate, MSc and PhDs) on neuroscience and pharmacology-related research projects. She serves as President at the Hellenic Society for Neurosciences (FENS member Society) and as Treasurer of the Institute of Stress Biology and Medicine. Finally, she is participating in the organization of Greek and International scientific meetings, as well as in public activities for brain awareness, as member of the DANA initiative for the brain.



De Chiara, Lavinia
Resident Psychiatrist,
School of Medicine and Psychology,
Sapienza University, Sant'Andrea
Hospital, Rome, Italy

I obtained the MD degree from Sapienza University of Rome in 2011 and then I started the Psychiatry Residency Training Program at Sant'Andrea Hospital, Sapienza University of Rome.

I have been a visiting resident at Massachusetts General Hospital Center for Women's Mental Health affiliated with Harvard Medical School in 2017.

I began training in Bipolar Disorders at Lucio Bini Mood Disorder Center in Rome with the internationally recognized mood-disorder expert, Athanasios Koukopoulos, MD and continued collaborating with him until he passed away.

I work in the field of Mood Disorders in the Bipolar Disorder Clinic at Sant'andrea Hospital. Since 2012 I focused my activity on Perinatal Psychiatry in the Center for Women's Mental Health at Sant'andrea Hospital of Rome assessing and treating women with pregnancy and post-partum mood and psychotic disorders. My clinical interests focus especially in the course and in the use of pharmacological treatments during pregnancy, breastfeeding and post-partum mood and psychotic disorders.

My research activity have focused on antecedents and prodromal phases of bipolar disorder as well as on the experimental use of the glutamate (NMDA receptor) antagonist memantine to test its preliminarily observed mood stabilizing effects and on the clinical evaluations of women with mood and anxiety disorders during pregnancy.



Diakaki, Kalliopi
"Agios Charalambos" Mental Health
Clinic, Crete, Greece

Kalliopi Diakaki, MD, is a graduate of University of Crete Medical School. She trained as a resident rural General Practitioner at the General Hospital of Kos and as a resident in General Medicine at the General Hospital of Rethymnon. She currently works at "Agios Charalambos" Mental Health Clinic expecting to start her training in Neurology in 2019.

Diakaki has been involved in numerous voluntary actions both inside and outside Greece; some domestic actions include Health Education courses for high school students of Heraklion, refugee support and consultation at Kastelorizo, and organization of an obesity awareness programme in collaboration with the Director of General Hospital of Kos. Notable voluntary action outside Greece is Diakaki's participation in the "Ethiopian project" aimed to raise AIDS awareness, for which Diakaki was placed in Ethiopia for six weeks. There, in collaboration with non-profit organizations she helped organize and participated in awareness, consultation and treatment of AIDS patients.

Her research interests lie in neuropsychiatry. More specifically, she is interested in the manifestation of cognitive impairments in psychiatric disorders and the use of neuropsychy-

colological assessment in behavioral disorders, as well as in the presence of soft neurological signs in affective and non-affective psychoses.



Diakogiannis, Ioannis
Professor of Psychiatry,
Head of the Drug Dependence Unit,
3rd Department of Psychiatry,
Aristotle University of Thessaloniki,
Greece

Dr Ioannis Diakogiannis was born in Thessaloniki in 1956, and graduated from the American College of Thessaloniki. He received his medical degree from the Medical School of Aristotle University of Thessaloniki (AUTH) in 1980. He was specialized in Psychiatry in the 1st and 3rd Psychiatric departments of A.U.TH and in the Department of Psychiatry of the Yale University-USA. He received a fellowship in Substance Abuse Treatment Unit from the Yale University-USA. From 1991 to 1998 worked as a scientific associate in the Department of Psychiatry and the Department of Pharmacology of the Aristotle University of Thessaloniki while he achieved his doctorate thesis in 1992. In 1998 he became Lecturer in Psychiatry, in 2002 Assistant Professor and in 2008 Associate Professor. Since 1998 he is the head of the Drug Dependence Unit of the 3rd Department of Psychiatry of A.U.TH. Dr. Diakogiannis has co-authored more than 100 scientific papers which have been presented in scientific meetings or have been published in scientific journals. He is member of many Scientific Committees and national associate representative in the Scientific Committee of the European Center for Drugs and Drug addiction in Lisbon, Portugal. He is also a member of the European Commission's projects for Alcohol ("Bridging the Gap"; "brief interventions for alcohol abuse" and "building capacity") and a member of the working group of the European Psychiatrists specialized in alcoholism. He is General Secretary of the Greek Society for the Study of Addictive Substances, member of the Advisor Committee of the South East European Society for Neurology and Psychiatry, member of the American Academy of Addiction Psychiatry, General Secretary of the branch for Psychiatry of addictions of the Greek Psychiatric Association and member of the editorial board of the scientific journal *Biological Psychiatry and Neurology*.



Dikeos, Dimitris
Professor of Psychiatry, Medical
School, National and Kapodistrian
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Dimitris Dikeos is Professor of Psychiatry at the 1st Department of Psychiatry of Athens University Medical School, Athens, Greece and Director of the Sleep Research Unit of Athens University at Eginition Hospital.

His research activities have focused on psychiatric genetics, sleep research, psychopharmacology and psychopathology. He has participated in various Multicentre Research Programmes in Europe and the U.S.A. such as: European Collaborative Studies of Affective Disorders, Johns Hopkins Genetic Epidemiology Schizophrenia Program, Meta-analysis of Sleep Laboratory Studies on Tolerance and Rebound Insomnia with Rapidly Eliminated Hypnotics, Maudsley Family Study, European Collaborative study by the Group for the Study of Resistant Depression (TRD), International Multicentre Study "FACTOR", International Study on the Genetics of Anorexia Nervosa, The Psychiatric Genetics Consortium (PGC); Neurobiology and Treatment of Adolescent Female Conduct Disorder: the Central Role of Emotion Processing (FemNAT-CD), etc.

He is currently: President of the Hellenic Sleep Research Society (HSRS); Past President of the International Neuropsychiatric Association (INA); Treasurer of the World Federation of Societies for Biological Psychiatry (WFSBP).

Dr. Dikeos is co-editor of three English-language books, two of which have been published by the World Psychiatric Association, and he is author or co-author of more than 100 full publications, out of which more than 60 are articles in SCI Journals with more than 2500 citations (h-factor=30), among which: American Journal of Medical Genetics, British Journal of Psychiatry, Current Opinion in Psychiatry, International Clinical Psychopharmacology, Journal of Psycho-somatic Research, Molecular Psychiatry, Nature Genetics, Psychiatric Genetics, and Science.



Dimopoulou, Maria
Nurse, Head of Public Health Sector,
General Hospital of Corfu, Greece

Dimopoulou Maria, currently works as a Head of Public Health Sector, in General Hospital of Corfu (2016-2018). Previously (1991-2016) she was working in Psychiatric Hospital of Corfu as a Head of Mental Health Unit of Corfu and also served as Head of the Department of Psychosocial Rehabilitation.

Mrs Dimopoulou received her Nursing Degree from the Technological Educational Institution of Heraklion, Crete, School of Health & Welfare Professions, Nursing Department (1990). She also holds a Degree in Specialty Psychiatry Nursing (1994), at National and Kapodistrian University of Athens (Aiginition Hospital of Athens).

She holds a Master in Social Psychiatry & Child Psychiatry from the Faculty of Medicine, University of Ioannina (2007). She

completed also a Master Class (2017) in Organization & Administration of Health Services at the National and Kapodistrian University of Athens.

Mrs Dimopoulou served previously as a Mental Health Expert in the Greek Ministry of Health, Athens (2015-2016). She was responsible for proposals for the organization of the Mental Health Sector, proposals for mental health policies, liaison of the Mental Health Directorate and the Pan- Hellenic Federation of Social Cooperatives LL.

She has authored more than 30 papers delivered to congresses and some of them are published in journals such as the Hellenic Journal of Nursing Science. She co-authored a number of book chapters mainly on the history of the Mental Health Hospital of Corfu.

Currently is also Chairman of the Board of the Social Cooperative of Limited Liability (KoiSPE) of Corfu "New Horizons", which is a company and Mental Health Unit, that facilitates the Social Entrepreneurship for people with mental health disabilities, aiming to their socio-economic inclusion and self-sufficiency.



Douzenis, Athanassios

Associate professor of Psychiatry and forensic Psychiatry, Second University Psychiatry Department, Attikon Hospital, Greece

Athanassios Douzenis qualified in Medicine in 1985 from the Ioannina Medical School and did higher psychiatric training in the UK receiving an M. Med. Sci from Sheffield University Medical School. He trained in psychiatry in England (Sheffield and London) and became MRCPsych in 1992. He completed his doctorate in Athens University Medical School on Forensic Psychiatry under the supervision of Prof. Stefanis. Since his return in Greece (1995), he worked with OKANA where he helped establish the first substitution programme in Greece and was head of the largest methadone unit in Athens. He became a lecturer in Forensic Psychiatry in 2000 and Assistant Professor on the same subject in 2005. Initially he worked in Eginition Hospital and later moved on with Prof Soldatos and Lykouras to establish the Second Athens University Psychiatry Department in Attikon Hospital. He has published 2 books about Forensic Psychiatry, has written more than 30 chapters in psychiatric books (3 with international publishers) and has 36 SCI publications. He has participated in numerous national and international psychiatric conferences. He is heading the Forensic Psychiatric Unit in the Second Psychiatry Department which is the only Forensic Unit in Greece.

He is President of the Section of Forensic Psychiatry of the Greek Psychiatric Association and is the publisher of the journal "Ate" (Άτη)

He is married and has three children.



Dragiotti, Elena

Psychologist PhD, Senior Lecturer,
Department of Medical and Health
Sciences, Linköping University,
Sweden

Elena Dragiotti was born in Kalamata, Greece, in 1972. She is married and she has 2 children. She holds a bachelor degree in psychology (Panteion University of Athens, Greece), a master degree in health psychology/pain management (University of Ioannina, Laboratory of Health Psychology Medical School, Ioannina, Greece) and a doctorate in clinical epidemiology focused on clinical psychology, psychotherapy and RCTs and meta-analysis (University of Ioannina, Department of Hygiene and Epidemiology, Medical School, Ioannina Greece). Since 2013 she is teaching in graduate programs at the University of Thessaly, Medical School, Larissa, Greece. Since 2014 she holds a senior researcher position at the Linköping University, Department of Medical and Health Sciences, Faculty of Health Sciences, and pain and rehabilitation center, County Council of Östergötland, SE-581 85 Linköping, Sweden. Since 2018 she holds a Senior Lecturer position at the Linköping University, Department of Medical and Health Sciences. Research in epidemiology, psychology and psychotherapy field challenge her professional's goals. Her previous position concerned the Psychiatric Rehabilitation Unit (half-way house) for severe mental illness, of the Department of Psychiatry of Sotiria Hospital, Athens Greece. She has authored several research articles and monographs both in Greece and abroad and she has presented a number of papers and seminars at international and Greek conferences on the psychometry, clinical psychology, health psychology and evidence based psychotherapies. She is a member of the Hellenic Psychological Society (EL.PS.E.) and the European Federation of Psychologists' Associations (EFPA). She has certificated in pedagogy teaching focused on problem-based learning approach from Linköping University.



Duman, Berker

Psychiatrist, Department of
Psychiatry, Division of Consultation-
Liasion Psychiatry, Ankara University,
Turkey

Berker Duman was graduated in 2005, from the Cerrahpasa School of Medicine. Completed his psychiatric training at the Ankara University, School of Medicine in 2010. Worked in Van Military and Polatli State Hospitals respectively. Since 2014, is working as a psychiatrist at the Department of Psychiatry, Division of Consultation- Liasion Psychiatry in Ankara University. In the year 2015, he was participated to the psychiatric epidemiology research as an academic visitor at King's College London Institute of Psychiatry, Psychology and Neuroscience. Dr. Duman is also a PhD student in neuroscience at Ankara University with particular research focus on fNIRS and free will.



Efstathopoulos, Efstathios P.
Professor of Medical and Radiation Physics, Head of Medical Physics Unit, 2nd Department of Radiology, «Attikon» University Hospital in Medical School, National and Kapodistrian University of Athens (NKUA), Greece

Professor of Medical and Radiation Physics, head of Medical Physics Unit of 2nd Department of Radiology at “Attikon” University Hospital in Medical School, National and Kapodistrian University of Athens (NKUA). He is delivering clinical work into the Hospital being Radiation Protection Supervisor for all Radiological units and units of Radiotherapy and Nuclear Medicine. He is teaching at Medical and Nurse Schools, Radiation Protection and Medical Imaging with x-rays. He is also teaching at four Postgraduate Programs. He has published more than 100 original papers in international scientific journals, which have been received more than 2.000 citations in international articles and books. He is author of three chapters in scientific books. He has presented more than 100 scientific congress announcements and has given more than 40 invited scientific lectures.



Einat, Haim
Professor at the School of Behavioral Sciences, Tel Aviv-Yaffo Academic College, Israel, Adjunct Professor, Dept. of Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Israel and in the College of Pharmacy at the University of Minnesota, USA

Haim Einat is a professor at the School of Behavioral Sciences, Tel Aviv-Yaffo Academic College in Israel and an adjunct professor at the Dept. of Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Israel and in the College of Pharmacy at the University of Minnesota, USA. Professor Einat received diverse education with an undergraduate degree in biomedical sciences from the Hebrew University of Jerusalem, followed by graduate degrees in zoology (from Tel-Aviv University) and in neuroscience and behavioral sciences (McMaster University, Canada) and finally a Ph.D. in psychopharmacology from Ben-Gurion University of the Negev in Israel. Professor Einat received additional training as a post-doctoral fellow at the National Institute for Mental Health in Bethesda, MD and in 2004 accepted a faculty position at the College of Pharmacy, University of Minnesota. In 2011, Professor Einat moved back to his home country Israel and took his current position.

