

# PSYCHIATRIA DANUBINA

Psychiatria Danubina (ISSN 0353-5053) is published quarterly by Medicinska naklada, Cankarova 13, 10 000 Zagreb, Croatia; Pro Mente d.o.o., 10 000 Zagreb, Croatia.

The cost of a yearly subscription to the journal is € 50.00 for institutions, € 40.00 for individual subscribers and € 30.00 for students - the prices are without postage (Payments in other currencies will be accepted on the basis of the official currency exchange rates). Advertising enquiries, correspondence and copy requests should be addressed to

Prof. Miro Jakovljević,  
Department of Psychiatry  
and Psychological Medicine,  
KBC Zagreb, Kišpatičeva 12,  
HR-10 000 Zagreb, Croatia  
(tel: +385 1 23 88 394;  
tel/fax: +385 1 23 88 329).  
psychiatria.danubina@gmail.com

All advertising material is expected to conform to ethical and medical standards. No responsibility is assumed by the publisher for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. Because of the rapid advances in the medical sciences, the Publisher recommends that independent verification of diagnosis and drug dosages should be made. Discussion, views and recommendations as to medical procedures, choice of drugs and drug dosages are the responsibility of the authors.

©2024 MEDICINSKA NAKLADA  
Zagreb, Cankarova 13, Croatia;  
Tel/fax: +385 1 37 79 444;  
www.medicinskanaklada.hr  
prodaja@medicinskanaklada.hr

©FACULTAS MEDICA  
UNIVERSITATIS STUDIORUM  
ZAGRABIENSIS, Zagreb, Croatia;

©PRO MENTE d.o.o., Zagreb  
on the behalf of the Danube  
Psychiatric Association.

All rights reserved. It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the Publisher if and when the article is accepted for publication. No part of this publication may be reproduced, stored in retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the Publisher.

Printed in Croatia.

Publication of the journal is supported by the Croatian Ministry of Science, Education and Sport.

**Impact Factor: 2.696**

I. Kongres sa međunarodnim sudjelovanjem  
**Multidimensionalni pristup  
u liječenju psihijatrijskih  
poremećaja**

I. Congress with International participation  
**Multidimensional approach  
to treatment of psychiatric  
disorders**

Medicinski fakultet Osijek | 27-28.03.2024.

The poster features a blue background with a white line-art profile of a head containing a brain. Below it is a large, stylized brain composed of many small blue triangles. At the bottom left are logos for the Faculty of Medicine Osijek and the Danube Psychiatric Association. The text is in both Croatian and English.

## **Main Organizer:**

Psychiatric Clinic – Department for Acute and Biological Psychiatry  
with Intensive Care – Clinical Hospital Centre Osijek

## **Co-organizers:**

Faculty of Medicine Osijek, J.J. Strossmayer University Osijek  
Faculty of Dental Medicine and Health, J. J. Strossmayer University Osijek  
Faculty of Law Osijek, J. J. Strossmayer University Osijek  
Croatian Psychiatric Association

## **Supporters of the Congress:**

Osijek-Baranja County  
Croatian Academy of Medical Sciences – Collegium of Psychiatric Sciences  
Croatian Institute for Research and Education on Mental Health

## CONTENTS

<i>WELCOME NOTE</i> .....	4
<i>Norman Sartorius: THE FUTURE OF MEDICINE AND PSYCHIATRY</i> .....	5
<i>Miro Jakovljević: HOW TO INCREASE TREATMENT EFFECTIVENESS AND EFFICIENCY IN PSYCHIATRY: TRANSDISCIPLINARY INTEGRATIVE APPROACH</i> .....	5
<i>Anamarija Petek Erić, Ivan Erić, Ivana Pavličević Tomas, Zoran Čavajda, Igor Damašek, Ena Bandov &amp; Lucija Kljaić: TRANSCRANIAL DIRECT CURRENT STIMULATION (TDCS) IN CLINICAL PRACTICE IN EASTERN CROATIA</i> .....	6
<i>Tihana Jendričko, Mirta Vranko, Kristina Draguzet &amp; Petrana Brečić: TELEPSYCHIATRY AS A NEW TREATMENT MODALITY</i> .....	7
<i>Dunja Degmečić: INTEGRATIVE APPROACH IN PSYCHIATRY</i> .....	7
<i>Sanda Anton: COMMUNICATION AS AN INTEGRAL PART OF EVERYDAY WORK IN PSYCHIATRY</i> .....	8
<i>Vlatka Kovač, Domagoj Benić, Ivana Groznica-Hrzić, Stanislav Rogulja, Marina Bježančević, Zlatna Andraković, Krešimir Melnik, Damir Kovač, Sanja Jandrić, Ana Vila, Petra Horvat, Tea Penić, Barbara Lenart Japundžić &amp; Vanja Trazer: MULTIDIMENSIONAL APPROACH TO TREATMENT OF PSYCHIATRIC DISORDERS IN WORKING WITH YOUNG PEOPLE</i> .....	9
<i>Ines Bilić-Čurčić, Silvija Canecki Varžić, Luka Rašković &amp; Ivana Agatić: ASSESSMENT OF DIABETES DISTRESS, HYPOGLYCEMIC ATTITUDES AND BEHAVIOR IN PEOPLE WITH TYPE 1 AND TYPE 2 DIABETES</i> .....	9
<i>Melita Vukšić Polić: ATOPIC DERMATITIS - MORE THAN JUST THE SKIN</i> .....	10
<i>Ružica Palić Kramarić, Tihana Gilman Kuric &amp; Zvonimir Popović: STROKE AND DEPRESSION: UNCOVERING THE HIDDEN CONNECTION</i> .....	11
<i>Saška Marcezi: PHARMACOGENETIC TESTS IN THE TREATMENT OF PSYCHIATRIC DISORDERS</i> .....	12
<i>Ivan Erić &amp; Anamarija Petek Erić: EMOTIONAL DISTRESS, COPING STRATEGIES AND QUALITY OF LIFE AMONG LUNG CANCER PATIENTS</i> .....	13
<i>Marina Perković Kovačević, Anja Kereta, Iva Vidanec Bandić, Anamarija Petek Erić &amp; Ivana Pavličević Tomas: CHARACTERISTICS OF SOME COGNITIVE FUNCTIONS AMONG PATIENTS WITH SCHIZOPHRENIA DEPENDING ON CLINICAL AND SOCIO DEMOGRAPHIC CHARACTERISTICS</i> .....	13
<i>Igor Filipčić, Ivona Šimunović Filipčić, Ivana Orgulan &amp; Vladimir Grošić: CLINICAL APPLICATION OF RTMS IN THE TREATMENT OF PSYCHIATRIC PATIENTS</i> .....	14
<i>Vedrana Makarović: ALCOHOLISM AS A COMMON PROBLEM – THE COLLABORATION BETWEEN EMERGENCY DEPARTMENT AND PSYCHIATRY CLINIC OF UHC OSIJEK</i> .....	15
<i>Melita Jukić: PSYCHOTRAUMA – LIFE IN THE WHIRLWIND OF SHAME, GUILT AND SILENCE</i> .....	16
<i>Mirela Čelić Ružić, Linda Rossini Gajšak, Vladimir Grošić &amp; Igor Filipčić: DIFFERENCES IN PSYCHOTIC DISORDERS BETWEEN MEN AND WOMEN</i> .....	17
<i>Ivana Pavličević Tomas, Anamarija Petek Erić, Zoran Čavajda, Igor Damašek &amp; Marina Perković Kovačević: PSYCHOPHARMACEUTICALS SIDE EFFECTS AND INTERACTIONS WITH OTHER DRUGS</i> .....	17
<i>Zoran Čavajda, Anamarija Petek Erić, Ivana Pavličević Tomas, Igor Damašek, Marina Perković Kovačević, Ena Bandov, Lucija Kljaić &amp; Ivan Požgain: SECURITY MEASURE OF OBLIGATORY ALCOHOL ABUSE TREATMENT</i> .....	18
<i>Igor Damašek, Anamarija Petek Erić, Ivana Pavličević Tomas, Zoran Čavajda &amp; Mia Damašek: ALCOHOLISM – IMPACT ON THE FAMILY</i> .....	19
<i>Ana Havičić: MANAGING PSYCHOTROPIC MEDICATIONS DURING PREGNANCY</i> .....	19
<i>Maristela Šakić, Lucija Bijelić, Helena Dakić &amp; Ana Marić: THE MISSION OF HOSPITALITY AND A TEAM APPROACH TO THE PATIENT AT THE ST. RAPHAEL STRMAC SPECIAL HOSPITAL</i> .....	20
<i>Martina Rojnić Kuzman, Kristina Brozić, Dina Bošnjak Kuharić &amp; Lea Kozina: FUNCTIONAL RECOVERY AFTER THE FIRST PSYCHOTIC EPISODE – 5 YEAR LONGITUDINAL FOLLOW UP</i> .....	21
<i>Vjekoslav Peitl: DEMENTIA AND COGNITIVE DISORDERS</i> .....	22