Professor Einat is using a combined behavioral, biochemical and molecular approach to study the underlying biology of affective disorders and to identify possible novel drug targets. His work is highly recognized by the scientific community with over 80 publications in the professional literature, numerous conference presentations and over 2000 citations. Professor Einat also serves on the editorial boards of a number of journals in his field of research and serves as an ad hoc reviewer most scientific journals in the field as well as a reviewer for many of the granting agencies.

**Eleftheriades, Anna**

3rd year Medical Student, National
and Kapodistrian University of
Athens, Greece

Anna Eleftheriades is a third year medical student at the National and Kapodistrian University of Athens. In 2015 she graduated from Athens College and succeeded in the panhellenic examinations. Since 2015 she attended numerous medical conferences including the 1st Panhellenic Conference on ADHD, the 4th Panhellenic Conference on Developmental and Behavioral Pediatrics and Adolescent Medicine, and the 1st Panhellenic Conference on Developmental and Behavioral Pediatrics. In addition, she assisted at the organization of the 2nd Congress of Early Career Psychiatrists, the 1st Congress of the Institute of Stress Biology and Medicine, and the 27th Meeting of the Hellenic Society for Neuroscience. Also, she participated at the 22nd, 23rd and 24th Scientific Congresses of Greek Medical Students, the 5th International Congress on Neurobiology, Psychopharmacology & Treatment Guidance, the 8th Scientific Conference 'Psychiatry in Everyday Clinical Practice', the 5th Panhellenic Conference on Child and Adolescent Gynecology, and the 2nd Panhellenic Conference on ADHD with numerous oral presentations and e-posters. Furthermore, she is an active member of the Scientific Society of Greek Medical Students (EEΦIE) and the Hellenic Medical Students' International Committee (HELMSIC) and she worked as a paper reviewer for the Anatolia College Science and Technology Annual Conference. Lastly, she speaks English and French fluently (Cambridge Proficiency and C1 respectively).

**Erzin, Gamze**

Psychiatrist, Ankara Dışkapi Training
and Research Hospital, Turkey

Dr. Erzín is specialized at adult psychiatry. She received her medical degree from Abant İzzet Baysal University School of Medicine in 2011 and completed her Psychiatry residency training at Psychiatry Department of Ankara Numune Training and Research Hospital in 2016. She has been working as a psychiatrist at Ankara Dışkapi Training and Research Hospital since July 2016. She is mainly interested in neurobiology in psychiatric disorders. She has been serving as a member of board at Psychiatry Association of Turkey since March 2016. She is also a member of Early Career Committee of World Psychiatric Association.



Fokas, Konstantinos G.
Chairman, 1st Psychiatric Clinic,
School of Medicine, Aristotle
University of Thessaloniki, Greece

1951: Born in Athens, Greece.
1975: Graduate, School of Medicine, Aristotle University of Thessaloniki, Greece.
1980: Neurologist - Psychiatrist.
1985: Ph.D. School of Medicine, Aristotle University of Thessaloniki.
1987: Lecturer, 1st Psychiatric Clinic of the School of Medicine, Aristotle University of Thessaloniki.
1989-1990: Post-graduate studies in England on Neuropsychology (National Hospital for Nervous Diseases, Prof. E. Warrington).
1992: Assistant Professor, 1st Psychiatric Clinic of the School of Medicine, Aristotle University of Thessaloniki.
1999: Associate Professor, 1st Psychiatric Clinic of the School of Medicine, Aristotle University of Thessaloniki.
2005: Professor, 1nd and 2nd Psychiatric Clinic of the School of Medicine, Aristotle University of Thessaloniki.
1999-2007: Chairman, 2nd Psychiatric Clinic, School of Medicine, Aristotle University of Thessaloniki.
2007-today: Chairman, 1st Psychiatric Clinic, School of Medicine, Aristotle University of Thessaloniki.
Research interests: Clinical Psychiatry, Clinical Psychopharmacology, Neuro-psychology and Psychophysiology.
He is a member of 10 National and International scientific societies.
He has participated in more than 150 congresses.
He is the only or co-author of more than 250 scientific papers.



Fotiadis, Petros
Consultant with the rank of
Lieutenant Colonel, Psychiatric
department, 424 General Military
Hospital, Thessaloniki, Greece

Petros Fotiadis MD, is Consultant with the rank of Lieutenant Colonel, at the Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece.
Petros Fotiadis received his medical degree at Aristotle University of Thessaloniki (A.U.TH.), Greece in 1993. He spent his residency in psychiatry in the 2nd Psychiatric department of A.U.TH, and completed specialization in psychiatry in 2002. He served as consultant with the rank of Major, Psychiatric department, 496 General Military Hospital, Didimoteixo, Greece (2002-2003), and as consultant at rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece (2004-2012). He also works in his private practice (2002-Today).
He has received a 2 years Fellowship, 3rd Psychiatric department (A.U.TH), Greece (2012-Today), in "Neuropsychological Assessment of Cognitive deficits in Schizophrenia and other Organic Psychiatric disorders". His areas of clinical and research interest are Schizophrenia, Bipolar spectrum disorders, Organic Psychiat-

ric disorders, Military and Disaster Psychiatry and Psychopharmacology. He has participated in more than 100 International and Regional meetings and congresses, in some of which as a speaker for specific areas of interest. He has authored and co-authored more than 20 papers delivered in Greek and International congresses. He is also in collaboration with the National and Kapodistrian University of Athens, Faculty Nursing, in the Post Graduate program "Disaster Medicine and Crisis Management". He has participated at several Training Meetings and Masterclasses, and also at the translation of Judith S. Beck book "Cognitive Therapy Basics and Beyond" 1995 The Guilford Press.



Fountoulakis, Konstantinos

Professor of Psychiatry, Aristotle University of Thessaloniki, Greece
Chair of the 2nd International Congress on Evidence Based Mental Health

Konstantinos N. Fountoulakis, MD, is Professor of Psychiatry at Aristotle University of Thessaloniki, AHEPA University Hospital, in Thessaloniki, Greece.

Dr. Fountoulakis received his medical degree (1989), performed his residency in psychiatry (1998), and earned his doctorate in psychiatry (1999) at the Aristotle University of Thessaloniki. He received a 3-year fellowship in psychosomatic medicine and a 1-year postdoctoral fellowship for research from the State Scholarships Foundation of Greece. Until 2003 he served as a medical officer in the Greek Armed forces retired with the rank of major. In 2005, Dr. Fountoulakis was a Research Fellow in the Department of Psychiatry, Division of Neuropsychiatry, at the University of Geneva in Switzerland.

Dr. Fountoulakis' areas of clinical and research interest are reflected in the topics that he teaches: general psychiatry, biological psychiatry, psychopharmacology, mood disorders, schizophrenia and personality disorders. He has coauthored more than 400 papers and more than 220 of them are published in international journals such as the LANCET, BMJ, Am J Psychiatry, British Journal of Psychiatry, Biological Psychiatry, International Journal of Neuropsychopharmacology, Journal of Affective Disorders, Schizophrenia Research, Psychiatry Research, Bipolar Disorders, and the Annals of General Psychiatry among others, with over 8000 citations and h=45 (Publish or Perish).

He authored or co-authored a number of chapters in books including the Mood disorders chapter for the Wiki project of the World Psychiatric Association (WPA). He has authored the book 'Bipolar disorders: An Evidence-Based Guide to Manic Depression' (Springer-Verlag 2015). Currently is editing the WPA book 'Advances in Psychiatry' and the book 'Psychobiology of behavior' (both to be published by Springer in 2017)

He chairs the ISNP and since 2006, he served as Secretary, since 2008 as co-chair, and currently as Chair of the Private Practice Section and also currently is chair of the section of Evi-

dence Based Psychiatry, of the World Psychiatric Association. He served as Chair of the CINP Credentials and Membership Committee (2010-2) and the Neuropsychological and Psychometric Instruments Section, of the Greek Psychiatric Association. He is an active member of a number of national and international professional organizations, including the EPA, APA, WPA, CINP, ECNP, ISAD, ISBD, EBF and others, peer referee for the Cochrane Collaboration and member of the International College of Neuropsychopharmacology (CINP) Advisory Board to the Task Force on the Usefulness of Antidepressants and the Mental Health Economics Task Force of the International Psychogeriatric Association (IPA).

Dr. Fountoulakis is Editor in Chief of Annals of General Psychiatry and served as Section Editor of Current Opinion in Psychiatry as well as guest editor in other international journals.

In 2009 was appointed member and in 2012-4 chair of the Greek Ministry of Health Committee for the Administrative, Economic and Scientific Supervision of the Mental Health Units of the deinstitutionalization project. In 2013 was appointed chair of the Independent Committee of Experts for the Assessment of Mental Health Services of the Greek Ministry of Health.

Was secretary of CME of the International Congress on Brain and Behaviour (2003-2007). I organize and chair the series of International Congress on Neurobiology and Psychopharmacology (2009-), the International Congress on Evidence Based Mental Health (2016-) and a series of certified by the WPA educational Workshops. For details on the significant number of meetings, congresses and workshops organized please see www.psychiatry.gr

He has received a number of national and international research awards, including the 2012 Kraepelin-Alzheimer medal of the University of Munich and the 2015 Excellence in Education Award of the WFSBP.

Since 2014 he is honorary member of the WPA



Gatopoulos Gatos, Angelica

Psychiatry Resident, Psychiatry
Hospital of Attika, Greece

Experience

04/2013 - 02/2014 Internist (Giagkos General Hospital)

02/2013 - 04/2013 Psychiatry Resident (L.V.R Klinik Krankenhaus - Bedburg Hau Deutschland)

08/2012 - 01/2013 Psychiatry Resident (Mental Health Center of Piraeus)

08/2010 - 08/2012 Internist (Giagkos General Hospital)

2008 - 2010 GP service with rotation in internal medicine, surgery, and cardiology (Panarkadiko Hospital of Tripolis)

Education

1996- 2002 Victor Babes University of Medicine and Pharmacy Timisoara Romania

2007 Academic and professional recognition of qualification (DOATAP)

Seminars/Conferences

- 06/2014- Psychiatry Masterclass VIII
- 09/2014-European program Leonardo da Vinci (Hopitaux Universitaires de Geneve)- On the job training for mental health professionals in old age mental health .
- 10/2014-International Congress of the World Federation for Mental Health & the Hellenic Psychiatric Association -Living with Schizophrenia.
- 11/2014- 3rd National Conference of Special Psychiatric Hospitals and 1st Conference of Holistic Treatment of Severe Mental Disorder - speaker (Omega-3 fatty acids, Negative symptoms of schizophrenia)
- 12/2014- National Conference of Forensic Psychiatry-speaker (Violent transgression of mentally ill)
- 4/2015-23rd National Conference of Psychiatry & 2nd National Psychopharmacology Congress-speaker (Liver diseases and psychopathology & Inflammatory processes at mental illnesses - differential diagnosis)
- 6/2015-12th World Congress of Biological Psychiatry
- 10/2015-2nd Workshop “Risk Assessment for the Mentally Ill in Daily Clinical Practice ”.
- 4th East European Psychiatric Congress & 3th Preventive Psychiatry International Congress-speaker (Neurobiology of anger).
- 4-12/2015-4th phase study of Zypadhera.



Giotakos, Orestis
Psychiatrist, Greece

Orestis Giotakos graduated in 1985 from the Military Medical School, University of Thessaloniki, Greece, and he has been working as a Military Psychiatrist since 1992. In 1998, he obtained the M.Sc. in Neuroscience at the Institute of Psychiatry, University of London. In 2003 he received his doctorate at the Medical School, University of Athens. He is the founder of the non-profit organization “obrela – Neuroscience & Mental Health” (www.obrela.gr). He has conducted several investigations and has written a number of articles and books on psychopathology and prevention strategies. He is also the editor of the Journal “Dialogues in Clinical Neuroscience & Mental Health” (www.obrela-journal.gr)



Gonda, Xenia

Clinical Psychologist and Pharmacist,
Associate Professor, Department
of Clinical and Theoretical Mental
Health, Semmelweis University,
Budapest

Xenia Gonda MA PharmD PhD is a clinical psychologist and pharmacist working as associate professor at the Department of Clinical and Theoretical Mental Health of Semmelweis University, Budapest. Her main research interests include personality genetics, neurobiology of suicide and bipolar disorders, effects of seasonality and birth season, and mood fluctuations related to the reproductive cycle.



Gorgoli, Dimitra

Consultant Psychiatrist,
General Hospital of Nea Ionia
"Konstantopouleio", Greece

I was born in Ioannina on 1986 and graduated from Ioannina Medical School, University of Ioannina, as a Doctor of Medicine (MD) on 2009.

I fulfilled my 6-month internship on pathology, at the general hospital of Arta (2010) and right after that, I worked as a rural doctor at Paros, Cyclades Health Center.

On 2011 I began working and training for 3,5 years, as a Psychiatry resident doctor at the Psychiatric Hospital of Attica (Dafni).

There, I worked at an emergency psychiatric department for 2 years, at a drug rehabilitation unit for 5 months, at a psychogeriatric department for 3 months and at an outpatient community service for 1 year.

I completed my residency in Psychiatry, with 1 year residency in neurology at NIMTS military hospital.

I got the title of the Specialty in Psychiatry, after official exams on 2016 and began working as a consultant psychiatrist on 2017 till present, at the General Hospital of Nea Ionia "Konstantopouleio".

I speak English and German.

My special interest is psychoanalysis (Lacanian field), since 2012 till present.



Grammatikopoulos, Ilias
Consultant Psychiatrist in Primary
Health Care (PEDY), Greece

Dr. Grammatikopoulos A. Ilias, currently works as a Consultant Psychiatrist in Primary Health Care (PEDY). Previously (2012-2016) he was working in private sector as a Psychiatrist-Psychotherapist and also served as Head of the Department of Organization against Drugs (OKANA) in General Hospital of Veria, Greece (2015-2016).

Dr. Grammatikopoulos received his medical degree from the Aristotle University of Thessaloniki, School of Health Sciences, Department of Medicine (2001) and performed his residency in psychiatry (2012) at the 2nd University Psychiatric Clinic, Aristotle University of Thessaloniki.

He holds a Master in Public Health and Health Care Management from the Faculty of Medicine, University of Crete (2007); his master thesis title was "Anxiety disorders in elderly in Primary Care in Crete", while he is currently a PhD candidate in the Department of Psychiatry, School of Medicine, University of Ioannina. He completed also a Master Class (2010) in Mental Health Services Research and Research Methodology at the Institute of Psychiatry, King's College London. Recently (2015) completed the Transcranial Magnetic Stimulation (TMS) course at the Maastricht Brain Imaging Center at Maastricht University. Dr. Grammatikopoulos' areas of research interest are: common mental disorders especially in primary care, determinants of mental health, suicidality, cost-effectiveness of mental health services, evidence-based mental health and mental health policy.

Dr. Grammatikopoulos served previously as a Special Advisor in the Greek Ministry of Health and Social Solidarity, General Secretary of Mental Health and Social Welfare, Athens (2008). His was responsible for: audit, assessment, development and evidence-based proposals of all the strategic mental health policies; management, implementation, monitoring, liaison and audit of the Mental Health Directorate and the Special Administration Service of the Operational Programme of Health & Welfare. In 2009 was appointed member of the Greek Ministry of Health Committees for the Administrative, Economic and Scientific Supervision of the epidemiological studies in mental health for adolescents, children and adults. Since September 2012 was appointed a board member of a Special Committee for the Administrative and Financial Audit of Mental Health Units from the Health Minister. He was also contributed as an external assessor in the on-going evaluation of the implementation of the National Action Plan "Psychargos C 2011-2015", under the auspices of the Ministry of Health (this project was assigned in a team cooperation of the Maudsley International, King's College of London and CMT Prooptiki).

He has coauthored more than 100 papers delivered to congresses and some of them are published in international journals such as the LANCET, Annals of General Psychiatry, BMC Family Practice, BMC Psychiatry and Journal of Nursing Management. He authored or co-authored a number of book chapters and editing the notes for the postgraduate course "Research Methodology" of the Master of Public Health and Health Care Management. He was also the Editor of the Greek translation under permission by Jané-Llopis E. and colleagues, of the primer: "Evidence in Public Mental Health".

Dr. Grammatikopoulos has participated in several organising committees of Hellenic and international conferences and has given several oral presentations as invited speaker. Since 2007 he served as General Secretary of the PanHellenic Congresses on Health Management, Economics and Policy and he is a member of the Greek Psychiatric Association and the World Suicidolgy Net (WPA section). He was also a research associate in international collaboration research projects (HAPPY AUDIT: FP6 project and OTC-Sociomed: FP7 project) and facilitator in several Greek research projects. He has received research awards for administrative interventions and he is a reviewer in "Health Policy" journal and also an external reviewer (vendor) of Medtronic Bakken Research Center B.V, Maastricht, Netherlands, while he serves as Editor in chief (Greece) for the journal "Mental Health in Family Medicine".

Currently is also Chairman of the Board of the Social Cooperative of Limited Liability (KoiSPE) of Perfecture Imathias "Desmos", which is a company and Mental Health Unit, that facilitates the Social Entrepreneurship for people with mental health disabilities, aiming to their socio-economic inclusion and self-sufficiency.



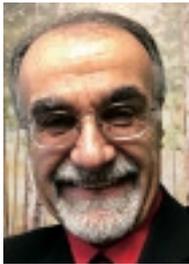
Hage, Brandon

Resident in General Adult & Child Psychiatry, Western Psychiatric Institute and Clinic, University of Pittsburgh Medical Center, USA

Brandon Hage, MD, MA, is currently a rising PGY-1 resident in General Adult & Child Psychiatry at Western Psychiatric Institute and Clinic of the University of Pittsburgh Medical Center. He was born and raised in Buffalo, New York. He attended College of the Holy Cross in Worcester, Massachusetts, earning a Bachelor of Arts degree in Psychology with a concentration in Pre-Medicine in 2011. He then earned his Master of Arts in Medical Sciences from Loyola University Chicago prior to enrollment in Loyola University Chicago Stritch School of Medicine, class of 2017.

During medical school, Dr. Hage was actively involved in research under the guidance of Angelos Halaris, MD, PhD. Dr. Hage's research was focused on the relationship of cardiovascular, autonomic, and inflammatory dysfunction in mood dis-

orders. Specifically, he was interested in how heart rate variability and parasympathetic tone relate to and may even be predictive of diagnostic and prognostic variables of both Major Depressive Disorder and depression in Bipolar Disorder. In clinical practice, Dr. Hage has a specific interest within child and adolescent psychiatry, perinatal/postpartum psychiatry, and emergency psychiatry. He plans to pursue a career in academic psychiatry so he can participate in both clinical and teaching opportunities. Outside of work, Dr. Hage enjoys spending his free time relaxing with his fiancé Vethina and their morkie Oliver. Together, they enjoy spending time outside, cooking, putting together puzzles of cities, and attending baseball games.



Hakimi, Michael

Clinical Psychologist, Assistant Professor and Director of Clinical Psychology, Department of Psychiatry of Loyola University Medical Center (LUMC), USA

Dr. Michael Hakimi is a licensed Clinical Psychologist, who currently serves as Assistant Professor and Director of Clinical Psychology at the Department of Psychiatry of Loyola University Medical Center (LUMC) since 2012. He also serves as a faculty of Sexual Wellness Program at LUMC. He holds a doctorate degree in Clinical Psychology from the Illinois School of Professional Psychology in Chicago. He has been in the front lines of mental health for over 3 decades in various roles, including 10 years of inpatient psychiatric hospitals, 15 years of directorship of residential treatment programs for at-risk youth, 5 years in primary care medical clinics, 6 years in LUMC, and 3 years as adjunct professor, teaching doctorate level psychology graduate students at Adler University.

His work experience spans across all age groups, which includes conducting individual, child and adolescent, family, group, couples and marriage psychotherapy, and assessments. Throughout his career, he also has served as a supervisor and mentor for psychology doctorate interns, clinicians, and psychiatry residents. He specializes in the treatment of depression, anxiety, panic disorders, PTSD, stress management, grief and bereavement, sex therapy, self-esteem, and relationship issues.





Halaris, Angelos

Professor of Psychiatry, Chairman of the Department of Psychiatry, Loyola University, Stritch School of Medicine, Chicago, USA

Dr. Angelos Halaris was born and raised in Athens, Greece. He graduated from the University of Munich School of Medicine and received research training at the Max-Planck Institute for Psychiatry in Munich. After a year at Novartis in Switzerland he joined the University of Chicago where he trained in psychiatry and psychopharmacology. He subsequently accepted a professorship at UCLA School of Medicine. He was later appointed Vice Chair of Psychiatry at Case Western Reserve University and Department Chair at MetroHealth Medical Center in Cleveland, Ohio. From 1993 through 2003 he served as Chairman of the Department of Psychiatry at the University of Mississippi Medical Center. In 2003 he was appointed Chairman of the Department of Psychiatry at Loyola University Stritch School of Medicine in Chicago. He has received numerous research grants. He has published over 200 refereed articles, numerous chapters, and three books and co-edited "Inflammation in Psychiatry" and "Neuroprogression in Psychiatric Disorders" with Dr. B. Leonard. He has received numerous awards and honors including the Kraepelin-Alzheimer's Medal from the University of Munich and the International Union of Angiologists. He is an Honorary Member of the Hellenic Society for Sleep Medicine, the Latin American College of Neuropsychopharmacology, and the Cuban College of Neuropsychopharmacology. He is a Lifetime Distinguished Fellow of the American Psychiatric Association. He was recognized with a Distinguished Service Resolution by the State of Mississippi Legislature for establishing an international Research Mentor Program for CINP. He was recently elected to active membership in the European Academy of Sciences and Arts and was awarded the Owl of Wisdom Award by the International Society of Neurobiology and Psychopharmacology at its annual congress. His research focuses on biomarkers of inflammation in mood disorders and cardiovascular disease.



Johnson, Katherine B.

Assistant Professor, Department of Psychiatry, Loyola University Health System, USA

I am currently an Assistant Professor and practicing adult and child and adolescent psychiatrist at Loyola University Medical Center near Chicago, IL, USA. I also attended medical school at Loyola. After moving to North Carolina for residency and fellowship at the University of North Carolina and then practicing there for a few years, I returned to the area where I was born and raised in the Chicago suburbs. I am currently board certified in both General and Child and Adolescent Psychiatry as well as Integrative and Holistic Medicine. I have worked in community mental health, student mental health, and private practice in the past before returning to academics. I enjoy working with residents and medical students as well as the col-

legality afforded in academics. I also enjoy research endeavors and teaching in the medical school in addition to my clinical practice. I have particular interests in trauma, ADHD, and collaborative practice.



Karaoulanis, Sokratis
Consultant Psychiatrist, Psychiatric
Clinic, University Hospital of Larissa,
Greece

Dr Karaoulanis was born in Thessaloniki, Greece. He graduated from Medical School of Thessaloniki University and received his specialty in Psychiatry from University Hospital of Larissa and Papageorgiou Hospital of Thessaloniki. He works as consultant Psychiatrist in the Psychiatric Clinic of the University Hospital of Larissa. He specializes in the domain of women's mental health.

He is teaching in University of Thessalia Medical School and in one Master of Science degree in the Technological institute of Thessaly Nursing School. He has published a number of papers in Greek and international medical journals and his research work have been announced in Greek and international medical conferences.



Kasper, Siegfried
Professor and Chair, Department
of Psychiatry and Psychotherapy,
Medical University of Vienna, Austria

Dr. Siegfried Kasper is Professor of Psychiatry and Chairman of the Department of Psychiatry and Psychotherapy at the Medical University of Vienna, Austria. Born in Salzburg, Austria, he was educated at the medical schools of the University of Innsbruck, Austria and the Universities of Freiburg and Heidelberg, Germany. Dr. Kasper gained clinical and research experience in psychiatry at the Central Institute of Mental Health, Mannheim, Germany, the Psychiatric Department of the University of Heidelberg, Germany, the Clinical Psychobiology Branch of the National Institute of Mental Health, Bethesda, Maryland/USA, and the Psychiatric Department of the University of Bonn, Germany; in neurology at the Neurological Department of the University of Heidelberg in Mannheim; and psychotherapeutic and psychoanalytic training at the Ausbildungsinstitut für Psychotherapie und Psychoanalyse in Heidelberg/Mannheim, Germany.

Dr. Kasper published 520 in PubMed listed publications (Citation Index: 16.373, Hirsch-Index: 62) and more than 250 books or book chapters, in various areas of psychiatry. He concentrates on the biological bases of mental disorders and their possible treatment approaches. Furthermore, he has conducted studies in psychopathological as well as clinical areas. Dr Kasper is a frequent national and international speaker and continues to be actively involved in research programmes studying depression, anxiety, psychosis, and dementia.

Dr. Kasper serves/served on the executive committees and advisory boards of several national and international societies, such as the European College of Neuropsychopharmacology

(ECNP) and the European Psychiatric Association (EPA). He has been elected to the Executive Committee of the International College of Neuropsychopharmacology (CINP) for the period of 2012 to 2016. Moreover Dr. Kasper is Chair of the World Psychiatric Association (WPA) Section of Pharmacopsychiatry. He is Founding President of the Austrian Society of Drug Safety in Psychiatry (ÖAMSP) and of the Austrian Society of Neuropsychopharmacology and Biological Psychiatry (ÖGPB). Furthermore, he is an Honorary Member of the Czech and Romanian Societies of Neuropsychopharmacology, the Hungarian Psychiatric Association and a Fellow of the Royal College of Psychiatrists, UK, as well as of the Ukrainian Association of Psychiatry. Furthermore, he has been appointed Honorary Professor at the University of Hong Kong, China in 2005 and Honorary Professor of the Universidad Andrés Bello Santiago de Chile in 2014. In 1997, he was President of the 10th ECNP Congress, was Chairman of the Local Organizing Committee of the WPA Thematic Conference in 2004 and Co-Chair of the Local Organizing Committee of the WFSBP Congress 2005 and in 2007 Local Advisor for the ECNP congress in Vienna. In 2009, he was President of the WFSBP Congress in Paris. From 2005 to 2009 Dr. Kasper was President of the World Federation of Societies of Biological Psychiatry (WFSBP) and has been appointed as Honorary President of the WFSBP in 2013.