# PSYCHIATRIA DANUBINA

2024

● supplement 1 ●

volume 36

<i>Aleksandar Savić, Draženka Ostojić, Suzana Kos &amp; Petrana Brečić: SCIENCE BEHIND THE CONCEPT OF PSYCHOSIS PRODROMES AND CLINICAL PRACTICE</i> .....	22
<i>Goran Arbanas: CIVIL AND FORENSIC INVOLUNTARY COMMITMENT: CHALLENGES AND PITFALLS</i> .....	23
<i>Barbara Herceg Pakšić: THE LINK BETWEEN PSYCHIATRY AND CRIMINAL LAW: IMPLICATIONS AND MEANING OF SELECTED AFFECTS AND CONDITIONS ON COURT DECISIONS</i> .....	24
<i>Davorin Pichler: LIABILITY FOR MENTALLY ILL AND MENTALLY DELAYED PERSONS</i> .....	25
<i>Ivan Čelić, Mislav Guščić, Miroslav Perić &amp; Petrana Brečić: THE CHALLENGES IN MANAGING „DUAL DISORDERS“ PATIENTS</i> .....	25
<i>Mirela Delalle &amp; Anamarija Petek-Erić: THE IMPORTANCE OF TRANSITIONAL PSYCHIATRIC CARE - BETWEEN CARE FOR ADOLESCENT AND ADULT CARE</i> .....	26
<i>Josipa Ivanušić Pejić: BIOPSYCHOSOCIAL APPROACH AND RECOVERY IN THE TREATMENT OF DEPRESSION</i> .....	27
<i>Gordana Filipović Bilić: THERAPEUTIC FACTORS IN GROUP PSYCHOTHERAPY</i> .....	27
<i>Tanja Đukanović Mirković: LIFE WITH A MENTALLY ILL PERSON</i> .....	28
<i>Vlatko Rotim: MODERN TECHNOLOGY DEPENDENCE</i> .....	28
<i>Stanislav Rogulja, Domagoj Benić, Marina Bježančević, Ivana Groznica Hrzić, Zlatna Andraković, Krešimir Melnik, Sanja Jandrić &amp; Vlatka Kovač: ADHD CHALLENGES IN THE THERAPEUTIC APPROACH – A CASE REPORT</i> .....	29
<i>Anja Kereta, Vlatka Kovač, Marina Perković Kovačević &amp; Iva Vidanec Bandić: COGNITIVE BEHAVIORAL TREATMENT OF A PATIENT WITH PANIC DISORDER AND AGORAPHOBIA IN COMBINATION WITH PSYCHOPHARMACOTHERAPY</i> .....	30
<i>Iva Vidanec Bandić, Marina Perković Kovačević, Anja Kereta &amp; Ivana Erkapić: THE CORRELATION BETWEEN SOCIO-EMOTIONAL FUNCTIONING AND COGNITIVE TASK PERFORMANCE IN INDIVIDUALS DIAGNOSED WITH SCHIZOPHRENIA</i> .....	30
<i>Ana Grgić Koprivčić, Ana-Marija Šibalić, Marta Gašparović &amp; Verica Todorović: LIFE SATISFACTION IN PSYCHIATRIC PATIENTS AFTER TREATMENT IN A DAILY HOSPITAL</i> .....	31
<i>Ana-Marija Šibalić, Ana Grgić Koprivčić &amp; Kornelija Bušić: THE EFFECTS OF TREATMENT IN DAY HOSPITAL ON MENTAL HEALTH OF PSYCHIATRIC PATIENTS</i> .....	32
<i>Ksenija Galić, Kornelija Bušić &amp; Ana-Marija Šibalić: STIGMATIZATION OF MENTALLY AND PHYSICALLY ILL PERSONS</i> .....	33
<i>Matea Klarić, Vesna Pintar, Anita Žemberi &amp; Anamarija Petek Erić: ELECTROCONVULSIVE THERAPY (ECT) IN PSYCHIATRY AND THE ATTITUDES OF NURSES AND TECHNICIANS TOWARDS ECT</i> .....	33
<i>Šime Ševerdija, Domagoj Rupert, Mario Živko, Mirko Čosić, Igor Jelkić &amp; Danijel Kostić: QUALITY OF LIFE OF PEOPLE SUFFERING FROM POST-TRAUMATIC STRESS DISORDER AFTER TREATMENT IN A DAY HOSPITAL</i> .....	34
<i>Nives Balog, Marin Mamić &amp; Ivana Jelinčić: THE INFLUENCE OF PHYSICAL ACTIVITY ON THE QUALITY OF LIFE OF PATIENTS WITH PSYCHOTIC DISORDERS</i> .....	35
<i>Sarah Kittel-Schneider: MULTIMODAL BIOMARKERS OF MOOD DISORDERS</i> .....	35
<i>Jakub Albrecht, Jozef Buday, Tadeas Mares, Jakub Opelka, Diana Klimankova &amp; Vratislav Fabian: AUGMENTATION STRATEGIES IN NEUROSTIMULATION MODALITIES</i> .....	36
<i>Sanja Jandrić: COGNITIVE CONTROL AND SYMPTOMS, SYNDROMES AND GENERAL PSYCHOPATHOLOGY IN ADOLESCENTS</i> .....	37
<i>Konstantinos N. Fountoulakis: SOMATIC MULTI-COMORBIDITY AND DISABILITY IN PATIENTS WITH PSYCHIATRIC DISORDERS IN COMPARISON TO THE GENERAL POPULATION: A QUASI-EPIDEMIOLOGICAL INVESTIGATION IN 54,826 SUBJECTS FROM 40 COUNTRIES (COMET-G STUDY)</i> .....	38
<i>Daria Smirnova, Elena Sloeva, Natalia Kuvshinova, Paul Cumming &amp; Gennadii Nosachev: PSYCHOLINGUISTIC PATTERNS OF DEPRESSION: WE SHOULD LISTEN TO WHAT OUR PATIENTS WANT TO TELL US</i> .....	39

# MULTIDIMENSIONAL APPROACH TO TREATMENT OF PSYCHIATRIC DISORDERS

## WELCOME NOTE

### Dear colleagues,

on March 27<sup>th</sup> and 28<sup>th</sup> 2024, the 1<sup>st</sup> Congress with International participation "Multidimensional approach to treatment of psychiatric disorders" took place at the Faculty of Medicine Osijek - J. J. Strossmayer University Osijek. The Psychiatric Clinic - Department for Acute and Biological Psychiatry with Intensive Care, organized this professional and scientific gathering with co-organizers: Faculty of Medicine Osijek; Faculty of Dental Medicine and Health Osijek, Faculty of Law Osijek and the Croatian Psychiatric Association, supported by the Head of the Clinic Prof. Ivan Požgain, MD, and Director of the Clinical Hospital Centre Osijek – Assist. Prof. Željko Zubčić.

This Congress arised driven by the will for continuous improvement and acquisition of new knowledge and insights, both on a professional and scientific level in the field of improvement, treatment, and protection of mental health in psychiatry of the 21<sup>st</sup> century. In this event, we have encompassed doyens and eminent experts in the field of psychiatry, legal science, and related specialties and other professions (specialists in other medical fields, psychologists, nurses/technicians) from Croatia and abroad, thereby achieving and strengthening international, interdisciplinary and inter-institutional cooperation. Among the eminent foreign experts/lecturers, we single out: prof. Norman Sartorius (Switzerland), prof. Jakub Albrecht (Czech Republic), prof. Sarah Kittel Schenider (Ireland/Germany), prof. Konstantinos Fountoulakis (Greece), prof. Daria Smirnova (Russia), as well as the doyen of Croatian psychiatry – professor emeritus Miro Jakovljević.

This clinical and professional event integrated the latest knowledge and approaches to treatment from the field of psychiatry and interdisciplinary specialist areas (from the field of psychiatry - biological, forensic, psychotherapy, psychotrauma, neurostimulation methods, psychopharmacology; interdisciplinary activities - neurology, clinical pharmacology, dermatovenerology, laboratory medicine /pharmacogenomics, nursing, legal sciences) bringing new insights in diagnosing, therapeutic approach and treatment of patients from the aspect of personalized medicine as a leading approach in modern psychiatry, which is combined in this collection of abstracts and papers.

Welcome!

*Anamarija Petek Erić*

\* \* \* \* \*

### **President of Organizing and Scientific Committee:**

Assist. Prof. Anamarija Petek Erić, MD, PhD, Prim

### **Honorary Committee:**

Prof. Norman Sartorius, MD, PhD, FRCPsych

Prof. Emeritus Miro Jakovljević, MD, PhD

### **Organizing Committee:**

Sanda Anton, Ena Bandov, Zoran Čavajda, Igor Damašek, Mirela Delalle, Tanja Đukanović Mirković, Gordana Filipović Bilić, Ksenija Galić, Barbara Herceg Pakšić, Josipa Ivanušić Pejić, Sanja Jandrić, Melita Jukić, Matea Klarić, Lucija Kljajić, Vlatka Kovač, Vedrana Makarović, Ružica Palić Kramarić, Ivana Pavličević Tomas, Marina Perković Kovačević, Davorin Pichler, Vesna Pintar, Melita Polić Vukšić, Maristela Šakić, Iva Vidanec Bandić

### **Scientific Committee:**

Ivan Požgain, Tihana Jendričko, Dunja Degmečić, Ines Bilić Čurčić, Petrana Brečić, Jakub Albrecht, Konstantinos Fountoulakis, Sarah Kittel Scheinder, Daria Smirnova, Aleksandar Včev, Ivica Mihaljević, Tunjica Petrašević, Martina Rojnić Kuzman, Ivan Erić, Vladimir Grošić, Igor Filipčić, Vjekoslav Peitl, Aleksandar Savić, Željko Zubčić

### **Secretariat:**

Ivana Pavličević Tomas, Ena Bandov, Matea Klarić, Lucija Kljaić

## ABSTRACTS

### THE FUTURE OF MEDICINE AND PSYCHIATRY

Norman Sartorius

*Association for the Improvement of Mental Health Programmes (AMH), Geneva, Switzerland*

E-mail: [sartorius@normansartorius.com](mailto:sartorius@normansartorius.com)

The presentation will first recall some of the major socioeconomic trends affecting the world at present and indicate the relationship between these trends, mental health, mental illness, and mental health services. Among the trends included are urbanization, the demographic changes, commodification, horizontalization of information flow, digitalization, and fragmentation of labour and of medicine.

Against this background the presentation will continue to describe the main problems that medicine including psychiatry will have to face and indicate some of the changes in the provision of services and of the education of psychiatrists which will be necessary to deal with these problems

**Key words:** future - mental health - psychiatry

#### References

1. Sartorius N: *The future of psychiatry. Conscortium Psychiatricum 2021; 1:3-7. doi:10.17816/CP63*

\* \* \* \* \*

### HOW TO INCREASE TREATMENT EFFECTIVENESS AND EFFICIENCY IN PSYCHIATRY: TRANSDISCIPLINARY INTEGRATIVE APPROACH

Miro Jakovljević

*Croatian Institute for Research and Education on Mental Health, Zagreb, Croatia*

E-mail: [jakovljevic.miro@yahoo.com](mailto:jakovljevic.miro@yahoo.com)

Among the hot topics in modern psychiatry, treatment effectiveness is a crucial aspect, not only from a practical clinical point of view but also from a research, theoretical, and epistemological perspective. Despite significant progress in psychiatry, a notable number of patients with mental disorders do not respond in satisfactorily to treatment. Insufficient treatment response appears to be more commonly the rule than the exception. Approximately one third of psychiatric patients achieve full recovery from standard treatments, one third show partial therapeutic response and one third are treatment resistant. Major mental disorders are predominantly chronic disorders with a fluctuating, waxing and waning course and illness progression. Strategies for increasing treatment effectiveness and efficiency are critical issues for psychiatrists, patients and their families as well as for communities and society in general.

Therapy in psychiatry can be understood and applied in various ways, ranging from more dogmatism and failure to more creativity, integration and effectiveness in approach. The new knowledge, paradigms and treatment options provide a solid foundation for reconsidering treatment strategies and increasing treatment effectiveness and efficiency. The substantial gap between the potential for achieving high treatment effectiveness and the often poor or not unsatisfactory results in clinical practice may be overcome by a multidimensional and transdisciplinary integrative therapeutic approach such as, for example, creative, person-centered narrative psychopharmacotherapy.