Dr. Kasper serves on the editorial boards of numerous learned journals, including The Lancet Psychiatry, Journal of Clinical Psychiatry, CNS Spectrums, Journal of Affective Disorders, Pharmacopsychiatry, European Archives of Psychiatry and Neuroscience. He is Chief-Editor of the World Journal of Biological Psychiatry and the International Journal of Psychiatry in Clinical Practice, and Field Editor of the International Journal of Neuropsychopharmacology.

As a result of his research expertise he is the recipient of numerous national and international scientific and public awards and prizes and has recently been acknowledged with the Commander's Cross II-nd class of the Republic of Austria.

**Kokras, Nikolaos**

Post-Doc Clinical & Research
Associate, Departments of Psychiatry
& Pharmacology, Medical School,
National & Kapodistrian University of
Athens, Greece

Dr Nikolaos Kokras is a psychiatrist and research associate at the Department of Pharmacology and at the First Department of Psychiatry, Eginition Hospital, Medical School, National and Kapodistrian University of Athens. Dr. Kokras has several years of experience in psychopharmacology, drug screening and translational pharmacology. He received his medical degree in 1999, an MSc (Research) degree in Affective Neuroscience in 2006 with a thesis on the HPA axis regulation and his PhD in Pharmacology in 2011 with a thesis on the sex-related differential response to antidepressants. In 2005, he earned a fellowship from the International Brain Research Organization and he spent time at the Max Planck Institute of Psychiatry at the Research Group of Dr. Osborne F. X. Almeida. There, he received excellent training in molecular techniques and performed studies on the role of HPA axis in sex differences in models of depression and anxiety. In parallel with his PhD studies, he was appointed as a psychiatric trainee in late 2007 and received his certificate of completed psychiatric training in September 2010 from the First Department of Psychiatry, Eginition Hospital, Medical School of Athens. Before joining Eginition Hospital, he received excellent training for one year at the South London, Maudsley & Oxleas NHS trust in London, UK. During his clinical training he was elected as a board member in the Trainee's Committee of the National Psychiatric Association and now is serving in the board of Young Psychiatrists Network. From 2012-2016, Dr. Kokras was employed as a post-doctoral fellow at the Dep. of Pharmacology, as member of a multidisciplinary consortium for the pharmacological screening of new CNS-acting molecules, co-funded by Greece and European Union. Moreover, Dr. Kokras has earned two fellowships from the State Institute of Fellowships (IKY) and with one of them he re-joined the Max Planck Institute of Psychiatry for 6 months in 2014. He is currently participating in an exchange program between the Dep. of Pharmacology in Greece and a collaborative laboratory in the Max Planck Institute of Psychiatry (IKY-DAD program). Dr. Kokras has received several distinctions from the IBRO, ECNP, BAP, HSN, IKY and the WPA. Dr Kokras has published 40 papers in peer-reviewed journals covering fields of experimental and clinical psychopharmacology, as well as liaison psychiatry and psychosomatics (>1100 citations, h-index 16, source Scopus/Scholar). He has also co-authored 6 chapters in international and Greek books and he has more than 100 abstracts in Greek and international conferences. He serves as a peer-reviewer in several scientific journals.



Konsta, Anastasia

Assistant Professor of Psychiatry and Psychogeriatrics, First Psychiatric Department, Aristotle University of Thessaloniki, «Papageorgiou» General Hospital, Greece

Anastasia Konsta is an Assistant Professor of Psychiatry and Psychogeriatrics at the First Psychiatric Department of the Aristotle University of Thessaloniki at the “Papageorgiou” General Hospital, where she is responsible for the Psychogeriatrics Inpatient and Outpatient Unit. Her academic, clinical and research work focuses mainly on the subject of Psychogeriatrics. She has published in academic journals and has contributed with chapters in edited volumes. She, also, participates regularly as a speaker in conferences, seminars and educational programs. She teaches the course “Psychogeriatrics” in the context of the undergraduate program of the Medical School of the Aristotle University of Thessaloniki.



Kotsis, Konstantinos

Psychiatrist, Greek National Health System, General Hospital’s Child and Adolescent Psychiatry Department, Greece

Konstantinos Kotsis is a child and adolescent psychiatrist. He graduated in 2003 from Medical School of the University of Ioannina and continued his studies receiving his Master’s Degree in Social Adult and Child Psychiatry. He has awarded his PhD in 2013, at the Department of Psychiatry of Medical School of the University of Ioannina, where he assessed the role of illness perceptions in psychological distress and Health-Related Quality of Life in patients with rheumatological disorders. He continues his research in similar areas at the same department.

He is working for the Greek National Health System in a General Hospital’s child and adolescent psychiatry department where his main areas of clinical work are Consultation - Liaison child psychiatry and telepsychiatry for children and adolescents. He has also experience in clinical work and research with children suffering from chronic illness as well as with children with special educational needs.

He has published peer-reviewed papers in the field of psychosomatic medicine and he is also a reviewer in several scientific journals. Konstantinos Kotsis has completed his training in Family Therapy and he is member of the Hellenic Systemic Thinking and Family Therapy Association.

He is also member of the Executive Committee of the Hellenic Society of Child and Adolescent Psychiatry (2017-2019) and member of the European Association of Psychosomatic Medicine (EAPM).



Koukopoulos, Alexia
Psychiatrist, Center for Prevention
and Treatment of Women's Mental
Disorders, Sant'Andrea Hospital of
Rome, Italy

Alexia Koukopoulos is a psychiatrist, she has been working in the field of bipolar disorders since 2000. She completed her medical education at La Sapienza University in Rome, Italy. She has trained and worked at the Centro Lucio Bini in Rome and at the Sant'Andrea Hospital, Sapienza University. In 2006-2007 she has worked at the MGH Center for Women's Mental Health in Boston, USA, where she worked with Dr Adele Viguera and Dr Lee Cohen, since then she has dedicated her clinical and research work to the field of mood disorders in women and especially in the perinatal period. In 2012 she founded, together with Prof. Gloria Angeletti, the Center for Prevention and Treatment of Women's Mental Disorders (Centro di Prevenzione e Cura per il Disagio Psicico della Donna) at the Sant'Andrea Hospital of Rome, Italy.. With this group she has been doing clinical, research and training activities in mood disorders and perinatal psychiatry . She has published several articles and book chapters on the topics of bipolar disorders and women's mental health.



Koupidis, Sotirios
Occupational Doctor, Greece

Dr Koupidis was born in 1975 in Veroia - Macedonia. He graduated from the Aristotle University of Thessaloniki School of Medicine and the National School of Public Health (MSc in Health Management). He completed his PhD at the University of Athens School of Medicine.

He served as Deputy CEO and CEO in three Psychiatric Hospitals and in the case of Chania and Corfu those two Psychiatric Hospitals were transformed in Community based Mental Health Services Network.

He was a doctor in the program "Promotion, Prevention and Public Health", emphasizing in assessing and restoring health for immigrants in a novice social context in the Municipality of Athens. He was the administrative coordinator of the administration task force of the Ministry of Health for the first nation-wide epidemiological surveys for mental disorders in adults.

Dr Koupidis also has significant teaching experience, namely in the Technological Educational Institute of Kalamata, the National Centre for Public Administration, on subjects such as Epidemiology and Public Health, Health Services Organization and Management and Healthcare Systems.

Mr Koupidis was a member of the Scientific and Technical Support Secretariat of the Independent Committee of Special Experts for the Healthcare System (Task Force for Health).

He has accomplished 16 publications in official journals with a significant Impact Factor, 90 free papers in conferences and 33 attendances in round tables.

He is an occupational doctor. He attended his residency in the

General Hospital of Athens “Evangelismos” and as part of his training he attended a three months specialty training at Mount Sinai Medical School, Department in Epidemiology Center of Occupational and Environmental Health in New York. He is also working as an expert in a WHO project for the implementation of reform in the Primary Health Care in Greece.

He has received three awards for most important administrative work, on issues concerning the improvement of functioning of health services.

Currently is also Chairman of the Board of the Social Cooperative of Limited Liability (KoiSPE) of 8th Attica Mental Health Sector “Athina Elpis”, which is a social cooperative (also a mental health unit), that creates job opportunities for people with mental health disabilities, aiming to their socio-economic inclusion and self-sufficiency. He is also the President of the Board of the Panhellenic Federation of Social Cooperatives of Limited Liability (POKoiSPE) which is the umbrella organization and represents the 30 KoiSPE that exist in Greece.



Malliaris, Panagiotis
Clinical Psychiatrist, Head
Psychiatrist, 5th Department, Private
Psychiatric Clinic “Ippokrateio
Therapeutirio”, Larissa, Greece

Panagiotis A. Malliaris, 38 years old, is clinical psychiatrist, MD. He is Head psychiatrist of the 5th Department (61 patient) in the Private Psychiatric Clinic “Ippokrateio Therapeutirio” in Larisa, where he also practices psychiatry in the Private Sector (Papakyriazi 45).

He is a Research Fellow in Psychiatric Clinic of the University Hospital of Larisa, in Outpatient Department of Psychotic Disorders, with scholarship in the Academic Field of Psychotic Disorders, while being PhD candidate (“Research and evaluation of biological and neuropsychological markers in the dimensional approach of schizophrenia spectrum disorders”). He is Msc student in “Management of Aging and Chronic Disorders”, a Postgraduate course of the Hellenic Open University in collaboration with the University of Thessaly.

He has participated as speaker in 6 national psychiatric conferences the last four years and has participated in two scientific publications. He had been specialized in Psychiatry in the University Hospital of Larisa and in the General Hospital of Volos. He has completed the theoretical course in Cognitive Analytic Psychotherapy. He was granted his Medical degree from the University of Patras, (grade 7,45/10) and he is graduate of the 7th High School of Patras (grade 20/20).



Manfredi, Giovanni

Clinical Liason Psychiatrist, Neurology,
Medicine and Surgery Departments,
Sant' Andrea Hospital - "La Sapienza"
University of Rome, Italy

Education:

From October 2001 to October 2004: PhD in "Neuroscience, Motor Rehabilitation and Behavioral Science" at the "La Sapienza" University of Rome.

December 2001: License in Psychotherapy granted by the Italian Medical Association, Roman Section.

November 2001: Specialization Magna cum Laude in Psychiatry and Psychotherapy - "La Sapienza" University of Rome. Dissertation on: The use of olanzapine in bipolar disorder.

May 1998: Medical Licensure obtained from the National Boards Examination

October 1997: Graduated in Medicine and Surgery Magna cum Laude - "La Sapienza" University of Rome.

Work experience:

From September 2011 to date: director of the Psychiatric Day-Hospital of the Department of Psychiatry - "La Sapienza" University of Rome, Sant'Andrea Hospital.

From April 2005 to date: working as clinical psychiatrist at the in-patient unit of the Department of Psychiatry - "La Sapienza" University of Rome, Sant'Andrea Hospital.

From April 2005 to date: Clinical Liason Psychiatrist at the psychiatric emergency unit of the Sant'Andrea Hospital - "La Sapienza" University of Rome.

From November 2001 to August 2011: working as clinical psychiatrist at the out-patient unit of the Department of Psychiatry - "La Sapienza" University of Rome, Sant'Andrea Hospital.

In this context I dealt with many bipolar patients, developing remarkable interest in the neurobiology, assessment, and clinical course and outcome of bipolar disorders.

Responsible for the psychopharmacology out patient clinic, focus on Bipolar Disorders.

From November 2001 to date: Clinical Liason Psychiatrist for the Neurology, Medicine and Surgery Departments at Sant'Andrea Hospital - "La Sapienza" University of Rome.

Teaching activities:

From November 2009 to date: teaching Psychiatry in Psychology Faculty at the University of Rome "La Sapienza"

From November 2009 to date: teaching Psychiatry in Medicine Faculty at the University of Rome "La Sapienza"

From November 2007 to date: teaching Psychiatry in Neurology residency courses at the University of Rome "La Sapienza".

From November 2005 to date: teaching in Psychiatry residency courses at the University of Rome "La Sapienza", specializing in psychopharmacology for affective disorders.

From March 2005 to date: teaching courses for the psychiatric nursing program at the University of Rome "La Sapienza".

March 2005: held a CME course on Emergency Psychiatry at Sant'Andrea Hospital, University of Rome "La Sapienza".

May 2002: participated in the organization and in the teaching of a CME Psychiatry course for Mental Health Professionals from developing countries, sponsored by the Department of Experimental Health and Pathology at the University of Rome "La Sapienza".

From November 2001 to date: Mentor Psychiatric Residents in clinical management of the Bipolar Patients they follow in our department.

From November 2001 to date: mentoring medical students during their Psychiatry rotation and assist with the preparation of their final thesis.

From November 2001 to date: I held a series of lectures on the assessment of bipolar disorders in the context of CME programs.



Mavreas, Venetsanos

Professor of Psychiatry, Medical School, University of Ioannina,
Director of the Department of Psychiatry, University Hospital of Ioannina, Greece

Professor Venetsanos Mavreas was born in Athens in 1951. He studied medicine at the University of Athens and specialized in Neurology and Psychiatry in Athens. From 1983 to 1988, he worked at the Maudsley Hospital and the Institute of Psychiatry in London, where he took his Ph.D. in 1990. From 1988 to 2000, he worked at the Department of Psychiatry of the University of Athens Medical School and the University Mental Health Research Institute in Athens. From 2000 to date, he is Professor of Psychiatry at the University of Ioannina Medical School and Director of the Department of Psychiatry of the University Hospital of Ioannina. The main topics of his work is psychiatric epidemiology, social and community psychiatry, trans-cultural psychiatry and research methodology in mental health. He is member of the Hellenic Psychiatric Association, the World Psychiatric Association and President of the Hellenic College of Academic Psychiatry. He has been advisor of the World Health Association in issues of mental health, psychiatric classifications, research instruments and disability. He is deputy member of the Health Central Council of Health. He has published over 100 scientific papers in international and Greek scientific journals and books.