**Key words:** treatment - efficacy - effectiveness - efficiency - failure and resistance - transdisciplinary integrative psychiatry - creative - person-centered narrative psychopharmacotherapy

#### References

1. Jakovljević M: *Creative person-centered psychopharmacology in treatment resistance in psychiatry. U KimYK (ur): Treatment Resistance in Psychiatry: Risk Factors, Biology, and Management, 273-293. Springer Nature Singapore Pte Ltd, 2019*
2. Jakovljevic M & Borovecki F: *Epigenetic, resilience, comorbidity and treatment outcome. Psychiatr Danub 2018; 30:242-253 <https://doi.org/10.24869/psyd.2018.242>*
3. Jakovljević M: *How to increase treatment effectiveness and efficiency in psychiatry: Creative psychopharmacotherapy: Part 1: Definition, fundamental principles and higher effectiveness polipharmacy. Psychiatr Danub 2013; 25:269-273*
4. Jakovljević M: *How to increase treatment effectiveness and efficiency in psychiatry: Creative psychopharmacotherapy: Part 2: Creating favorable treatment context and fostering patients' creativity. Psychiatr Danub 2013; 25:274-279*

\* \* \* \* \*

## TRANSCRANIAL DIRECT CURRENT STIMULATION (TDCS) IN CLINICAL PRACTICE IN EASTERN CROATIA

Anamarija Petek Erić<sup>1,3,4\*</sup>, Ivan Erić<sup>2,3</sup>, Ivana Pavličević Tomas<sup>1,3</sup>, Zoran Čavajda<sup>1,3</sup>,  
Igor Damašek<sup>1</sup>, Ena Bandov<sup>1</sup> & Lucija Kljaić<sup>5</sup>

<sup>1</sup>Psychiatric Clinic, Clinical Hospital Centre Osijek, Osijek, Croatia

<sup>2</sup>Department of Cardiothoracic Surgery, Clinic for Surgery, Clinical Hospital Centre Osijek,  
Osijek, Croatia

<sup>3</sup>Faculty of Medicine Osijek, University of J.J. Strossmayer Osijek, Osijek, Croatia

<sup>4</sup>Faculty of Dental Medicine and Health Osijek, University of J.J. Strossmayer Osijek, Osijek, Croatia

<sup>5</sup>National Memorial Hospital "Dr. Juraj Njavro", Vukovar, Croatia

\*E-mail: [petek-eric.anamarija@kbco.hr](mailto:petek-eric.anamarija@kbco.hr)

Transcranial direct current stimulation (tDCS) represents a relatively safe, non-invasive neuromodulation technique that has been extensively developing since 1998 when Priori and colleagues investigated the effects of direct current on the brain by evaluating its effects on the excitability of the cerebral cortex using transcranial magnetic stimulation. The shape and size of transcranial direct current stimulators, underwent several transformations, from a galvanic battery in the 18<sup>th</sup> and 19<sup>th</sup> centuries, following vacuum tubes and transistors to microcontrollers and microprocessor technologies in the 20<sup>th</sup> and 21<sup>st</sup> centuries. Given its tolerability and safety profile, tDCS has elicited significant interest in clinical research studies in psychiatry, neurology, and other medical specialties. In psychiatry, tDCS has been evaluated in treating major depressive disorder, schizophrenia, alcohol-use disorder, obsessive-compulsive disorder, and others. tDCS uses the application of low-intensity, direct current (usually in the range of 1-2 milliampere (mA)). The current delivery is ensured through the bilateral placement of electrodes (anode and cathode; size around 5x5 cm), usually in the projection of the frontal cortex which corresponds to underlying brain target areas, that are made of bioconducting material resulting in polarity-specific neuromodulation and consequential neuroplasticity changes in the neural regions.

In September 2023 Clinical Hospital Centre Osijek (Croatia), the first medical institution in Croatia, started using tDCS for therapeutic purposes, as a pilot project, among psychiatric patients in a diagnostic spectrum of mood disorders (mainly major depressive disorder, depressive episodes in bipolar disorder type I, depressive episode in schizoaffective disorder and mixed anxiety - depressive disorder). With the application of therapy, we have been assessing the subjective perception of included patients with an unstandardized questionnaire regarding the novel method, severity of depressive symptoms with respective scale (Hamilton Depression Rating Scale; HAM-D) before and after treatment and, quality of life (World Health Organization Quality of Life Scale - brief ver.; WHOQOL-BREF). Each patient included in this treatment was indicated by a psychiatry specialist and has signed informed consent for tDCS therapy.

**Keywords:** transcranial direct current stimulation (tDCS) - major depressive disorder - bipolar disorder - neurostimulation - non-invasive treatment

### References

5. Sreeraj VS, Arumugham SS, Venkatasubramanian G: *Clinical Practice Guidelines for the Use of Transcranial Direct Current Stimulation in Psychiatry. Indian J Psychiatry* 2023; 65:289-296. doi: 10.4103/indianjpsychiatry.indianjpsychiatry\_496\_22
6. Sarmiento CI, San-Juan D, Prasath VBS: *Letter to the Editor: Brief history of transcranial direct current stimulation (tDCS): from electric fishes to microcontrollers. Psychological Medicine* 2016; 46:3259-3261. doi:10.1017/S0033291716001926
7. Kekic M et al.: *A systematic review of the clinical efficacy of transcranial direct current stimulation (tDCS) in psychiatric disorders. Journal of Psychiatric Research* 2016; 74:70-86

\* \* \* \* \*

## TELEPSYCHIATRY AS A NEW TREATMENT MODALITY

Tihana Jendričko\*, Mirta Vranko, Kristina Draguzet & Petrana Brečić

*University Psychiatric Hospital Vrapče, Zagreb, Croatia*

\*E-mail: [Tihana.jendricko@bolnica-vrapce.hr](mailto:Tihana.jendricko@bolnica-vrapce.hr)

**Introduction:** The beginning of the pandemic led to a faster development of the provision of services via remote connections, and the development of telepsychiatry made it possible to maintain the availability of psychiatric care. The potential of using telepsychiatry is unbounded, although this transition is not without difficulties. As part of the Outpatient Treatment, Rehabilitation and Education Center of the University Psychiatric Hospital Vrapče, the Unit for Outpatient Telepsychiatry Care was established, through which we digitized several therapeutic programs (day hospitals, individual and group psychotherapy, counselling, intermittent programs, family therapy, etc.) carried out by a multidisciplinary team.

The paper aims to present the work of the Outpatient Telepsychiatry Care Unit. The development of telepsychiatry, in addition to technical conditions, required the adaptation of therapists to different contexts and points of time, adapting the framework and goal of work to the needs and capabilities of the patient.

**Method:** Telepsychiatry provides accessibility not only to patients located in remote areas but also to those with various limitations caused by physical conditions. The change of modality included several changes in communication behaviour, as well as certain significant settings of the therapeutic relationship.

**Conclusion:** Telepsychiatry is a promising approach to improving access to mental health care, particularly in the outpatient, post-treatment and underserved psychiatric care populations.<sup>3</sup> In the future, the development and adjustment of the provision of mental health care through remote connections are planned, with the structuring of programs following diagnostic categories, work methods, outcomes and assessment of patient needs, and telepsychiatry in addition to live work represents an important added value in the provision of psychiatric care. Our findings are consistent with other research and indicate that telepsychiatry and its multidisciplinary team contribute to professional, financial and health benefits in overall psychiatric care.

**Key words:** telepsychiatry - outpatient care - multidisciplinary team

### References:

1. Aghdam MRF, Vodovnik A, Hameed RA: *Role of Telemedicine in Multidisciplinary Team Meetings. J Pathol Inform 2019; 10:35. doi:10.4103/jpi.jpi\_20\_19. PMID:31799021; PMCID:PMC6883478*
2. Gude J, Subhedar RV, Zhang MH, Jain P et al.: *Emerging Needs and Viability of Telepsychiatry During and Post COVID-19 Era: A Literature Review. Cureus 2021; 13:e16974. doi:10.7759/cureus.16974. PMID:34540384; PMCID:PMC8423321*
3. Mucic D, Shore J, & Hilty D: *The World Psychiatric Association Telepsychiatry Global Guidelines. J Technol Behav Sci 2023. https://doi.org/10.1007/s41347-023-00339-w*

\* \* \* \* \*

## INTEGRATIVE APPROACH IN PSYCHIATRY

Dunja Degmečić

*Department for Integrative Psychiatry, Psychiatric Clinic, Clinical Hospital Centre Osijek, Osijek, Croatia  
Faculty of Medicine, University J.J.Strossmayer Osijek, Osijek, Croatia*

*Faculty for Dental Medicine and Health, University J.J.Strossmayer Osijek, Osijek, Croatia*

E-mail: [ddegmecic@gmail.com](mailto:ddegmecic@gmail.com)

Integrative approach in psychiatry includes and integrates many aspects of psychiatric science and profession. It integrates all theoretical approaches in etiology of psychiatric disorders (biological, psychological and social), it indicates importance of timely adequate making diagnosis, as well as actions on risk factors in order to develop and implement different preventive activities to prevent development of different psychiatric and somatic disorders.

Integrative approach in psychiatry is based on individualised approach to every patient which includes different therapeutic approaches and procedures (psychopharmacotherapy, different psychotherapeutic

approaches, sociotherapeutic and sociorehabilitation procedures) in psychiatric disorders as well as in somatic comorbidities.

Integrative approach includes and emphasizes the role of family members, as well as wider community, and also emphasizes importance of psychiatric care by mobile psychiatric teams in the community where patient live.

**Key words:** integration - integrative psychiatry - therapeutic approach

**References:**

1. *Gonzales RA, Bortolotti L: The appeal and challenges of an integrative approach to psychiatry. Braz J Psychiatry 2022; 44:231-232. doi:10.1590/1516-4446-2021-0035*
2. *Lipowski ZJ: The integrative approach in psychiatry. Aust NZJ Psychiatry 1990; 4:470-4. doi:10.3109/00048679009062901*
3. *Ranjbar N, Ricker M, Villagomez A: The Integrative Psychiatry Curriculum: Development of an Innovative Model. Global Advances in Health and Medicine 2019; 8:1-7. doi:10.1177/2164956119847118*

\* \* \* \* \*

## COMMUNICATION AS AN INTEGRAL PART OF EVERYDAY WORK IN PSYCHIATRY

Sanda Anton

*Psychiatric Clinic, University Hospital Center Osijek, Osijek, Croatia  
Medical Faculty Osijek, J.J. Strossmayer University Osijek, Osijek, Croatia*

*E-mail: sanda.anton1@gmail.com*

The nature of psychiatry requires sophisticated communication skills because the complexity of clinical interactions within it. Changes in society towards liberalization, pluralism of value systems, along with patient autonomy, the right to diversity of opinion and new legal regulations significantly affect the need to monitor and adopt communication skills not only in psychiatry but in the entire medical profession. By accepting a holistic approach in medicine that includes the complete biopsychosocial functioning of the patient and by moving from a paternalistic to a partnership relationship during treatment, more and more attention is being paid to successful communication between doctor and patient. Mastering interpersonal and intrapersonal reactions is the basis of communication. The doctor cares that the relationship with the patient is positive, because such a relationship is healing by itself and significantly helps in the treatment of the patient. In the first contact, the patient, due to his regression and being overwhelmed by the unpleasant events taking place in him, offers himself to the doctor in an unsystematized way. During treatment, he often offers non-cooperation, which should be evaluated because in most cases it is a question of insufficient trust due to some previous bad experiences. The relationship between doctor and patient in psychiatry is dynamic and based on a psychotherapeutic approach to the patient, with the dominance of non-verbal communication, regardless of the patient's disorder. Psychiatrists create their own identity, set behavioral norms and values but have to develop and tolerate awareness of differences between people, be considerate to others and during treatment develop mutual emotional interest with the patient. In addition to education in the professional field, there is also a constant need to "work on yourself" with the need for supervision in order to be able to observe and analyze complex mutual relationships with the patient and further development of adequate therapeutic alliance.