Michopoulos, Ioannis

Psychiatrist, Associate Professor
of Psychiatry, School of Medicine,
National and Kapodistrian University
of Athens, Greece

Ioannis Michopoulos is a psychiatrist and Associate Professor of Psychiatry in the School of Medicine, National and Kapodistrian University of Athens in Greece. He is a teaching cognitive psychotherapist and treasurer of the Hellenic Society for Cognitive Psychotherapies (member of EABCT). He is Head of the Eating Disorders Unit of the 2nd Department of Psychiatry in Attikon Hospital. He has more than 50 international publications and more than 500 citations in the international literature. His studies include clinical and neuropsychological interests, mainly in mood and eating disorders.



Miller, Robert B.

Associate Professor, Practicing Family
Medicine physician, Loyola University
Medical Center, Chicago, IL, USA

I am currently an Associate Professor and practicing Family Medicine physician at Loyola University Medical Center near Chicago, IL, USA. I attended medical school and residency at Rush University Medical Center in Chicago, IL, and did my Sports Medicine fellowship at St. Joseph's Hospital (Midwest Orthopedics). I am currently board certified in Family Medicine. I have been a faculty member at Loyola since 2005, and I also enjoy research and teaching in the medical school in addition to my clinical practice. I have particular interests in musculoskeletal injuries, adolescent medicine, and collaborative mental health care. I am active in my community in the western suburbs of Chicago, where I live with my family.



Mintzas, Michael

Rural Community Primary Healthcare
Physician, Amfikleia, Greece

Dr Michalis Mintzas MD, was born in Heraklion in 1992. He graduated from the AUTH Medical School in July 2017 and worked at 'Aghios Charalampos' Mental Health Clinic in Heraklion from November 2017 to February 2018. Since March 2018, he has been serving as a rural community primary healthcare physician in Amfikleia.





Mitropoulos, Georgios
Consultant Psychiatrist, Psychiatric
Hospital of Attiki, Greece

George Mitropoulos is a consultant psychiatrist working at the Psychiatric Hospital of Attiki. He graduated from the Medical School of the University of Athens. As a psychiatrist, he treats patients both at the acute phase clinic and at rehabilitation housing settings. He is also a practitioner of lacanian psychoanalysis. He has published original research concerning the phenomenology of psychosis and gender issues of psychotic patients. He recently accepted an invitation by the Freudian School of Cyprus to lecture on psychoanalytical issues. He has an active scientific interest in such topics as psychiatric diagnosis and classification, clinical psychopathology, psychoanalytic theory, and the incorporation of psychoanalytical insights into clinical psychiatry.



Mitrusias, Alexandros
Molecular Biology Student, Democritus
University of Thrace, Greece

Mr. Mitrusias is a Molecular Biology student in the final year of his studies. He graduated with excellent marks from the 4th Lyce of Tricala and he started his studies in the Chemistry Department of University of Ioannina in 2012. In the following year he was admitted in Molecular Biology and Genetics Department of Democritus University of Thrace. His final post graduate Thesis has the title « The effect of Vit D in the expression of genes that involved in dopamine metabolism»



Möller, Hans-Jürgen
Emeritus Professor of Psychiatry,
Ludwig-Maximilians University,
Munich, Germany

Hans-Jürgen Möller, MD, worked from 1988 to 1994 as full Professor of Psychiatry and Chairman of the Psychiatric Department at the University of Bonn (Germany) and from 1994 to 2012 as full Professor of Psychiatry and Chairman of the Psychiatric Department at the Ludwig-Maximilians-University in Munich (Germany), where he acts now as professor emeritus. Professor Möller's main scientific contributions include clinical and neurobiological research into psychiatry, schizophrenia and depression, and clinical psychopharmacology. Professor Möller has written and co-authored over 1,300 scientific publications (Hirsch Factor 120) and several books. He was certified 2014 and 2015 by Thomson Reuters among 1% of researchers for most cited papers (2002-2012). He was editor or co-editor of several German or English journals like "European Archives of Psychiatry and Clinical Neuroscience", "World Journal of Biological Psychiatry". He was President of the World Federation of Society of Biological Psychiatry (WFSBP), of the European Psychiatric Association (EPA) and Chairman of the Section on Pharmacopsychiatry of the World Psychiatric Association (WPA). He is Past-President

of the Collegium Internationale Neuro-Psychopharmacologicum (CINP).



Möller-Leimkühler, Anna-Maria

Professor of Psychiatry, Department
of Psychiatry and Psychotherapy,
Ludwig-Maximilians-University
Munich, Germany

Qualifications

- 2011 Extraordinary professorship or "Social Science in Psychiatry"
- 2005 Habilitation for 'Sociological Psychiatry' at the Medical Faculty, University of Munich, Germany
- 1988 Doctoral degree in Social Science, University of Wuppertal, Germany
- 1980 Diploma in Social Science, University of Bochum, Germany

Positions

- since 1998: Senior social scientist at the Department of Psychiatry, Ludwig-Maximilians- University of Munich
- 1991-1997: Lecturer on Public Health, University of Düsseldorf
- 1982-1998: Scientific collaborator, Department of Psychiatry, University of Düsseldorf

Main activities

- Main research fields: gender and mental health, caregiver burden, patient satisfaction.
- Chair of the expert group "Gender" of the German National Suicide Prevention Program
- Scientific consultant of the German Society of Men and Health and of the Foundation Men's Health, Berlin



Nestoris, Christoforos

Psychiatrist - Psychotherapist,
Thessaloniki, Greece

Christoforos Nestoris has graduated from Aristotle University of Thessaloniki, Medical School, in 1995. He completed his residency in Psychiatry in 2005 at the 2nd University Psychiatric Clinic of Psychiatric Hospital of Thessaloniki, Greece.

He has received training in CBT at the Psychiatric Hospital of Thessaloniki and at the Community Mental Health Center, central district, Thessaloniki, 1999-2005, under the clinical supervision of prof. Gregoris Simos, president of the Greek Association for Cognitive and Behavioural Psychotherapies (www.gacbp.com)

Currently he is working in private practice, as a psychiatrist - psychotherapist. He is an accredited therapist by the European Association for Behavioural and Cognitive Therapies (EABCT) and member of the Greek Association for Cognitive and Behavioural Psychotherapies (GACBP) since 2004. He is also member of the Academy of Cognitive Therapy (ACT) and the Association for Contextual Behavioral Science (ACBS).

He is interested especially in anxiety and mood disorders, obsessive-compulsive disorder, CBT for schizophrenia and bipolar

disorder, integrating Mindfulness into Cognitive Therapy and Acceptance and Commitment Therapy.



Nikolaidis, Nikolas

Psychiatrist, Head of the educational program for CBT, 2nd Psychiatric Clinic, Medical School of the Aristotle University of Thessaloniki, Greece

Dr Nikolaidis is a psychiatrist working in the private sector. He is a cognitive behaviour therapist since 1998 and head of the educational program for CBT in the 2nd Psychiatric Clinic of the Medical School of the Aristotle University of Thessaloniki, Greece



Nimatoudis, Ioannis

Professor of Psychiatry, Director of the Division of Neurosciences, Aristotle University of Thessaloniki, Greece

Ioannis Nimatoudis is Professor of Psychiatry and director of the Division of Neurosciences at the Aristotle University of Thessaloniki, Greece He received his Medical degree from the Aristotle University Thessaloniki in 1979 and completed his residency in Psychiatry - Neurology in 1984. Since 1990 he is active member in Psychiatric Reform and rehabilitation in Greece, and specially devoted in the "Leros Programme" of the Regulation 815/84 of E.U. During 1991- 2003 he served as scientific coordinator of rehabilitation units in Thessaloniki under the auspice of the N.G.O. "Society of Mental Health and Social Rehabilitation" in collaboration with the Ministry of Health and the E.U.

He has supervised 9 PhD that completed successfully in four of them been part of the three member committee. He is currently the main supervisor in 4 PhD that are in process. He is responsible for organising elective courses in Neuropsychiatry, he participates in education programmes of other Medical Universities in Greece and is responsible for organizing educational workshops in international conferences. His main research interests rely on neuropsychology, psychopharmacology, psychopathology and evaluation of psychiatric services. He served as member of the organizing committee of 13 international and 13 national conferences. He is an active member of 11 national and international scientific societies. He has participated in 83 Greek and International scientific conferences and in 58 round tables, lectures, and seminars as invited speaker. He is author or coauthor of more than 250 papers presented in conferences or published in national and international scientific journals.



Ntetsika, Theodora
5th year Medical Student, University
of Ioannina, Greece

Theodora Ntetsika is a 5th year medical student at the University of Ioannina, Greece. She was born and raised in Ioannina. She was distinguished in the Panhellenic examinations and passed among the first nominees to the Medical School. She is the President of the Chapter of Ioannina of the Scientific Society of Hellenic Medical Students. She has organized a series of scientific seminars for medical students and worked on a variety of awareness-raising initiatives on social issues related to medical science. She was the Vice-President of the 24th Scientific Congress of Hellenic Medical Students. Her interests are focused on the study and understanding of medical science, the discovery of its beauty and the promotion of human well-being through this journey of knowledge. Her future plans lean to the domain of Neuroscience and Psychiatry. She speaks fluently English and French. Literature, poetry, music, history and politics are of her main interests, while travelling, communicating and tasting food and different cultures of her preferable pastime activities.



Oikonomou, Achilleas
Psychiatrist-Psychotherapist, Greece

Achilleas Oikonomou is a psychiatrist-psychotherapist. He owns two private medical offices in the cities of Trikala and Grevena. He is the lead psychiatrist in the team of the mobile mental health units of EPAPSI responsible for the island of Tinos. He is also the psychiatrist in charge of the boarding house of EPAPSI in Trikala. At present he is President of the Greek Young Psychiatrists and in the past he served as President of the Hellenic Association of Psychiatric Trainees. He has an MSc in Health Management. He has over 50 presentations in international and Greek psychiatric conferences.



Ozel-Kizil, Erguvan Tugba
Professor of Psychiatry, Department
of Psychiatry, Ankara University
School of Medicine, Turkey

Dr. Ozel-Kizil is specialized at adult psychiatry. She received her medical degree from Hacettepe University School of Medicine in 2000 and completed her Psychiatry trainee at Department of Psychiatry in Ankara University School of Medicine in 2005. She has been working as a psychiatrist at the same department (Department of Psychiatry in Ankara University School of Medicine) since then. She worked as a psychiatrist between 2005-2011, as an associate professor between 2011-2017 and in 2017 she was appointed as the professor of Psychiatry. She is a lecturer at the Ankara University School of Medicine and she also works as the chief of the outpatient Geriatric Psychiatry and inpatient psychosis units of the department. She is mainly interested in neuropsychiatry and neuropsychology. She has participated in several national and international publications concerning neurocognitive disorders, schizophrenia, bipolar

disorder, social phobia and grief. She is also active in social work at professional organizations like Turkish Association of Psychiatry and Turkish Alzheimer's Association. She is the board member of the local committee of Turkish Association of Psychiatry as well as the coordinator of the Geriatric Psychiatry Unit of Turkish Association of Psychiatry.



Panagiotidis, Panagiotis
Consultant, Psychiatric Dept.,
424 Military Hospital,
Thessaloniki, Greece

Dr Panagiotis Panagiotidis received his medical degree at Aristotle University of Thessaloniki (A.U.TH.), Greece in 1998, and completed his residency in psychiatry in 2007 in the 3rd Psychiatric department of A.U.TH. He currently serves as consultant at the rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece. He also works in his private practice (Co-owner, Ψ-Center Thessaloniki, Private sector, Mental Health and Addictions Center, Thessaloniki, Greece).

Dr Panagiotis Panagiotidis has earned his PhD Thesis in 2012, from Medical School of A.U.TH. with the subject: "Prevalence of neurological soft signs in patients with schizophrenic psychosis" and received a 2 years Fellowship, 3rd Psychiatric department (A.U.TH) in "Drug addictions, screening and identification of problematic use and dependence from psychoactive substances, prevention and brief interventions in the general population and special subgroups, therapeutic management, individual and group psychotherapies". He is scientific associate, 3rd Psychiatric Department, Aristotle University of Thessaloniki and participates in psychiatric training of undergraduate medical students, as well as of psychiatry residents and psychologists.

Dr Panagiotis Panagiotidis is member of many Scientific Committees, member of the European Commission's projects for Alcohol ("Bridging the Gap», «brief interventions for alcohol abuse" and "building capacity") and also member of the working group of the European Psychiatrists specialized in alcoholism. He is General Secretary of the Greek Society for the Study of Addictive Substances. ". His areas of clinical and research interest are Addictions, Schizophrenia, Bipolar spectrum disorders, Liaison Psychiatry, Psychopharmacology and Military Psychiatry. He has participated in various International and Regional meetings and congresses and as an invited speaker for various scientific associations. He has authored and co-authored more than 50 papers delivered in Greek and International Journals.



Papadimitriou, Panagiota
Resident in Adult General Psychiatry,
5th Department, Psychiatric Hospital
of Attica, Greece

Dr Papadimitriou is a graduate of the Medical School of Palermo (Università degli Studi di Palermo, Italia). During Medical school, she practiced in specific programs of Internal Medicine, Forensic Medicine, Sports Medicine, and Neurosurgery. In 2012, she returned to Greece to practice medicine and for 1 year and a half she was a physician of rural service in Sperchiada, a village in Fthiotida's countryside. After that time, she started her psychiatric internship at Kozani's General Hospital, where she was trained 8 months in acute psychiatric disorders and 6 months in intercourse psychiatry. At the present, she is completing her psychiatric training in Psychiatric Hospital of Attica at the 5th Department. During her training time, she participated in two neuropsychiatric seminars in Primary Health Care and attended the 23rd and 25th Pan-Hellenic Congress of Psychiatry. Specifically, in the 25th Congress she presented 2 posters, one concerning the impact of unemployment on mental health and the other about refugee migration crisis.



Pappa, Aglaia
Associate Professor of Molecular
Physiology, Democritus University of
Thrace, Greece

Dr. Pappa is Associate professor in Democritus University of Thrace in the department of Molecular Biology and Genetics. She teaches Physiology and Pharmacology. She is a graduate of Biology Department from Aristotele University of Thessaloniki. She had her Phd. in Pharmacology and Chemistry Laboratories from University of Ioannina. She had her post Phd training in Dr. Vasilious' Laboratory, University of Colorado Health Sciences Center, School of Pharmacy, Denver, Colorado, U.S.A. and Dr. D. J. Krolls', Natural Products Laboratory, Center for Organic and Medicinal Chemistry, Research Triangle Institute (RTI), Research Triangle Park, North Carolina, U.S.A. She has a significant number of announcements in National and International conferences. She has also a significant number of publications in International scientific Journals.



Parlapani, Eleni
Assistant Professor in Psychiatry,
1st University Psychiatric Clinic,
General Hospital Papageorgiou,
Thessaloniki, Greece

Eleni Parlapani was born in Thessaloniki in 1976. She graduated from the School of Medicine of the Aristotle University of Thessaloniki in 2000. She received a Marie Curie Training fellowship from the European Community as part of the European Graduate School for Neuroscience (EURON) at the Division of Neurobiology of the Department of Psychiatry, Saarland University, in 2003. She continued with her postgraduate education in neurobiology research in the Division of Neurobiology at the Saarland University until September 2005. In 2006 she completed her doctoral thesis, which focused on gene expression profiling of risk genes in schizophrenia. In 2005 she began with her residency in the Department of Psychiatry and

Psychotherapy, Saarland University, and after two years in the Department of Psychiatry and Psychotherapy, Goettingen University. During her residency, she continued with her research work and received funding by the University of Goettingen for a project at the research centre Max Planck Institute for Experimental Medicine, Goettingen, focusing on genome-wide analysis of gene expression in hippocampal pyramidal neurons in schizophrenia patients. She returned to Greece in 2009, and completed her residency in psychiatry in 2011. She became a Lecturer in Psychiatry at the Aristotle University of Thessaloniki in 2012, and an Assistant Professor in 2015. Since 2012, she has been working at the 1st University Psychiatric Clinic of the General Hospital "Papageorgiou" in Thessaloniki, where she has been fully clinically engaged and teaching medical students and psychologists. Her main research fields include the pathophysiology of schizophrenia, and resilience in schizophrenia and bipolar disorder.



Pervanidou, Panagiota

Assistant Professor of Developmental & Behavioral Pediatrics, Head of the Center of Developmental & Behavioral Pediatrics, First Department of Pediatrics, University of Athens, School of Medicine, "Aghia Sophia" Children's Hospital, Athens, Greece

Dr. Panagiota Pervanidou, MD, is currently Assistant Professor of Developmental & Behavioral Pediatrics and, since 2007, Head of the Center of Developmental & Behavioral Pediatrics, First Department of Pediatrics, University of Athens, School of Medicine, "Aghia Sophia" Children's Hospital, Athens, Greece. Dr Pervanidou is a graduate of Aristotle University of Thessaloniki, School of Medicine. She completed her residency in Pediatrics in the First Department. of Pediatrics, University of Athens, School of Medicine, "Aghia Sophia" Children's Hospital, and a fellowship in Developmental & Behavioral Pediatrics in the First Department of Pediatrics, University of Athens and the Cincinnati Children's Hospital Medical Center, Cincinnati, USA. She has a Medical Doctorate in the Neuroendocrinology of Posttraumatic Stress Disorder in Children and Adolescents, from the First Department of Pediatrics and the Department of Child Psychiatry, University of Athens, School of Medicine. She is a member of the International Society for Developmental and Behavioral Pediatrics, SDBP, since 2008 and founding member of three Greek Societies. She has a great teaching experience in the pre-and postgraduate level and she has organized more than 20 Educational Seminars and Conferences. Clinical and Research Interests include: Stress, ADHD, Autism Spectrum Disorders, Eating Problems and their neuroendocrine and neurobiological mechanisms

Research Summary: peer reviewed (full) articles: 53; IF: 164.543; citations: 1.909; h-index:17; i10-index: 25 (google scholar); book chapters: 12; Invited Speaker in international conferences: 19; Invited Speaker in > 100 Greek Conferences; Presentations in International Congresses>100



Petrikis, Petros
Assistant Professor of Psychiatry,
University of Ioannina, Greece

Education:

Graduated from the Aristotle University of Thessaloniki in 1992, completed my residency training as a psychiatrist in the First psychiatric Clinic of the University of Thessaloniki in 2002. In 2007 completed my doctoral thesis about "The subjective experience in patients with schizophrenia". From 2002 till 2010 scientific collaborator of the First Psychiatric Clinic of the University of Thessaloniki, participating actively in clinical practice, lectures and clinical training for medical students and resident doctors and research. In 2010, I received a fellowship from the Philippe Paumelle Center in Paris where, under the supervision of Dr Kapsambelis, psychiatrist-psychoanalyst and General Director of the Center, participated in clinical practice and in seminars focusing on psychoanalytic theory and practice, psychotherapy and psychopathology

Training and Professional Experience

From 2011 till 2016, I was a lecturer in Psychiatry at the University of Ioannina Faculty of medicine, School of Health Sciences, participating actively in clinical practice, research, lectures for pre-, post-graduate students and resident doctors. From 2012 on, I am co-responsible with the Associate Professor Mr Skapinakis for the Lecture and the clinical training of medical students. Since 2013, I am running the Early Intervention in Psychosis Unit of the psychiatric Clinic. My main research interests include immune, hormone and metabolic alterations in drug-naïve first episode patients. From 2012 on, in collaboration with the Department of Forensic Medicine and Toxicology, we implemented a program focusing on antipsychotic drug measurement, aiming at optimizing the dosages of the aforementioned medications and at the reduction of relapses of the patients.



Prochaska, Danika
Psychiatry Resident, Loyola University
Medical Center, Chicago, USA

I was born and raised in the Chicago Suburbs. I completed my Bachelor's degree in Brain Behavior and Cognitive Science at The University of Michigan. I then attended medical school at Loyola University Medical Center Stritch School of Medicine near Chicago, IL, USA. After medical school I stayed at Loyola for my Psychiatry Residency where I am currently Chief Resident. My areas of interest include the link between inflammation and mood disorders as well as teaching medical students.



Ramnalis, Anestis
Consultant at the rank of Major,
Psychiatric department, 424 General
Military Hospital, Thessaloniki,
Greece

Ramnalis Anestis graduated from the Medical School of Aristotle University of Thessaloniki in 2002, and completed his residency in psychiatry in 2011. He currently serves as consultant at the rank of Major, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece, and also private practice. He is scientific associate, 1st Psychiatric Department, Aristotle University of Thessaloniki. He participates in psychiatric training of undergraduate medical students, as well as of psychiatry residents and psychologists.

His interests include Psychopharmacology (owner of Master of Psychopharmacology), Schizophrenia and other Psychotic disorders, Bipolar Spectrum disorders and liaison Psychiatry. He has participated in various International and Regional meetings and congresses and as an invited speaker for various scientific associations.



Rantis, Konstantinos
Consultant Psychiatrist, Hellenic
Armed Forces, Medical Corps (rank:
Major), Psychiatric Clinic, Substance
Abuse Department, 424 Military
Hospital Greece

OCCUPATIONAL INFORMATION:

- Consultant Psychiatrist
Hellenic Armed Forces, Medical Corps (rank: Major)
Current Institution: 424 Military Hospital, Psychiatric Clinic,
Substance Abuse Department

- Private Practice

WORK EXPERIENCE:

- Medical doctor, Officer, Hellenic Armed Forces since 2003.
- 401 Military Hospital as non-specialist physician, 2003-2004.
- Military camps as non-specialist physician, 2004-2006.
- Specialty training in Psychiatry, 2006-2012.
- Medical Company Commander, 71st Airmobile Brigade, 2012-2014 (including participation in NATO Response Force 2012, and EU Battlegroup 2014).
- Battle Medic School trainer, 2012-2014
- Participation in 2 NATO peacekeeping operations (Kabul, Afghanistan in 2005 as non-specialist physician, Prishtina, Kosovo in 2013 as a psychiatrist).
- Consultant Psychiatrist, Substance Abuse Service, Psychiatric Department, 424 Military Hospital, Thessaloniki, 2014-today.
- Coordinator specialist in several Psychosocial Care Groups of the Hellenic Armed Forces, 2012-today.

EDUCATION AND TRAINING:

- Aristotle University of Thessaloniki, Department of Medicine, 1997-2003.
- Corps Officers Military Academy, 1997-2003.
- Applied Medical Corps School, basic training, 2003-2004
- Residency in Psychiatry (424 Military Hospital and 3rd Psy-

chiatric Department, Aristotle University, Thessaloniki), including 1 year training in substance abuse, 3,5 years training in psychodynamic therapy and consultation liaison psychiatry, 2006-2012

- Title of Psychiatry Specialist, 2012
- Applied Medical Corps School, advanced training, 2014
- Certified training in Cognitive Analytic Therapy, 2015
- Courses on Internet Addiction (online), Zur Institute, currently undergoing.
- Course on Clinical Psychopharmacology, Hellenic Psychiatric Association, 2016-2017.
- Training in Addiction Medicine, 3rd Psychiatric Department, Aristotle University Thessaloniki, 2016-today.

OTHER OCCUPATIONAL SKILLS:

- Certified MedEvac training, 2004
- Certified ATLS training, 2004
- Health Service Management: Certified programme of the National Centre of Public Services, 2014
- Management of Human Personnel in Health Services: NCPS, 2014

PERSONAL SKILLS:

- Mother language : Greek
- Other languages: English: Certificate of Proficiency in English, University of Cambridge
- Certificate of Proficiency in English, University of Michigan
- French: Certificat de Langue Francaise, Institut Francais D' Athenes
- Good digital competence (Word, Powerpoint, Internet etc).



Rehn, Simone
Research Assistant, Australia

Publications

Kendig, M. D., Fu, M. X., Rehn, S., Martire, S. I., Boakes, R. A., & Rooney, K. B. (2018). Metabolic and cognitive improvement from switching to saccharin or water following chronic consumption by female rats of 10% sucrose solution. *Physiology & Behavior*, 188, 162-172.

Rehn, S., Eslick, G. D., & Brakoulias, V. (2018). A Meta-Analysis of the Effectiveness of Different Cortical Targets Used in Repetitive Transcranial Magnetic Stimulation (rTMS) for the Treatment of Obsessive-Compulsive Disorder (OCD). *Psychiatric Quarterly*, 1-21.

Brakoulias, V., & Rehn, S. (2017). Does the severity of obsessive-compulsive symptoms reduce with age? *Journal of Affective Disorders*, 213, 178-179.

Smith, D. G., Sajid, N., Rehn, S., Chandramohan, R., Carney, I. J., Khan, M. A., & New, E. J. (2016). A library-screening approach for developing a fluorescence sensing array for the

detection of metal ions. *The Analyst*, 141, 4608-4613. doi: 10.1039/C6AN00510A

Academic Achievements

Doctor of Philosophy

- University of Sydney 2018-Present

- Project focused on elucidating an animal model of binge eating and its overlap with addiction under the supervision of Emeritus Professor Robert Boakes

Bachelor of Psychology (Honours Class I)

- University of Sydney 2014 - 2017

- University of Sydney Medical School Summer Research, 2016-2017
- Dean's List of Excellence in Academic Performance, 2017
- Short-term Psychology Exchange programme, University of Bergen, Spring Semester 2016
- International Exchange Outbound Scholarship, 2015
- Talented Student Program (TSP), 2014-2015
- Psychology Entry Scholarship (Science Stream), 2014

Work Experience

Research Assistant 2016 - Present

- Experience with ethical procedures associated with handling rats
- Knowledge of how to use a variety of behavioural techniques such as, water-chamber training, sensory pre-conditioning, conditioned taste aversion, elevated plus maze, lever-press training
- Proficiency in handling, presenting and analysing data



Samakouri, Maria

Professor of Psychiatry, Head of the Department of Psychiatry, Medical School, Democritus University of Thrace, University General Hospital of Evros, Alexandroupolis, Greece

Maria Samakouri, MD, is Professor of Psychiatry and Head (since 2013) of the Department of Psychiatry, Medical School, Democritus University of Thrace (DUTH) at the University General Hospital of Evros, in Alexandroupolis (UGHA)- Greece.