**Key words:** communication, doctor - patient relationship - psychiatry

**References:**

1. *Maguire P, Pitceathly C: Key communication skills and how to acquire them. BMJ 2002; 325:697-700*
2. *Michaelson S, Rahim S: Communication skills training in psychiatry. BJ Psych Advances 2023; 29:56-67*
3. *Priebe S, Dimic S, Wildgrube C, Jankovic J, Cushing A, McCabe R: Good communication in psychiatry - a conceptual review. Eur Psychiat 2011; 26:403-407*
4. *Thompson L, Howes C, McCabe R: Effect of questions used by psychiatrists on therapeutic alliance and adherence. BJ Psych 2016; 209:40-7*
5. *Wilson J: Have 100 years of talking therapies taught psychiatrists how to communicate? Commentary on. BJ Psych Advances 2018; 24:221-4*

\* \* \* \* \*



## MULTIDIMENSIONAL APPROACH TO TREATMENT OF PSYCHIATRIC DISORDERS IN WORKING WITH YOUNG PEOPLE

Vlatka Kovač<sup>1,2\*</sup>, Domagoj Benić<sup>1</sup>, Ivana Groznica-Hrčić<sup>1</sup>, Stanislav Rogulja<sup>1</sup>,  
Marina Bježančević<sup>1</sup>, Zlatna Andraković<sup>1</sup>, Krešimir Melnik<sup>1</sup>, Damir Kovač<sup>1</sup>, Sanja Jandrić<sup>1,2</sup>,  
Ana Vila<sup>1</sup>, Petra Horvat<sup>1</sup>, Tea Penić<sup>1</sup>, Barbara Lenart Japundžić<sup>1</sup> & Vanja Trazer<sup>1</sup>

<sup>1</sup>Department of Child and Adolescent Psychiatry, University Hospital Center Osijek, Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, Osijek, Croatia

\*E-mail: kovac.vlatka@kbco.hr

Effective treatment of psychiatric disorders often requires a multimodal and multi-disciplinary (inter-professional) approach, especially with young people. Multimodal treatment includes different forms of psychotherapy, pharmacotherapy, psychological assessment and therapy, neurodevelopmental kinesiotherapy, occupational therapy, sensory integration therapy, speech therapy, educational-rehabilitation program, education of parents or guardians for daily work with the child at home is carried out. A multi-disciplinary approach involves a number of different specialists (psychiatrists, pediatricians, clinical psychologists, speech therapist, educational rehabilitator, health and occupational therapists, social workers, nurses). The treatment is carried out in university hospital centers and different multidisciplinary centers. Multi-disciplinary centres and clinics also engage in research activities. Employed specialists working in these centers receive further training in education and treatment. They also routinely collect data on the causes of disorders, clinical features, psychiatry disorders management options, psychological and psychiatry characteristics and the social status of patients. Routine monitoring is very important for the evaluation of diagnostics and the treatment, and also for the adoption of proper guidelines regarding the causes and treatment. To achieve goals, it is necessary to organize trainings in psychiatrist disorders treatment on multiple levels: undergraduate, postgraduate courses and post-doctoral studies. Experts employed in outpatient clinics for primary health care, clinical hospital centers and other treatment centres must adhere to the highest professional and ethical standards.

**Key words:** multidisciplinary approach - multimodal treatment - psychiatric disorders - young

### References:

1. Begovac I et al: *Dječja i adolescentna psihijatrija, Sveučilište u Zagrebu Medicinski fakultet, Zagreb, 2021*
2. Benedetti G: *Psychotherapie in den verschiedenen Lebensaltern [Psychotherapy in various ages]. Schweiz Arch Neurol Neurochir Psychiatr 1973; 113:177-87. German. PMID:4766001*
3. Hadders-Algra M: *Early Diagnostics and Early Intervention in Neurodevelopmental Disorders-Age-Dependent Challenges and Opportunities. J Clin Med 2021; 10:861. doi:10.3390/jcm10040861. PMID:33669727; PMCID:PMC7922888*

\* \* \* \* \*

## ASSESSMENT OF DIABETES DISTRESS, HYPOGLYCEMIC ATTITUDES AND BEHAVIOR IN PEOPLE WITH TYPE 1 AND TYPE 2 DIABETES

Ines Bilić-Ćurčić<sup>1,2\*</sup>, Silvija Canecki Varžić<sup>1,2</sup>, Luka Rašković<sup>2</sup> & Ivana Agatić<sup>2</sup>

<sup>1</sup>Department of Endocrinology, Clinic for Internal Medicine, Clinical Hospital Center Osijek,  
Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, Osijek, Croatia

\*E-mail: ibcurcic@mefos.hr

Diabetic distress can manifest in many forms and be influenced by age, gender, culture, type of diabetes, use of insulin, number of complications, duration of diabetes and hypoglycemia-related issues. The aim of the research was to assess the differences in diabetic distress and fear of hypoglycemia in relation to the type of diabetes and therapy regimen.

The study included 80 people with type 1 diabetes (DMT1) treated with multiple daily injections or insulin pumps and 80 subjects with type 2 diabetes (DMT2) using different regimens of injectable therapy. The participants filled out five questionnaires: a general questionnaire and DDS17; diabetes distress scale, HABS; Hypoglycemic Attitudes and Behavior Scale, HCS; Hypoglycemic confidence scale, IDSS-T1D; The Insulin Delivery Satisfaction Survey in type 1 diabetes, IDSS-T2D The Insulin Delivery Satisfaction Survey in type 2 diabetes.

In people suffering from type DMT2, 67% were treated with a simple and 33% with a complex regime. Clinically significant distress was present in 37% of subjects, while 30% had clinically significant concerns about hypoglycemia. In people with DMT1, 69% used an insulin pen, and 31% used an insulin pump. Clinically significant distress was experienced by 61%, while 26% of respondents had clinically significant concerns about hypoglycemia. All subjects felt moderately safe from hypoglycemia-related problems and showed a moderate to high level of satisfaction with the therapy delivery device. Physician-related distress was higher in subjects treated with an insulin pen compared to an insulin pump in DMT1 patients ( $p=0,01$ ), while hypoglycemic confidence was more pronounced in the group of subjects treated with a simple compared to a complex regime in people with DMT2 ( $p=0.04$ ).

Diabetic distress was significantly more pronounced in patients with DMT1 compared to DMT2, although all were treated with injectable therapy. The hypoglycemia-related concerns were somewhat more pronounced in patients with DMT2 compared to DMT1, although they were treated with a predominantly simple regimen, which could explain the problem of adherence and persistence to insulin therapy in DMT2. Furthermore, insulin pump therapy is emerging as a standard of care for DMT1, which explains less physician-related distress than conventional insulin pen therapy.

**Key words:** type 1 diabetes - type 2 diabetes - diabetic distress - hypoglycemia - injectable therapy

### References:

1. Fisher L, Polonsky WH, Hessler D: *Addressing diabetes distress in clinical care: a practical guide. Diabet Med* 2019; 36:803-812
2. Stoop CH, Neffs G, Pop VJ, et al.: *Diabetes-specific emotional distress in people with Type 2 diabetes: a comparison between primary and secondary care. Diabet Med* 2014; 31:1252-1259
3. Fisher L, Polonsky WH, Hessler DM, et al.: *Understanding the sources of diabetes distress in adults with type 1 diabetes. J Diabetes Complications* 2015; 29:572-577
4. Reach G, Pechtner V, Gentilella R, Corcos A, Ceriello A: *Clinical inertia and its impact on treatment intensification in people with type 2 diabetes mellitus. Diabetes Metab* 2017; 43:501-11
5. Ratanawongsa N, Crosson JC, Schillinger D, Karter AJ, Saha CK, Marrero DG: *Getting under the skin of clinical inertia in insulin initiation: the Translating Research Into Action for Diabetes (TRIAD) Insulin Starts Project. Diabetes Educ* 2012; 38:94-100

\* \* \* \* \*

## ATOPIC DERMATITIS - MORE THAN JUST THE SKIN

Melita Vukšić Polić

*Department of Dermatology and Venereology, Osijek University Hospital, Osijek, Croatia  
Faculty of Medicine Osijek, J.J. Strossmayer University of Osijek, Osijek, Croatia*

E-mail: [melyderma@gmail.com](mailto:melyderma@gmail.com)

**Introduction:** Among the several functions of the human skin, it protects the organism against environment aggressions and allows for essential physiological changes. Besides, it constitutes the boundaries of the body, presenting the individual to the others and to the world. Through the skin it is possible to show desires and early sufferings, which in many cases have not been symbolized yet.

**Subjects and methods:** Atopic dermatitis (AD) is a chronic, relapsing, inflammatory cutaneous disease characterized by pruritus and clinical heterogeneity with regard to age of onset, lesion morphology, distribution and severity of lesions, and long-term persistence. The estimated prevalence of AD is 15% to 20% in children and 7% to 10% in adults. It is associated with skin pain, sleep disturbance, other atopic comorbidities (allergic rhinoconjunctivitis, food allergy, asthma, and eosinophilic esophagitis), and poor quality of life. Regardless of the disease severity, the AD has a strong influence on patient's life quality, because it interferes in their daily leisure, work and study activities.

**Conclusion:** Given the tremendous burden of AD on physical, mental, and social health, the need is high to develop new, targeted therapies. Advances in our understanding of AD pathogenesis have paved the way toward the development of new therapies that promise to revolutionize our management of AD. Future research will focus on long-term efficacy and safety and creating predictive models for choosing best management options on a personalized basis.

**Key words:** atopic dermatitis - burden - comorbidity

## References:

1. Drake L, Prendergast M, Maher R, Breneman D, Korman N, Satoi Y, et al.: The impact of tacrolimus ointment on health-related quality of life of adult and pediatric patients with atopic dermatitis. *J Am Acad Dermatol* 2001; 44:65-72
2. Garg N, Silverberg J: Epidemiology of childhood atopic dermatitis. *Clin Dermatol* 2015; 33:281-8
3. McDougall J: *Teatros do corpo: o psicossoma em psicanálise*. 2ª ed. São Paulo. Martins Fontes, 1996
4. Puar N, Chovatiya R, Paller AS: New treatments in atopic dermatitis. *Ann Allergy Asthma Immunol* 2021; 126:21-31
5. Sacotte BS, Silverberg J: Epidemiology of adult atopic dermatitis. *Clin Dermatol* 2018; 36:595-605
6. Silverberg J: Comorbidities and the impact of atopic dermatitis. *Ann Allergy Asthma Immunol* 2019; 123:144-51

\* \* \* \* \*

## STROKE AND DEPRESSION: UNCOVERING THE HIDDEN CONNECTION

Ružica Palić Kramarić<sup>1,2,3\*</sup>, Tihana Gilman Kuric<sup>1,2</sup> & Zvonimir Popović<sup>1,2</sup>

<sup>1</sup>Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>2</sup>Department of Neurology, Osijek University Hospital Centre, Osijek, Croatia

<sup>3</sup>Faculty of Dental Medicine and Health Osijek, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

\*E-mail: palickramariczruzica@gmail.com

The overlap of psychiatric symptoms within neurological diseases is well known, with stroke and depression a major risk factor for a disrupted quality of life. Both conditions represent a major public health burden and are one of the leading causes of disability. People with depression face a higher stroke risk and more trouble recovering from one. While it has long been known that a significant number of patients after stroke exhibit depression, novel research points to the existence of another unexplored "secret" connection between the two conditions. Recent works show that patients with a higher proportion of depressive symptoms (such as sleep and appetite disorders, feelings of guilt or worthlessness) are at higher risk of developing a stroke than people who did not exhibit similar symptoms. The exact mechanism of depression influence on stroke is still not known but multifactorial reasons are considered: cerebrovascular risk factors (diabetes, arterial hypertension, smoking, alcoholism), increased platelet activity, more pronounced inflammation and atherosclerosis as well as higher occurrence of arrhythmias among patients suffering from depression. The underlying mechanisms that link these two conditions should be further investigated with depression being considered as a „pre-stroke“ phenomenon. Patients with symptoms of depression and other cerebrovascular risks should be monitored for primary stroke prevention.