Dr. Samakouri graduated from the Medical School, University of Athens-Greece, in 1985. She received her Certificate of the Specialist Training in Psychiatry in 1991 and earned her Doctorate in Psychiatry, in 1994, from the Medical School, DUTH. She worked as a NHS psychiatrist in the Department of Psychiatry - UGHA, for ten years, and later (2001 up today) served as a faculty member (lecturer, assistant and associate professor) at the Medical School, DUTH & UGHA. The services offered by the Department of Psychiatry of the above Hospital form a network of inpatient, outpatient, community and rehabilitation mental health units. In 2012, Dr Samakouri spent her 6-month sabbatical at the Institute of Psychiatry, King's College London & South London and Maudsley NHS Foundation Trust, London, UK. Since 2013, Dr. Samakouri is the Head of the mas-



ter degree program in Social Psychiatry, offered by the Medical School, DUTH and since 2016 she serves as the director of the newly founded Students' Psychosocial Support Service of the same University.

Dr Samakouri has been teaching, to undergraduate students, clinical psychiatry, community psychiatry, medical psychology and psychosomatics, for more than 15 years. Moreover, the courses she teaches to post-graduate students include ethics in psychiatry, forensic psychiatry and psychopharmacology.

Dr. Samakouri clinical and research interests concern community psychiatry. She has been actively involved in the "Psychiatric Reform" in the catchment area served by the UGHA. She has been the founding Director of many community mental health services of that Hospital that have been funded by EU, during the last 15 years.

Dr.Samakouri has coauthored more than 40 papers and chapters published in national & international journals and books.



Sani, Gabriele

Associate Professor of Psychiatry,
School of Medicine and Psychology
of Sapienza University, Department
of Neurosciences, Mental Health,
and Sensory Functions (NESMOS)
and Vice Director of the Psychiatry
Residency Training Program,
Rome, Italy

Gabriele Sani, medical doctor and psychiatrist, is Associate Professor of Psychiatry at the School of Medicine and Psychology of Sapienza University, Rome, Italy, Department of Neurosciences, Mental Health, and Sensory Functions (NESMOS) and Vice Director of the Psychiatry Residency Training Program. He is author or co-author of more than 100 international, peer-reviewed publication, 15 book chapters and two books. His research activity mainly focuses on clinical aspects of mood disorders, with particular reference to bipolar disorder, temperament, clinical course, rapid cycling, mixed states and specifically, agitated depression, drug treatment of psychiatric disorders, the concept of comorbidity and suicide. He carried-out continuous clinical assistance activity since 2001, first as a resident in psychiatry at Sapienza University, Rome-Sant'Andrea Hospital, and subsequently as an employee of the Sant'Andrea Hospital, as well as in private structures within the National Health System of the Lazio region. From 2001 onwards, he conducts regular clinical and research activity at the Lucio Bini Centre, Rome, which is renowned for the diagnosis and treatment of manic-depressive illness, under the supervision of dr. Athanasios Koukopoulos.



Sayed, Aima

First year Resident Physician, Loyola
University Medical Center, USA

Aima Sayed, MD is a first year resident physician at Loyola University Medical Center. She is originally from Pakistan, but has lived in Chicago most of her life. She graduated with a B.A. in Psychology from Rutgers University in 2012 and went to Loyola University Stritch School of Medicine for medical school. She graduated last month and is pursuing psychiatry at Loyola University Medical Center. She is interested in engaging in research and will be studying psychobiological aspects of depression.



Sereslis, Konstantinos

Resident in Psychiatry, Greece

Dr Sereslis graduated from the Medical School, Aristotle University of Thessaloniki. He has been a resident in Psychiatry since 2014.

Dr Sereslis has attended the three-year EABCT accredited CBT training Program of the Greek Association for Cognitive Behavioural Psychotherapies. He has also trained in Cognitive Analytic Therapy and also participated in Balint Groups. He is fluent in English and Italian.



Simos, Gregoris

Professor of Psychopathology,
University of Macedonia, Greece

Gregoris Simos graduated from the Medical School of the Aristotle University of Thessaloniki, from where he also earned his PhD. Dr Simos specialized on Neurology and Psychiatry, and he had postgraduate clinical training courses at the Institute of Psychiatry, University of London, and also at the Center for Cognitive Therapy/ University of Pennsylvania Medical School. Dr Simos is a Founding Fellow, a Diplomate and also a Certified Consultant/Trainer of the Academy of Cognitive Therapy. Dr Simos is the President of the Greek Association for Cognitive and Behavioral Psychotherapies and also the Head of its three-year CBT Training Program that is accredited by the European Association for Behavioural and Cognitive Therapies. Dr Simos has published in Greek and English and has been at the Editorial Board of various scientific Journals. He is currently a Professor of Psychopathology at the Department of Educational and Social Policy, University of Macedonia, Greece.



Simou, Meropi
Psychologist, Greece

Meropi Simou is a licensed psychologist and graduate of the Aristotle University of Thessaloniki (AUTH), Greece. She has completed a three-year EABCT-accredited training in Cognitive Behavioural Therapy at the Greek Association for Cognitive and Behavioural Psychotherapies (GACBP) and she is currently finishing her Master's degree in Clinical Psychology at Leiden University, The Netherlands. In the past years she has worked as a Scientific Associate at the First University Department of Psychiatry (AUTH), at the Papageorgiou General Hospital in Thessaloniki, as well as contributed as a psychologist in the Student's Counselling and Support Centre of the University of Macedonia and in private practice.

In the previous years, she has gained clinical experience by working voluntarily in various clinical settings, such as the Community Mental Health Centre, Central District/Psychiatric Hospital of Thessaloniki, or the First University Department of Psychiatry at the Papageorgiou General Hospital.

She has attended several congresses, both as a participant and as a speaker, presenting her research work along with other colleagues. She also continues her clinical training by participating in various workshops and seminars, with her primary scientific interests being in the field of diagnostics, clinical assessment and psychotherapy intervention.



Skapinakis, Petros
Assistant Professor of Psychiatry,
School of Medicine, University of
Ioannina, Greece

Petros Skapinakis is a graduate of the Medical School of the University of Athens and also holds a Masters in Public Health (MPH) from the University of Wales College of Medicine and a PhD in Psychiatry from the same University. He is currently an Assistant Professor of Psychiatry in the University of Ioannina School of Medicine. Dr Petros Skapinakis has authored/co-authored more than 50 peer-reviewed international journal publications and his main research interests include the common mental disorders and their association with the socioeconomic status, symptom-based epidemiological research (sleep, fatigue, depressive and anxiety symptoms), psychiatric epidemiology in adolescence and adults, obsessive compulsive disorder and other anxiety disorders and evidence synthesis.



Soldatos, Constantinos
Emeritus Professor of Psychiatry and
Director of the Mental Health Care
Unit, Evgenidion Hospital, University
of Athens, Greece

Professor C.R.Soldatos graduated from the Athens University Medical School, where he had subsequently his specialty training in Neurology and Psychiatry. He also trained for one year in Clinical EEG at the University of Manitoba Medical School, Winnipeg, Canada.

For the last 50 years, he has served as faculty member in the Departments of Psychiatry of the University of Athens, Pennsylvania State University and New York Medical College.

During his academic carrier, he became Associate Director of the Sleep Research and Treatment Center at Pennsylvania State University, Director of the Sleep Research Unit and Sleep Disorders Center at Athens University, Chairman of the 2nd Department of Psychiatry (Attikon Hospital) as well as the 1st Department of Psychiatry (Eginition Hospital) at the University of Athens. He is currently Emeritus Professor of Psychiatry and Director of the Mental Health Care Unit at the Evgenidion Hospital of the University of Athens.

Since June 2013 Prof. Soldatos served as President of the World Federation of Societies of Biological Psychiatry (WFSBP) for a two year term. He is now serving as a member of the Executive Committee of WFSBP in his capacity as the Past President for a two year period (2015-2017).

Over the years he has been Chairman of the Committee for Mental Health of the Central Health Council of Greece and Member of many other Committees of national and international Organizations. He was President of the International Neuropsychiatric Association (2006-2008) and of seven other scientific societies based either in Greece or abroad. Until now, he is President of the Hellenic Society for the Advancement of Psychiatry and Related Sciences as well as of the Hellenic Association of Biological Psychiatry, both of which he has founded. In addition, he served as Co Chair of the Operational Committee on Scientific Sections of the World Psychiatric Association (WPA) and he has been member of five more major committees of WPA and another seven of the WFSBP, two of which he chairs. He has been actively involved in the organization of more than 350 national or international congresses, having being President in 21 of them.

In 1967 completed his Doctorate Thesis and in 1989 his Dozent Thesis at the University of Athens Medical School. Also, he has been the Guest Editor of 3 International Psychiatric Journals and he has published 40 scientific books (10 in English) and about 500 journal articles or book chapters. His ISI journal articles have received 9602 citations, while his h-index is 51, as per Google Scholar in January 2017. Most of his research work pertains to Sleep Pathology and Pharmacology, particularly to the study of

insomnia and its relationship to psychopathology.

In recognition of his scientific contributions, Prof. Soldatos has received a number of distinctions from various scientific institutions; most notably, he is Doctor Honoris Causa of the Patras University, Honorary President of the Hellenic Sleep Research Society, which he founded in 1997, and Honorary Member of the World Psychiatric Association, the Polish Psychiatric Association, the Mexican Neuropsychiatric Association, the Argentinean Neuropsychiatric Association and the International College of Geriatric Psychoneuropharmacology. He is, also, the recipient of certain career awards, such as the Owl of Wisdom Prize and the Athens Hypnology Award. Finally, as of July 2014, he was elected Member of the European Academy of Sciences and Arts.



Sotiriou, Michael

Psychiatrist, Director of the
Psychiatric Adult Unit, Kavala General
Hospital, East Macedonia, Greece.

Michael J. Sotiriou is Director of the Psychiatric Adult Unit at Kavala General Hospital, East Macedonia, Greece. He received his medical degree and completed his residency in Psychiatry at the Aristotle University, 2nd Department of Psychiatry, Thessaloniki, Greece. Having awarded a scholarship (I.K.Y) he worked in Great Britain (Department of Psychiatry, Guy's Hospital, University of London). After his return to Greece he worked in Thessaloniki Psychiatric Hospital (Day Hospital), Serres (Community Psychiatric Center and Day Hospital). He still works in Kavala's General Hospital (NHS) having organized in Kavala the Adult Psychiatric Unit (2000), the Day Hospital (2002), two Independent living flats (2003) for chronic patients and, during 2011, the Social Cooperative of Limited Liability (1/3 of work positions are to be given to unemployed psychiatric sufferers).



Sotiropoulou, Eleni

President of Volunteer Program of
"Health for All", Greece

EDUCATION

Athens University, BSc in Economics

EMPLOYMENT HISTORY

- 12.12.1984 I was recruited following successful examinations by the Athens Nursery School Foundation
- 1986 - 2000, I was the head of the department of the Athens Nursery School
- Foundation (800 employees)
- 2000 Consultant at the Minister of Health and Welfare, in matters of welfare.
 - A. Planning and implementing the program of 3rd European Welfare program as of: Helping at Home, Creative employment centers for children with disabilities, Day support of Elderly, Nurseries
 - B. Planning and implementing the Health promotion program of Greek Gypsies, 1st prize of Children's Society.
- C. 2002 -2004 Consultant at the Deaf Foundation, Member

- of the National Committee of Persons with disabilities.
- 2004 Assigned to the National Organization of Drugs, Department of Public Relations and Information.
- E. 2016 President of volunteer program of “Health for All”
- Associate of the A’ University Clinic, “Ag. Sofia”
- Member of the scientific committee on congress of the National Organization of Drugs.



Stefanis, Nikolaos

Professor of Psychiatry, National and Kapodistrian University of Athens Medical School (NKUAMS) and Vice-Director of the University Mental Health Research Institute in Greece

Nikos C. Stefanis MD, FRANZCP, is Professor of Psychiatry at the National and Kapodistrian University of Athens Medical School (NKUAMS) and vice-director of the University Mental Health Research Institute in Greece. He is the chair of the First Episode Psychosis Task Force within the World Federation of Societies of Biological Psychiatry. He worked as Professor of Psychiatry at the School of Psychiatry and Clinical Neurosciences, The University of Western Australia (2010-2013). In his current capacity as a consultant psychiatrist he runs a national referral center for First Episode Psychotic Disorders at Eginition teaching Hospital, A’ Department of Psychiatry, NKUAMS (since 2016).

He trained in Psychiatry at the Maudsley Hospital / Institute of Psychiatry in London UK and in Cognitive Behavior Therapy at Oxford University. He joined the faculty of the Department of Psychiatry at the NKUAMS in 1999 as a lecturer, receiving tenure in 2008. He is an editorial board member of the journal *European Neuropsychopharmacology*, since 2009, and the *World Journal of Biological Psychiatry* since 2014. He has been a reviewer for 20 peer reviewed high impact journals including *Molecular Psychiatry*, the *American Journal of Psychiatry* and *Biological Psychiatry*.

He has received grants from the Onasion Foundation Scholarship in Greece, The Greek Ministry of Research and Technology, the European Regional Development Fund, and the National Institute of Mental Health USA with Prof. D. Avramopoulos.

His main academic interests have gravitated towards the better understanding of the complex interplay between genetic and environmental risk factors that shape the vulnerability for major psychiatric disorders. His academic work has been published in more than 70 high impact international peer reviewed journals: Impact factor ~ 380 (Google Scholar H index 29, citations 3800).



Theleritis, Christos

Clinical Research Associate,
University of Athens Medical School,
1st Psychiatry Dpt., Eginition Hospital,
Consultant in Psychiatry
in SOPSI Day Community Center
and Guest House, Greece
Visiting Senior Researcher, Dept.
Psychosis Studies, Institute of
Psychiatry, King's College London, UK

Dr Christos Theleritis MD, PhD, is a Clinical Research Associate with the University of Athens Medical School, 1st Psychiatry Dpt., Eginition Hospital and Consultant in Psychiatry in SOPSI Day Community Center and Guest House. He holds a senior visiting researcher's appointment with the Department of Psychosis Studies, Institute of Psychiatry, Psychology and Neuroscience, King's College, London, UK; within this context, Dr Theleritis has participated in the Genetics and Psychosis (GAP) study and the Physical Health and Substance Use Measures in First Episode Psychosis (PUMP) study. His primary research interests include: i) sexual dysfunction and metabolic disorders in first-episode psychosis, ii) Smoking and cognitive aspects in first-episode psychosis, iii) childhood trauma in first-episode psychosis, iv) Association of BDNF val/met and cognition in first-episode psychosis, v) Psychopharmacology Atypical Antipsychotics - Metabolic parameters, vi) Eye tracking (saccades, antisaccades, smooth pursuit, fixation) in patients with schizophrenia, schizotypy, OCD, Parkinson's Disease, vii) Executive functions, working memory, Neurological Soft Signs in patients with schizophrenia and schizotypy, viii) Psychogeriatrics, ix) Transcranial Magnetic Stimulation in patients suffering from depression, bipolar disorder, x) Sleep Medicine- Sleep Disorders, xi) Psychological trauma and PTSD after natural disasters.



Touloumis, Charalampos

Psychiatrist, Psychiatric Hospital of
Athens, Deputy Clinic Director, 10th
Psychiatric Department, Greece

Dr Touloumis was born in Chalkis of Evia, in Greece. He graduated from Medical School of Athens University and received his specialty in Psychiatry from Psychiatric Hospital of Athens and Evangelismos Hospital.

Since 1987, he has been working as Psychiatrist in Psychiatric Hospital of Athens (nowadays in the position of Deputy Clinic Director in the 10th Psychiatric Department). He has published more than 50 scientific publications through greek and international biomedical magazines. He has made more than 70 scientific presentations in medical conferences. He is interested specifically in Clinical Psychiatry and Psychopharmacology.





Tsalamaniotis, Emmanouil

Child and Adolescent Psychiatrist,
Assistant Clinical Director, Greek
National Health System, Asklepieio
General Hospital, Child and
Adolescent Psychiatry Department,
Greece

Emmanouil Tsalamaniotis is a child and adolescent psychiatrist. He graduated in 1991 from Medical School of the Aristotle University of Thessaloniki.

He was trained in “Adolescent Psychiatry-Personality disorders” in Menninger Clinic, Menninger Department of Psychiatry and Behavioral Health Sciences, Baylor College of Medicine in Houston and in “OCD Disorders” in “Houston OCD Program” and “Behavioral Health Partial Program” at McLean Hospital-Medical Harvard School.

He is working as a consultant (assistant clinical director) for the Greek National Health System in Asklepieio General Hospital in child and adolescent psychiatry department. His main area of clinical work is being in charge in a special community mental health service for adolescents.

He is also an active research fellow in Adolescent Health Unit(A.H.U), Second Department of Pediatrics,“P. & A. Kyriakou” Children’s Hospital.

He has published peer-reviewed papers in the field of OCD.

Emmanouil Tsalamaniotis has completed his training in Family Therapy and he is member of the Hellenic Systemic Thinking and Family Therapy Association.

He was Vice-President of the Executive Committee of the Hellenic Society of Child and Adolescent Psychiatry (20011-13).



Tsapakis, Evangelia

Psychiatrist, Visiting Research
Associate, Institute of Psychiatry,
King’s College London and Harvard
Medical School, Boston, Director,
Private Mental Health Unit,
Heraklion, Crete, Greece

Dr Tsapakis studied pharmacology at King’s College London and medicine at St. George’s Hospital Medical School, University of London. Having earned the first prize in psychological medicine (the Arthur Crisp Prize), she went on to train in psychiatry at the Maudsley Hospital. She has worked under Ross Baldessarini’s mentorship at Harvard Medical School whilst on a traveling fellowship awarded by the Royal College of Psychiatrists. In 2007, she earned a Masters in Affective Neuroscience from the University of Maastricht. Two years later, she earned a PhD in pharmacogenetics (on the role of metabolic enzyme variants in response to treatment with psychotropic agents) and pharmacogenomics (on the differential gene expression induced by antidepressants in juveniles) from the University of London. Dr Tsapakis’ awards include a Young Scientist Award at the 11th Biennial Winter Workshop on Schizophrenia (2002), a Research Award at the 5th International Neuropsychiatry Congress (2004), a Young Investigator Award for the 20th International Congress in Schizophrenia Research (2005), and a Poster Prize at the 3rd International Congress on Brain and Behaviour (2007). Dr Tsapakis is a visiting research associate at the Institute of Psychiatry, King’s College London and at Harvard Medical School, Boston, MA. Since 2009, she directs a private mental health unit in Heraklion, Crete, Greece.



Tsopelas, Christos
Consultant in Adult General
Psychiatry, Psychiatric Hospital of
Attica, Greece

Dr Tsopelas is a graduate of the Medical School of Athens. His psychiatric training was completed in Aeginition Hospital, Athens, and Charring Cross Psychiatric training Scheme, London, UK. He has worked in London in various posts, like Community Drug and Alcohol Teams and Crisis Resolution Home Treatment team. The last post was as Consultant psychiatrist in Community Mental Health Team at South London and Maudsley Trust before he returned to Greece in late 2005. Since then he has been part of Greek National Health system and worked for the last 5 years at the Psychiatric Hospital of Attica.

He completed his MSc in Psychiatric Research at Institute of Psychiatry, London, UK. He is in the process of finishing his PhD. He has training in Brief Solution Focused Therapy and Interpersonal Psychotherapy.

His special interests include Epidemiology, Forensic Psychiatry, patients' rights and community psychiatry. He has been secretary of Forensic Psychiatric Section of Hellenic Psychiatric Association and actively involved in organizing and teaching at European co-funded educational programs about de-institutionalization, community psychiatry and forensic psychiatry. Now he is General Secretary of the Board of the Hellenic Psychiatric Association and Vice President of the Greek Forensic Psychiatric Association.



Tzeferakos, George
Psychiatrist, Scientific Associate,
Forensic Psychiatric Unit-Depot
Outpatient Clinic, 2nd Department
of Psychiatry, University of Athens,
Greece

Dr. Tzeferakos Georgios is a Psychiatrist. He is scientific associate to the forensic psychiatric unit-depot outpatient clinic of the 2nd department of Psychiatry University of Athens, where he completed his PhD. He is the director of a substitution unit of the Hellenic Agency Against Drugs, which specializes in dual diagnosis patients treated with Long Acting Therapies. He also works in mobile mental health unit covering the Aegean islands of Milos and Kimolos.

He is the president of the Forensic Psychiatric Section of the Hellenic Psychiatric Association and Secretary of the Psychiatry, Law and Ethics Section of the World Psychiatric Association.





Venizelos, Nikolaos

Active Professor Emeritus and Head
of the Neuropsychiatric Research
Laboratory & Biobank, School of
Medical Sciences, Örebro University,
Sweden

Nikolaos Venizelos studied biomedicine at Uppsala University in Sweden and in 1981 after his Master thesis in clinical chemistry at the Karolinska Institutet, was obtained a professional certification/license as a specialist in Clinical Chemistry from the Ministry of Health in Greece.

In 1982 was appointed as a research associate at the Dept. of clinical chemistry, Karolinska Hospital, and during 1986-1999 was head of the Cell Culture & Biobank Section at the Centre for Inherited Metabolic Diseases (CMMS), Karolinska University Hospital. In 1997 he obtained a PhD in Medicine at Karolinska Institute and 1999 was appointed as Senior Researcher and in in the Section of Psychiatry at Karolinska University Hospital.

In 2001, he moved to the School of Health and Medical Sciences at Örebro University, where he established the Neuropsychiatric Research Laboratory. 2004 he obtained a Docentship (Associate professor) and was further appointed as Programme Director of Biomedicine Education Programme (4 years program). In 2012 he was appointed as a full Professor in Biomedical Sciences, at Faculty of Medicine and Health, Örebro University.

He has formally established the Swedish-Hellenic Life Science Research Conferences and is the inventor and chair of "Nobel Day Festivities" at School of Health-, and Medical Sciences, Örebro University since 2009. Significant for academic and research purpose is also that Prof. Venizelos has been Chaired of more than 35 public disputations of Medicine Doctor's theses. Prof. Venizelos's conduct research in Experimental Neuropsychiatry with actual focus to explore the role and regulatory mechanisms of proinflammatory cytokines, environmental lifestyles stress factors, and the influence of probiotics on the transport of the neurotransmitter precursor's tyrosine and tryptophan in neuropsychiatric disorders and in the ageing process.

Prof. Venizelos has been awarded with the "Norage-Pharmacia Award" and 2016, awarded with the "Delphic Prize for Outstanding Contributions to Psychiatry and Related Sciences", from 2017 he serves as Ambassador of the World Congresses of Biological Psychiatry.



Vorvolakos, Theofanis
Assistant Professor of Psychiatry,
Democritus University of Thrace,
Greece

He works as a consultant in the Psychiatric Department of Democritus University of Thrace. This includes word duties; community work and he have also founded and is responsible for the Old Age Psychiatric Clinic of the Hospital for the last 8 years.

He teaches in two Democritus University Departments and he participates in the teaching of five Master in Science Degrees from Democritus University of Thrace and the Technologic Educational Institute of Thessaly.

He was trained as a consultant Old Age Psychiatrist in Hillington, St. Pancras and Queen Mary's hospitals of London UK.

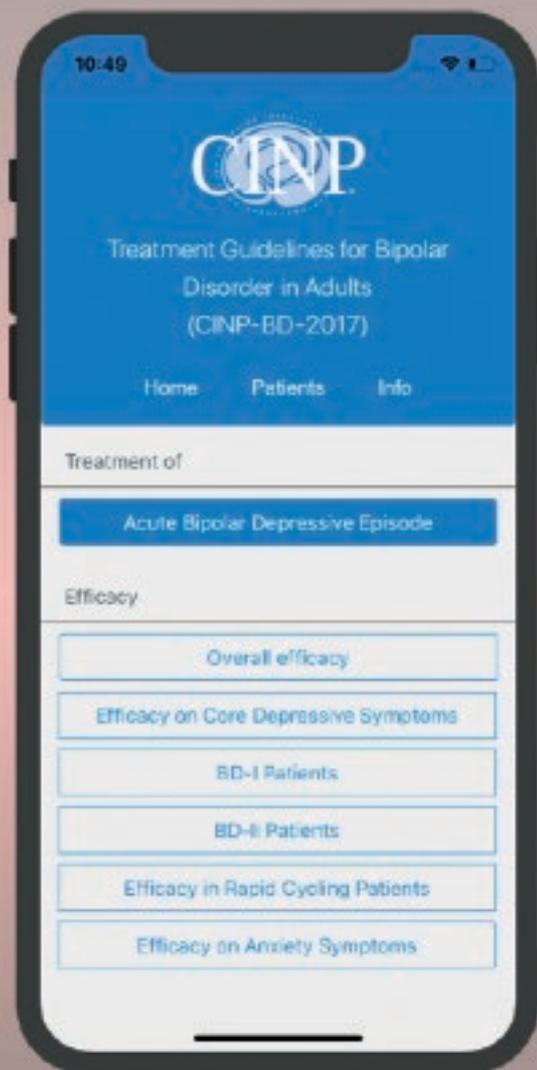
His research work includes the supervision of a number Philosophy and Diploma Thesis and is published in Greek and International Journals and is also announced in Greek and International Conferences.



Zikopoulou, Olga
Psychologist, Greece

Dr. Olga Zikopoulou has trained as a psychologist at Aristotle University of Thessaloniki (AUTH). She received a master's degree in Developmental and School Psychology, also from the AUTH. She has recently obtained her PhD from the Department of Educational and Social Policy, University of Macedonia, Greece. Her thesis was on the field of child psychopathology and her research focused on the application of a cognitive behavior therapy program with anxious children.

Since 2007 she works as a psychologist in private practice. She practices as a cognitive behaviour therapist with special interest in children and adolescents. She has a longstanding interest in issues relating to the modification and adaptation of CBT techniques in special groups, like children with high functioning autism. She works on a range of clinical conditions, including anxiety disorders, autism spectrum disorders, and attention deficits disorders. She works both with children and adolescents as well as with young adults. Her recent research interests lies in the field of emotional regulation, and especially in the efficacy of teaching emotion regulation skills for the management of a range of clinical symptoms.



iOS/Android Applications

- Specifics of iOS implementation in Xcode
- Based on web services for shared iOS/Android core logic
- Compatible with iPhone SE, 5s, 6, 6s, 7, X - including Plus models, and the most Android smartphones



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Acknowledgements

The Organizing Committee wishes to thank the below-mentioned Companies:







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**June 28th - July 1st, 2018
Kavala - Greece**