**Keywords:** depression - stroke - connection - risk factors

## References:

1. Arbelaez JJ et al.: Depressive symptoms, inflammation, and ischemic stroke in older adults: A prospective analysis in the cardiovascular health study. *J Am Geriatr Soc* 2007; 55:1825–1830
2. Faramawi MF et al.: Relation between depressive symptoms and common carotid artery atherosclerosis in American persons > or =65 years of age. *Am J Cardiol* 2007; 99:1610–1613
3. Jia-Yi Dong et al.: Depression and Risk of Stroke. A Meta-Analysis of Prospective Studies. *Stroke* 2012; 43:32-37
4. Salaycik KJ, Kelly-Hayes M, Beiser A, Nguyen AH, Brady SM, Kase CS, et al.: Depressive symptoms and risk of stroke: The Framingham Study. *Stroke* 2007; 38:16–21
5. Wijeratne T & Sales C: Understanding Why Post-Stroke Depression May Be the Norm Rather Than the Exception: The Anatomical and Neuroinflammatory Correlates of Post-Stroke Depression. *Journal of Clinical Medicine* 2021; 10:1674

\* \* \* \* \*

## PHARMACOGENETIC TESTS IN THE TREATMENT OF PSYCHIATRIC DISORDERS

Saška Marcz

Laboratory of Molecular and HLA Diagnostics, Clinical Institute of Transfusion Medicine,  
University Hospital Centre Osijek, Osijek, Croatia  
Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

E-mail: marcz.saska@kbco.hr

Genetic factors, along with environmental, pathophysiological, and dietary factors, affect the patient's response to a particular drug. Pharmacogenetics/pharmacogenomics (PGx) helps predict how the patient will respond to pharmacotherapy. Individualizing pharmacotherapy based on the patient's pharmacogenomics profile leads to an optimal therapeutic response while reducing the risk of poor drug efficacy and helping avoid drug toxicity.

Results of several recent large studies revealed clinically actionable genetic variants, as well as the benefit of pre-emptive genotyping regarding the treatment of psychiatric disorders. It is anticipated that the use of pre-emptive *CYP2D6* and/or *CYP2C19* genotyping for initial precision dosing, with follow-up by therapeutic drug monitoring will become a dominant approach for several antidepressant and anti-psychotic treatments (Jukic et al. 2022). Evidence-based, peer-reviewed, and updated pharmacogenomic recommendations/guidelines are provided for relevant psychiatric drug-gene pairs, e.g. for amitriptyline, clomipramine, doxepin, imipramine, trimipramine, citalopram, escitalopram, desipramine, fluvoxamine, nortriptyline, paroxetine, atomoxetine etc. by the Clinical Pharmacogenetics Implementation Consortium (CPIC), Dutch Pharmacogenetics Working Group (DPWG), US Food and Drug Administration (FDA) and other relevant Clinical Guideline Sources. Among the high number of distinct alleles determined for the *CYP2D6* and *CYP2C19* genes, the consensus was reached as to which variants should minimally be tested (Pratt et al. 2018, Pratt et al. 2021). Relationships between genotype/diplotype of PGx biomarkers *CYP2D6* and *CYP2C19*, the activity scores, and translated phenotypes are well known (Kane 2023). However, it remains to harmonize recommendations of diplotype-based dosing for certain drug therapies between the different expert groups and to improve decision support tools (van Schaik et al. 2020). In addition, the integration of PGx education into medical school curricula, and continuous professional education programs, is essential to the successful implementation of PGx in psychiatry and other areas of medicine.

**Key words:** pharmacogenetic testing - psychiatry - *CYP2C19* - *CYP2D6*

### References:

1. Jukic M, Milosavljević F, Molden E & Ingelman-Sundberg M: Pharmacogenomics in treatment of depression and psychosis: an update. *Trends Pharmacol Sci* 2022; 43:1055-1069
2. Kane M: *CYP2D6* Overview: Allele and Phenotype Frequencies. In Pratt VM, Scott SA, Pirmohamed M, Esquivel B, Kattman BL & Malheiro AJ (eds): *Medical Genetics Summaries*. 779-810. National Center for Biotechnology Information (US), Bethesda (MD), 2023
3. Pratt VM, Del Tredici AL, Hachad H, Ji Y, Kalman LV, Scott SA et al: Recommendations for Clinical *CYP2C19* Genotyping Allele Selection, A Report of the Association for Molecular Pathology. *J Mol Diagn* 2018; 20:270-276
4. Pratt VM, Cavallari LH, Del Tredici AL, Gaedigk A, Hachad H, Ji Y et al: Recommendations for Clinical *CYP2D6* Genotyping Allele Selection. A Joint Consensus Recommendation of the Association for Molecular Pathology, College of American Pathologists, Dutch Pharmacogenetics Working Group of the Royal Dutch Pharmacists Association, and the European Society for Pharmacogenomics and Personalized Therapy. *J Mol Diagn* 2021; 23:1047-1064
5. van Schaik RHN, Müller DJ, Serretti A, Ingelman-Sundberg M: Pharmacogenetics in Psychiatry: An Update on Clinical Usability. *Front Pharmacol* 2020; 11

\* \* \* \* \*

## EMOTIONAL DISTRESS, COPING STRATEGIES AND QUALITY OF LIFE AMONG LUNG CANCER PATIENTS

Ivan Erić<sup>1,2\*</sup> & Anamarija Petek Erić<sup>2,3,4</sup>

<sup>1</sup>Department of Cardiothoracic Surgery, Clinic for Surgery, Clinical Hospital Centre Osijek, Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, University of J.J. Strossmayer Osijek, Osijek, Croatia

<sup>3</sup>Psychiatric Clinic, Osijek, Clinical Hospital Centre Osijek, Croatia

<sup>4</sup>Faculty of Dental Medicine and Health Osijek, University of J.J. Strossmayer Osijek, Osijek, Croatia

\*E-mail: ivaneric982@gmail.com

Lung cancer patients often experience multiple symptoms related both to disease itself and the treatment. Also, more so than with other types of malignant diseases, patients with lung cancer often feel stigmatized with their disease and this increases patient emotional subjective distress, effects the quality of life and may result in avoidant behaviour in terms of seeking professional help. Lung cancer is often related with stigma which results from the association between the disease and smoking and the public perception that disease is self-inflicted, high mortality rates and perception of death experience. These negative evaluations and beliefs, when internalized, may result in person feeling ashamed, guilty or discriminated due to disease. Stigma and related feelings pose a threat to individual identity and influence social interactions. Moreover, increased stress and poor self-coping strategies may lead to negative mental and physical health outcomes, diminished quality of life and psychosocial issues which can lead to increased morbidity.

We are presenting cross-sectional research in Department for Cardiothoracic surgery - Department of thoracic surgery in Clinical Hospital Centre Osijek (Croatia) in which we had included lung cancer patients (regardless staging of the malignant disease) who underwent thoracic surgical procedure in order to investigate their emotional distress ( using Depression, Anxiety and Stress Scale - 21 items; DASS-21); coping mechanisms (using the COPE-BREF Inventory - 28 items); quality of life ( World Health Organization Quality of Life Questionnaire - brief version - WHOQOL-bref). All patients signed designated informed consent and inoperable patients were excluded from the research.

**Keywords:** lung cancer - emotional distress - quality of life - coping - surgery

### References:

1. Chambers SK, Baade P, Youl P, Aitken J, Occhipinti S, Vinod S, et al.: *Psychological distress and quality of life in lung cancer: the role of health-related stigma, illness appraisals and social constraints. Psychooncology 2015; 24:1569-77. doi:10.1002/pon.3829*
2. Morrison EJ, Novotny PJ, Sloan JA, Yang P, Patten CA, Ruddy KJ, et al.: *Emotional problems, quality of life, and symptom burden in patients with lung cancer. Clinical Lung Cancer 2017; 18:497-503*
3. Polanski J, Jankowska-Polanska B, Rosinczuk J, Chabowski M, et al.: *Quality of life of patients with lung cancer. OncoTargets and Therapy 2016; 1023-1028*

\* \* \* \* \*

## CHARACTERISTICS OF SOME COGNITIVE FUNCTIONS AMONG PATIENTS WITH SCHIZOPHRENIA DEPENDING ON CLINICAL AND SOCIO DEMOGRAPHIC CHARACTERISTICS

Marina Perković Kovačević<sup>1,2\*</sup>, Anja Kereta<sup>1</sup>, Iva Vidanec Bandić<sup>1</sup>,  
Anamarija Petek Erić<sup>1,2</sup> & Ivana Pavličević Tomas<sup>1,2</sup>

<sup>1</sup>Head Department of Psychiatry, University Hospital Centre Osijek, Osijek, Croatia

<sup>2</sup>Department of Psychiatry and Psychological Medicine, Faculty of Medicine,  
Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

\*E-mail: marina.perkovic@kbco.hr

**Introduction:** Schizophrenia is considered to be a neurodevelopmental disorder (Rund 2018). Schizophrenia is usually associated with broad cognitive impairment and related problems in psychosocial functioning. Research indicates that individuals with schizophrenia, on cognitive measures, achieve, on average, one standard deviation below the healthy population. Cognitive impairment in individuals with

schizophrenia is more strongly associated with the negative symptoms, while positive symptoms show a lower correlation with impairment (Ventura et al. 2010).

The aim of this study was to characterize cognitive functioning in schizophrenia and examine whether clinical and sociodemographic characteristics are associated with cognitive impairment in individuals with schizophrenia.

**Subjects and methods:** The research included 102 patients with ICD-10 and DSM-V diagnosis of schizophrenia, hospitalized at the Department of Psychiatry of the University Hospital Centre Osijek in period of one year. The assessment of clinical factors was done by a psychiatrist, and assessment of psychosocial factors by a clinical psychologist. The battery of instruments used for assessment included the following: clinical and sociodemographic status questionnaire designed for research purposes, PANSS Positive and Negative Syndrome Scale, KNT-test for intelligence measuring, AVLT-test for verbal memory assessment and d2 test of attention.

**Results:** Severity of the negative symptom dimension was related to verbal memory, psychomotor speed and measure of concentration. In contrast, severity of the positive symptom dimension correlated only with measure of concentration. Regarding the relationship between sociodemographic characteristics and cognition, the results indicate a moderate correlation between both age and education levels and the majority of cognitive deficits, whereas other sociodemographic variables are related with the measure of concentration.

**Conclusion:** Cognitive impairment in patients with schizophrenia correlate with certain clinical and sociodemographic variables. Complexity of relationship between those variables opens up an array of possibilities for further research and emphasizes the significance of multidisciplinary in planning therapeutic approaches and methods to alleviate cognitive impairment in schizophrenia.

**Keywords:** schizophrenia - clinical characteristics - concentration - intelligence - verbal memory - socio demographic characteristics

#### References:

1. Rund BR: *The research evidence for schizophrenia as a neurodevelopmental disorder. Scandinavian Journal of Psychology* 2018; 59:49–58
2. Tornainen M: *Cognitive Impairment in Schizophrenia: Related Risk Factors and Clinical Characteristics. Academic Dissertation, National Institute for Health and Welfare Department of Mental Health and Substance Abuse Services Helsinki, Finland and University of Helsinki Institute of Behavioural Sciences Helsinki, Finland, Helsinki, 2013*
3. Ventura J, Thames AD, Wood RC, Guzik LH & Helleman GS: *Disorganization and reality distortion in schizophrenia: a meta-analysis of the relationship between positive symptoms and neurocognitive deficits. Schizophr Res* 2010; 121:1-14

\* \* \* \* \*

## CLINICAL APPLICATION OF RTMS IN THE TREATMENT OF PSYCHIATRIC PATIENTS

Igor Filipčić<sup>1,2,3\*</sup>, Ivona Šimunović Filipčić<sup>2,3,4</sup>, Ivana Orgulan<sup>1,2</sup> & Vladimir Grošić<sup>1,2</sup>

<sup>1</sup>University Psychiatric Hospital Sveti Ivan, Zagreb, Croatia

<sup>2</sup>Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>3</sup>School of Medicine, University of Zagreb, Zagreb, Croatia

<sup>4</sup>Department of Psychiatry and Psychological Medicine, University Hospital Centre Zagreb, Zagreb, Croatia

\*E-mail: filipcic555@gmail.com

Non-invasive brain stimulation techniques have emerged in the last three decades as promising methods in the treatment of psychiatric disorders. Repetitive transcranial magnetic stimulation (rTMS) is the most applicable non-invasive, neuromodulatory and neurostimulatory technique used in clinical and research practice with an insignificant number of mostly transient side effects. rTMS is a non-invasive technique of deep brain stimulation that achieves the best results in the treatment of mood disorders approved by the EMA & FDA. The stimulator creates a changing electric current inside the coil that induces a magnetic field; this field then causes another inductance of reverse electrical charge within the brain itself. The largest number of papers and research were conducted in the treatment of depression and then anxiety and affective disorders, especially OCD (obsessive compulsive disorder) and addictions (smoking, alcohol addiction and other addictions).

Results showed significantly better response rates with H1 coil treatment compared to a control group in 228 patients with major depressive disorder, although the study found no difference in remission rates.

In addition to the regular use of the H1-coil in our clinical work, we are investigating the comparison of efficacy between the H1 and the newer, H7-coil and a sham coil. Our research has shown that accelerated deep TMS with H1-coil regimen twice daily for 10 or 15 days can be a safe and effective alternative for the treatment of MDD. Schizophrenia patients show abnormal functional connectivity between the dorsolateral prefrontal cortex (DLPFC) and the midbrain region (mesocortical pathway). A dysfunctional mesocortical pathway is known to be associated with the presence of negative symptoms. Our latest research indicates the results of rTMS on the treatment of negative symptoms of schizophrenia with deep H7 coil vs sham, via excitatory stimulation of the left DLPFC and establishment of normal connectivity in the mesocortical pathway. We will also present the effects of rTMS on sleep, cognitive functioning and PTSD and the results of accelerated new protocols implemented at the St. Ivan Psychiatry Clinic.

In 2014, a TMS laboratory was established at the Sveti Ivan Psychiatry Clinic, where more than 3,000 patients have been treated to date, and from 2020 it will become the Reference Center of the Ministry of Health of the Republic of Croatia and the leading regional center in this part of Europe, and more than of 400 patients.

**Key words:** transcranial magnetic stimulation - depression - addictions and negative symptoms of schizophrenia - TMS laboratory

**Reference:**

1. Baeken C et al.: Repetitive transcranial magnetic stimulation treatment for depressive disorders: current knowledge and future directions. *Curr Opin Psychiatry* 2019; 32:409-415
2. Filipčić I et al.: Efficacy of repetitive transcranial magnetic stimulation using a figure-8-coil or an H1-Coil in treatment of major depressive disorder; A randomized clinical trial. *J Psychiatr Res* 2019; 114:113-9
3. Filipčić I et al.: A pilot investigation of accelerated deep transcranial magnetic stimulation protocols in treatment-resistant depression. *Eur Arch Psychiatry Clin Neurosci* 2021; 271:49-59
4. Gereš N, Šimunović Filipčić I, Sučić S, Milovac Ž, Gajšak T, Zečević Penić S, Orgulan I, Matić K & Filipčić I: Current status of repetitive transcranial magnetic stimulation (rTMS) in Croatia and in University Psychiatric Hospital Sveti Ivan. *Psychiatr Danub* 2022; 34(Suppl 3):S4-6

\* \* \* \* \*

## ALCOHOLISM AS A COMMON PROBLEM - THE COLLABORATION BETWEEN EMERGENCY DEPARTMENT AND PSYCHIATRY CLINIC OF UHC OSIJEK

Vedrana Makarović

Emergency Department UHC Osijek, Osijek, Croatia  
Faculty of Dental Medicine and Health Osijek, Osijek, Croatia

E-mail: [barabanvedrana@gmail.com](mailto:barabanvedrana@gmail.com)

**Introduction:** According to data from the Croatian Institute of Public Health, Croatia has around 250,000 alcohol addicts and is among the top five countries in the European Union in terms of consumption of alcoholic beverages. More and more young people are becoming addicted to alcoholic drinks, considering it an integral part of their youth and growing up and as a prerequisite to acceptance in society and proof of maturity.

The big problem of today's society, strongly reflected in Croatian emergency departments, is that alcoholism is taking on epidemic proportions in all age groups of adults, and the intoxicated state itself is increasingly complicated by somatic and psychological ailments. Therefore, the importance of taking such patients seriously upon their hospital admission is indisputable. At the Emergency Department of UHC Osijek we witness more frequent complications of this addiction, both in previously healthy individuals and in people with comorbidities.

**Methods:** According to data obtained from the Hospital Information System of UHC Osijek for the year 2023, alcoholic patients made up the large part of addicts who were taken to our ED by an ambulance, accompanied by a doctor sent on an intervention.

**Results:** In 2023, the total number of urgently admitted alcoholic patients was 96. The lecture will present an analysis of these patients according to gender, age, laboratory-confirmed amount of alcohol in their blood, first and repeated visits, their clinical status and comorbidities, and the method of medical treatment of a patient intoxicated with alcohol.

**Conclusions:** We also highlight the continuous excellent cooperation between the Emergency Department and the Psychiatry Clinic of UHC Osijek, all for the purpose of optimal care for these common patients - either through a consultative examination by a psychiatrist in the ED or as a continuation of observation and urgent medical treatment, followed by later control examinations in Psychiatry Clinic.

**Key words:** alcoholism - addiction diseases - emergency admission

**References:**

1. Kuntche E, Knibbe R, Gmel G & Engels R: *Why do young people drink? A review of drinking motives. Clinical Psychology Review* 2005; 25:841-861
2. Lisha NE, Martens M & Leventhal AM: *Age and gender as moderators of the relationship between physical activity and alcohol use. Addictive Behaviors* 2011; 36: 933-936
3. *World Health Organization (WHO): Global status report on alcohol and health. Geneva: World Health Organization, 2014*

\* \* \* \* \*

## PSYCHOTRAUMA - LIFE IN THE WHIRLWIND OF SHAME, GUILT AND SILENCE

Melita Jukić

National Memorial Hospital "Dr. Juraj Njavro" Vukovar, Vukovar, Croatia  
Faculty of Dental Medicine and Health Osijek, Osijek, Croatia

E-mail: mjuki17@gmail.com

**Introduction:** Psychotrauma can lead to various mental disorders, notably post-traumatic stress disorder (PTSD). PTSD's duration varies, spanning decades or resurfacing unexpectedly in seemingly recovered individuals, contingent on diverse circumstances. Profound guilt and shame, experienced by the traumatized, play a pivotal role in perpetuating PTSD's chronic nature and contributing to other mental disorders.

This study emphasizes recognizing guilt and shame as aftermaths of psychotrauma, exploring their impact on traumatized individuals' mental well-being and functionality, and assessing potential ramifications for close relationships.

**Subjects and methods:** Adhering to PRISMA guidelines, we conducted a comprehensive literature search in PubMed and Google Scholar. Using keywords, related terms, and diverse combinations, we selected pertinent works addressing psychotrauma consequences, guilt and shame, and familial functioning in psychotraumatized individuals.

**Results and conclusion:** Guilt and shame emerge as substantial symptoms, intricately complicating PTSD's clinical landscape and significantly influencing functionality and quality of life for traumatized individuals and their close relationships. These emotions can contribute to psychotic symptoms, depression, anxiety disorders, addiction, and an elevated suicide risk. Recognizing these emotions is imperative, necessitating timely intervention, often involving family or close individuals, to avert adverse consequences. Incorporating brief case presentations enriches understanding, emphasizing the need for a multi-disciplinary approach to address the multifaceted challenges faced by psychotraumatized individuals.

**Keywords:** psychotrauma - PTSD (Post-Traumatic Stress Disorder) - guilt - shame - secondary traumatization

**References:**

1. *American Psychiatric Association: Diagnostic and statistical manual of mental disorders: DSM-5. Fifth Edition. Arlington, VA: American Psychiatric Publishing, 2013*
2. Grant BF, Hasin DS, Blanco C, Stinson FS, Chou SP, Goldstein RB et al.: *The epidemiology of social anxiety disorder in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. J Clin Psychiatry* 2005; 66:1351-61
3. Jakovljević M, Brajković L, Jakšić N, Lončar M, Aukst-Margetić B, Lasić D: *Posttraumatic stress disorders (PTSD) from different perspectives: a transdisciplinary integrative approach. Psychiatr Danub* 2012; 24:246-55
4. Jukić M, Malenica L, Đuričić V, Talapko J, Lukinac J, Jukić M et al.: *Long-Term Consequences of War Captivity in Military Veterans. Healthcare (Basel)* 2023; 11:1993
5. Urlić I, Simunković GT: *Working through Shame in Groups for Victims of Trauma and War. Int J Group Psychother* 2009; 59:165-178

\* \* \* \* \*



## DIFFERENCES IN PSYCHOTIC DISORDERS BETWEEN MEN AND WOMEN

Mirela Čelić Ružić<sup>1,2\*</sup>, Linda Rossini Gajšak<sup>1</sup>, Vladimir Grošić<sup>1,2</sup> & Igor Filipčić<sup>1,2,3</sup>

<sup>1</sup>Psychiatric Clinic Sveti Ivan, Zagreb, Croatia

<sup>2</sup>Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>3</sup>School of Medicine, University of Zagreb, Zagreb, Croatia

\*E-mail: mirela.celic@pbsvi.hr

In patients with psychotic disorders, there is gender variability in prevalence, clinical onset, presentation, course of the disease, response to pharmacological and psychosocial treatment. There are several confirmed hypotheses for the above. From a biological point of view, there are genetic, neurodevelopmental and hormonal differences between genders. From a psychological point of view, the way of reaction to exposure to stress or trauma contributes to the difference, and socio-cultural factors that influence differences in the clinical presentation related to expectations of gender roles. More recent studies indicate a slightly higher incidence of psychotic disorders in men, with a risk ratio of about 1,4. Symptoms of psychotic disorders in women appear later than in men. Psychoses related to the risky partal period and traumatic events are specific for women (eg violence by a partner). Most studies report worse premorbid functioning and adjustment, and a higher frequency of negative symptoms with more pronounced functional deficits in the clinical picture of psychoses in men. Affective symptoms, emotional instability and parasuicidal behavior are more present in women. According to the clinical outcome or establishment of remission from psychosis, higher rates of relapse were recorded in men, and higher rates of remission in women. Women with disorders from the psychotic spectrum have twice the risk of physical comorbidities, especially in the early stages of the disease and at a younger age (<35 years). Among population with psychotic disorder, a higher frequency of cardiovascular deaths was found in men and due to malignant diseases in women. In both genders an association has been reported between the use of antipsychotics (AP) and reduced mortality from all causes. In studies and in clinical practice there is a difference in prescription, pharmacokinetics, therapeutic response as well as side effects of AP between the genders.

**Key word:** psychosis - schizophrenia - gender differences

### References:

6. Carter B, Wootten J, Archie S, Terry AL, Anderson KK: Sex and gender differences in symptoms of early psychosis: a systematic review and meta-analysis. *Arch Womens Ment Health* 2022; 25:679-691
7. Bucci P, et al.: Sex and gender differences in clinical and functional indices in subjects with schizophrenia and healthy controls: Data from the baseline and 4-year follow-up studies of the Italian Network for Research on Psychoses. *Schizophr Res* 2023; 251:94-107
8. Goldstein JM et al.: Sex differences in the genetic risk for schizophrenia: history of the evidence for sex-specific and sex-dependent effects. *Am J Med Genet B Neuropsychiatr Genet* 2013; 162B:698–710
9. Hartung CM & Lefler EK: Sex and gender in psychopathology: DSM–5 and beyond. *Psychological Bulletin* 2019; 145:390
10. Šimunović Filipčić I et al: Gender differences in early onset of chronic physical multimorbidities in schizophrenia spectrum disorder: Do women suffer more? *Early Interv Psychiatry* 2020; 14:418–427

\* \* \* \* \*

## PSYCHOPHARMACEUTICALS SIDE EFFECTS AND INTERACTIONS WITH OTHER DRUGS

Ivana Pavličević Tomas<sup>1,2\*</sup>, Anamarija Petek Erić<sup>1,2,3</sup>, Zoran Čavajda<sup>1,2</sup>,  
Igor Damašek<sup>1,2</sup> & Marina Perković Kovačević<sup>1,2</sup>

<sup>1</sup>Head Department of Psychiatry, University Hospital Centre Osijek, Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>3</sup>Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

\*E-mail: pavlicevic1987@gmail.com

In the last few decades, psychopharmacology has witnessed incredible developments in terms of efficacy, safety and the number of options available for the treatment and management of mental disorders. The shift in perspective from largely experiential therapy to evidence-based medicine represents a

veritable revolution in mental health, with the implication of providing concrete improvements in disease prognosis and patients' quality of life. Nevertheless, the tolerability profile of psychopharmacological therapy remains an area for improvement and research. One of the most common side effects of psychotropic drugs is certainly metabolic syndrome, also known as syndrome X or insulin resistance syndrome, which denotes a set of conditions that occur together with insulin resistance as a common feature. Components of the syndrome include hypertension, central obesity, dyslipidemia (high triglycerides and low high-density lipoprotein cholesterol), and impaired glucose tolerance. Many frequently used psychopharmaceuticals adversely affect the components of the metabolic syndrome as risk factors for vascular diseases and in general the development of other systemic diseases of acute and chronic type. Various strategies have been implemented to improve the quality of available data on adverse drug reactions associated with psychiatric therapy. Regardless, much remains to be investigated about the systemic effects of psychoactive drugs, their pharmacokinetic and pharmacodynamic interactions with other drugs, and the variability of these effects in such specific and vulnerable populations.

**Keywords:** psychopharmacology - side effects - interactions - metabolic syndrome

### References:

1. Corcoran K: *From the scientific revolution to evidence-based practice: teaching the short history with a long past. Res Soc Work Pract* 2007; 17:548–52
2. Correll CU, Solmi M, Cortese S, Fava M, Højlund M, Kraemer HC, et al.: *The future of psychopharmacology: a critical appraisal of ongoing phase 2/3 trials, and of some current trends aiming to de-risk trial programmes of novel agents. World Psychiatry* 2023; 22:48–74
3. de Filippis R, De Fazio P, Gaetano R, Steardo L, Cedro C, Bruno A, et al.: *Current and emerging long-acting antipsychotics for the treatment of schizophrenia. Expert Opin Drug Saf* 2021; 20:771–90
4. de Filippis R, De Fazio P, Kane J, Schoretsanitis G: *Pharmacovigilance approaches to study rare and very rare side-effects: example of clozapine-related DRESS syndrome. Expert Opin Drug Saf* 2022; 21:585-7
5. Montejo AL, Lourenço M: *Editorial: safety and tolerability of psychotropic compounds. Front Neurosci* 2020; 14:509

\* \* \* \* \*

## SECURITY MEASURE OF OBLIGATORY ALCOHOL ABUSE TREATMENT

Zoran Čavajda<sup>1,3\*</sup>, Anamarija Petek Erić<sup>1,3,4</sup>, Ivana Pavličević Tomas<sup>1,3</sup>, Igor Damašek<sup>1,3</sup>,  
Marina Perković Kovačević<sup>1,3</sup>, Ena Bandov<sup>1</sup>, Lucija Kljaić<sup>2</sup> & Ivan Požgain<sup>1,3</sup>

<sup>1</sup>Psychiatric Clinic, University Hospital Osijek, Osijek, Croatia

<sup>2</sup>Psychiatric Department, National Memorial Hospital "dr. Juraj Njavro", Vukovar, Croatia

<sup>3</sup>Faculty of Medicine, University of Josip Juraj Strossmayer Osijek, Osijek, Croatia

<sup>4</sup>Faculty of Dental Medicine and Health, University of Josip Juraj Strossmayer Osijek, Osijek, Croatia

\*E-mail: zcavajda@gmail.com

The security measure of obligatory substance abuse treatment is regulated by Article 69. of the Criminal Code of the Republic of Croatia. The security measure of obligatory substance abuse treatment will be imposed on an offender who committed a criminal act under the decisive influence of addiction to alcohol, drugs, or other types of addiction if there is a danger that, due to this addiction, they will commit a more serious criminal offense in the future.

Alcohol is a substance of addiction that has the most significant criminogenic effect. Its acute effects reduce behavior and emotions control resulting of altered perceptions of themselves and their surroundings. Individuals under the influence of alcohol often commit aggressive criminal acts directed against life and the body.

The specificity of alcohol as a substance of addiction and the commission of criminal acts under the influence of alcohol is that the person committing the criminal act may not be an alcohol addict and mostly is not addicted to alcohol, unlike the commission of criminal acts under the influence of other substances of addiction where it mostly involves addicts in the narrower sense who mainly commit property crimes motivated by the higher cost of psychoactive substances to ensure continued availability of the addictive substance.

The purpose of this paper is to compare the number of individuals treated at the Forensic infirmary of the Psychiatric clinic at University hospital Osijek with the imposed security measure of alcohol addiction treatment with other addictions and to stimulate a discussion about the need for imposing a treatment

measure for alcohol addiction in individuals who do not meet the criteria for the diagnosis of alcohol addiction in the narrower sense.

**Key words:** alcohol - addiction - obligatory treatment - security measure

**Reference:**

1. Cvitković E: *The Treatment of alcohol dependence in correctional setting – an overview of current knowledge, Faculty of Education and Rehabilitation Sciences, University of Zagreb, 2021*
2. <https://www.zakon.hr/z/98/Kazneni-zakon>
3. Žarković Palijan T: *Značajke osobnosti alkoholičara počinitelja i nepočinitelja kaznenih djela, Medical faculty, Zagreb, University of Zagreb, 2004*

\* \* \* \* \*

## ALCOHOLISM - IMPACT ON THE FAMILY

Igor Damašek<sup>1,2\*</sup>, Anamarija Petek Erić<sup>1,2,3</sup>, Ivana Pavličević Tomas<sup>1,2</sup>,  
Zoran Čavajda<sup>1,2</sup> & Mia Damašek<sup>1,2,4</sup>

<sup>1</sup>Department of Psychiatry, University Hospital Centre Osijek, Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>3</sup>Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>4</sup>Pediatric Clinic, University Hospital Centre Osijek, Osijek, Croatia

\*E-mail: idamasekid@gmail.com

Alcoholism as well as alcohol-related disorders lead to dysfunction and destabilization of the family of alcohol addicts. This significantly affects and prevents further harmonious growth and development of family members. Therefore, it is not possible to talk about the disease or disorder of an individual, but about the disorder of the whole family. It is the family that first recognizes changed behavior and the first signs of addiction. An alcohol addict exhibits an unbearable attitude towards family members up to aggressive outbursts, neglects family obligations and child care. Reasons for avoiding dealing with alcohol addiction problems of family members can be ignorance, shame, fear of an adverse reaction from the alcohol addict himself or the need to protect him. Alcohol addiction can and must be treated while simultaneously overcoming the resulting difficulties in the family. It is necessary to start the treatment of alcohol addiction through institutions with programs for the treatment and rehabilitation of alcohol addicts, and at the same time professional support and help must be provided to all family members.

**Key words:** alcoholism - family - rehabilitation of alcohol addicts

**References:**

1. Zoričić Z: *Ovisnosti Prevencija, liječenje i oporavak. Školska knjiga, Zagreb, 2018*
2. Kaličanin P: *Psijhijatrija. Elit-medica, Beograd, 2002*
3. Hotujac LJ i sur: *Psijhijatrija. Medicinska naklada, Zagreb, 2006*

\* \* \* \* \*

## MANAGING PSYCHOTROPIC MEDICATIONS DURING PREGNANCY

Ana Havidić

Department of Clinical Pharmacology, University Hospital Centre Osijek, Croatia

Department of Pharmacology, Faculty of Medicine Osijek, Croatia

E-mail: ana.havidic@kbc.hr

**Introduction:** The management of psychiatric disorders in pregnant women frequently involves the use of psychotropic drugs. Balancing the need for pharmacological treatment against potential risks to both the mother and fetus is a complex challenge. While certain drugs may benefit the mother, their potential harm to the developing fetus complicates the selection process. However, the risks associated with

untreated psychiatric illness during pregnancy often outweigh the potential drawbacks of pharmacotherapy.

**Subjects and methods:** Selective serotonin reuptake inhibitors are generally considered the antidepressants of choice in pregnancy, excluding paroxetine. According to available data, the use of escitalopram has been associated with the lowest risk of birth defects.

Use of mood stabilizers during pregnancy is often a matter of concern. Valproate is contraindicated due to its high risk of teratogenesis and cognitive deficits. Although lithium is effective, it is considered teratogenic due to an elevated risk of cardiac defects. However, lamotrigine, when used as monotherapy, poses a lower risk for major birth defects.

Second-generation antipsychotics are more commonly utilized during pregnancy than their first-generation counterparts. Research generally suggests that exposure to both first and second-generation antipsychotics in utero does not significantly increase the risk of major physical malformations beyond general population rates.

The available data regarding the risk of congenital anomalies associated with benzodiazepines remains inconclusive. If their use is necessary, prescribing drugs with short half-lives at the lowest effective dose is considered reasonable.

**Conclusion:** Once the decision to initiate treatment with a specific drug is made, careful consideration should be given to selecting the lowest effective dose while monitoring its effects. Furthermore, the variable pharmacokinetics of drugs during pregnancy may necessitate adjustments to ensure optimal outcomes.

**Keywords:** pregnancy - pharmacotherapy - birth defects - anomalies

#### References:

1. Anderson KN, Lind JN, et al.: Maternal Use of Specific Antidepressant Medications During Early Pregnancy and the Risk of Selected Birth Defects. *JAMA Psychiatry* 2020; 77:1246–1255. doi:10.1001/jamapsychiatry.2020.2453
2. Erdeljić Turk V & Vitezić D: Lijekovi i trudnoća. *Medicus* 2017; 26:23-36
3. Gruszczyńska-Sińczak I, Wachowska K, et al.: Psychiatric Treatment in Pregnancy: A Narrative Review. *J Clin Med* 2023; 12:4746. doi:10.3390/jcm12144746. PMID: 37510861; PMCID:PMC10380824
4. Huybrechts KF, Hernández-Díaz S et al.: Antipsychotic Use in Pregnancy and the Risk for Congenital Malformations. *JAMA Psychiatry* 2016; 73:938-46. doi:10.1001/jamapsychiatry.2016.1520. PMID:27540849; PMCID:PMC5321163

\* \* \* \* \*

## THE MISSION OF HOSPITALITY AND A TEAM APPROACH TO THE PATIENT AT THE ST. RAPHAEL STRMAC SPECIAL HOSPITAL

Maristela Šakić\*, Lucija Bijelić, Helena Dakić & Ana Marić

“St. Raphael Strmac” Special Hospital for Psychiatry and Palliative Care, Strmac, Cernik, Croatia

\*E-mail: maristela.sakic@yahoo.com

**Introduction:** To promote long-term recovery in patients with mental disorders during treatment, a multidisciplinary approach is necessary. The mission of hospitality, as the fundamental principle of patient care at the St. Raphael Special Hospital, is based on values such as respect, quality, responsibility and spirituality. These values encourage a comprehensive approach to each person, incorporating the biopsychosocial components of individuals as unique and irreplaceable. Therefore, all team members, each with their own expertise, work together with a common focus on the well-being and care of the patient.

To illustrate achieving optimal insight in a patient using the Helm of Recovery. Optimal insight is a driver of recovery, according to the World Health Organization (WHO), achieved through symptom control, strengthening identity and improving functionality.

**Subjects and methods:** The Helm of Recovery is a tool encompassing ten areas assessing cognitive, emotional, social and functional levels of achieved recovery. Each team member, in collaboration with the patient, analyzed and evaluated crucial life domains for recovery using the Helm of Recovery. On a scale of 0% to 100%, the patient self-assessed their level of functioning, where a lower score indicated a lower level of functioning.

**Results:** Recovery results were obtained through the first and second self-assessments in the following distinct areas:

- Symptom control: 1<sup>st</sup> assessment 40%, 2<sup>nd</sup> assessment 70%;
- Coping with stress and trauma: 1<sup>st</sup> assessment 20%, 2<sup>nd</sup> assessment 70%;
- Identity and self-respect: 1<sup>st</sup> assessment 40%, 2<sup>nd</sup> assessment 60%;
- Relationships and social inclusion: 1<sup>st</sup> assessment 50%, 2<sup>nd</sup> assessment 90%;
- Purpose and meaning in life: 1<sup>st</sup> assessment 20%, 2<sup>nd</sup> assessment 60%.

**Conclusion:** An individualized approach to patients with mental disorders by all team members is the foundation for critical insight and the formulation of an optimal recovery plan.

**Key words:** multidisciplinary team - insight - recovery

#### References:

1. Jakovljević M: *Transdisciplinary holistic integrative psychiatry- a wishful thinking or reality. Psychiatr Danub* 2008; 20:341-8
2. *Person-centred recovery planning for mental health and well-being self-help tool. WHO QualityRights. Geneva: World Health Organization, 2019*
3. Štrkalj-Ivezić S & Radić K: *The Helm of Recovery as a Tool for Developing an Individual Recovery Plan in Everyday Psychiatric Practice. Soc psihijat* 2022; 50:436-449

\* \* \* \* \*

## FUNCTIONAL RECOVERY AFTER THE FIRST PSYCHOTIC EPISODE - 5 YEAR LONGITUDINAL FOLLOW UP

Martina Rojnić Kuzman<sup>1,2\*</sup>, Kristina Brozić<sup>3</sup>, Dina Bošnjak Kuharić<sup>3</sup> & Lea Kozina<sup>3</sup>

<sup>1</sup>University Hospital Centre Zagreb, Zagreb, Croatia

<sup>2</sup>School of Medicine, Zagreb, Croatia

<sup>3</sup>University Psychiatric Hospital Vrapče, Zagreb, Croatia

\*E-mail: mrojnic@gmail.com

Despite numerous new methods and treatment options, schizophrenia is still considered as one of the most severe mental disorders that is associated with numerous prejudice and stigma. It represents a significant burden for both the patients and their environment and, taking into account the economic aspect, including both high costs and long duration of treatment, for society in general. Treatment is demanding, and consists of combining pharmacotherapy and various psychosocial methods. The goal of the treatment is to achieve complete recovery, which is accomplished in only around 30% of all the patients.

Through the Biomarkers in Schizophrenia project - integration of complementary approaches in monitoring people with a first psychotic episode (FPE) (2015-2019; 110316 HRZZ), we followed 159 patients with FPE for 18 months and showed significant differences between patients with FPE and control group in the domain of neurocognitive functioning, emotional recognition and responses to psychosocial stress. Significant changes were also observed between initial parameters and after 18 months of treatment. The use of sedatives was a predictor of reduced functioning, while polytherapy with antipsychotics and the psychosocial program of a outpatient clinics have been shown as predictors of improved functioning after 18 months of treatment.

As a part of the current project, we are continuing our longitudinal study of our initial sample with the aim of investigating predictors of functional recovery after 5-year treatment through the implementation of the same neurocognitive tests, tests of emotional recognition, and responses of salivary cortisol to psychosocial stress using a previously developed paradigm. In this paper, the first preliminary results will be shown.

**Key words:** first psychotic episode - functional recovery - biomarkers

\* \* \* \* \*

## DEMENTIA AND COGNITIVE DISORDERS

Vjekoslav Peitl

*School of Medicine, Catholic University of Croatia, Zagreb, Croatia  
Department of Psychiatry, University Hospital Center Sestre milosrdnice, Zagreb, Croatia*

*E-mail: vjekoslav.peitl@gmail.com*

When addressing cognition, the term usually includes a whole range of brain functions, including the ability to learn and remember, organize, plan and solve problems, correctly perceive the environment, understand and use language, process new information and direct, retain and shift attention. The neurocognitive domains that represent the backbone of the diagnosis of cognitive disorders are formed according to the mentioned abilities. From the point of view of psychiatry, cognitive deficits are recognized as a fundamental characteristic of a number of mental disorders, both those that are most often associated with it - dementias, but also others, such as schizophrenia, but this fact is not recent. The newer focus of research on cognition is driven by the relative ineffectiveness of currently available psychopharmacotherapy in adequately coping with cognitive disorders and the development of new therapeutic modalities to address them, but also by a clearer understanding of cognitive dysfunctions in other psychiatric disorders, from psychosis to anxiety. Numerous tests and questionnaires can be used in the assessment of cognitive impairment in clinical practice, but they mostly require a considerable level of knowledge of the issue at hand, which is often accompanied by specific training, as well as significant time commitment, considering that the implementation of some of them takes several hours. In addition, if it is necessary to focus on a specific domain of cognitive impairment, some of the tests will not provide adequate results or do not have to cover it at all, especially because they were not developed specifically for psychiatric disorders, up to perhaps dementia. Therefore, again from the clinical standpoint, the application of reliable and time-limited tools is necessary. Regarding the treatment of cognitive impairment, for now, psychosocial interventions and strategies for improving secondary cognitive deficits are in the foreground, while pharmacological interventions are very often poorly selective and therefore reserved for situations when they are deemed necessary. For this reason, it is necessary to carefully assess the risks and benefits of the use of individual psychopharmaceuticals and to choose the most adequate one in treating the various symptoms that manifest cognitive disorders.

**Key words:** dementia - cognitive disorder - psychopharmaceuticals

### References:

1. *Badžim V, Orlović I, Peitl V, Silić A, Ostojić D, Karlović D: Interaction between cortisol levels, nerve growth factor concentration and cognitive functioning in patients with first episode schizophrenia - preliminary findings. Schizophrenia Bulletin 2022; 44(Suppl 1):S369-370*
2. *Husain M, Schott JM: Oxford textbook of cognitive neurology and dementia. Oxford: Oxford University Press, 2016*
3. *Karlović D: Psihijatrija. Jastrebarsko: Naklada Slap, 2019*
4. *Karlović D, Peitl V, Silić A: Shizofrenije. Jastrebarsko: Naklada Slap, 2019*
5. *Peitl V, Badžim VA, Šiško Markoš I, Rendulić A, Matešić K, Karlović D: Improvements of fronto-temporal cerebral blood flow and cognitive functioning in patients with first episode of schizophrenia treated with long-acting aripiprazole. J Clin Psychopharmacol 2021; 41:638-643*

\* \* \* \* \*

## SCIENCE BEHIND THE CONCEPT OF PSYCHOSIS PRODROMES AND CLINICAL PRACTICE

Aleksandar Savić<sup>1,2\*</sup>, Draženka Ostojić<sup>1,3</sup>, Suzana Kos<sup>1</sup> & Petrana Brečić<sup>1,2,4</sup>

<sup>1</sup>University Psychiatric Hospital Vrapče, Zagreb, Croatia

<sup>2</sup>School of Medicine, University of Zagreb, Zagreb, Croatia

<sup>3</sup>Faculty of Law, University of Zagreb, Zagreb, Croatia

<sup>4</sup>Faculty of Education and Rehabilitation Sciences, University of Zagreb, Zagreb, Croatia

*\*E-mail: aleksandar.savic@bolnica-vrapce.hr*

The concept of non-specific and sub-syndromal symptoms and phenomena preceding and leading into frank psychosis has long existed in psychiatry, but given the lack of pathognomonic signs or symptoms it has always been a retrospective concept that could not inform every-day practice. Over the last 30

decades a number of research groups have analyzed those at risk of developing psychotic disorders, and a number of classification systems (primarily research-focused) appeared. Those systems aimed at identifying clinical high-risk (CHR) individuals, primarily revolving around ultra-high risk (UHR) or basic symptoms models. Although CHR criteria are well established, they are linked to a number of issues including the time needed for an evaluation, as well as the need for specialized groups trained to perform evaluation and interpret the results. Putting the organizational issues aside, even with adequate identification of CHR population using UHR criteria only 22% of those in CHR group will transition to psychosis over a 3-year period, which indicates a low clinical utility of current models.

Novel research aiming at has focused on the possibility of integrating clinical and biological variables in stacked predictive models, like using expert evaluations, neurocognitive tests, structural magnetic resonance, and polygenic risk score. Koutsouleris and collaborators showed that using multimodal machine learning and sequential integration of these different variables yields a significant accuracy (85.9%), but also that such approach could be used to predict psychosis risk in a broader risk spectrum.

Advances in classification models and objective measures of the risk are the only way to introduce CHR identification and interventions in the every-day clinical practice given the risks and ethical considerations associated with recruitment of at-risk populations in what would be considered specialized selective prevention or early intervention. However, certain insights from available research can already help to inform our current practice.

**Key words:** psychosis - psychotic disorders - machine learning

#### References:

1. Fusar-Poli P, Salazar de Pablo G, Correll CU, Meyer-Lindenberg A, Millan MJ, Borgwardt S et al.: *Prevention of psychosis: advances in detection, prognosis, and intervention. JAMA Psychiatry 2020; 77:755-765*
2. Koutsouleris N, Dwyer DB, Degenhardt F, Maj C, Urquijo-Castro MF, Sanfelici R et al.: *Multimodal Machine Learning Workflows for Prediction of Psychosis in Patients With Clinical High-Risk Syndromes and Recent-Onset Depression. JAMA Psychiatry 2021; 78:195-209*
3. Koutsouleris N, Worthington M, Dwyer DB, Kambaitz-Illankovic L, Sanfelici R, Fusar-Poli P et al.: *Toward Generalizable and Transdiagnostic Tools for Psychosis Prediction: An Independent Validation and Improvement of the NAPLS-2 Risk Calculator in the Multisite PRONIA Cohort. Biol Psychiatry 2021; 90:632-642*

\* \* \* \* \*

## CIVIL AND FORENSIC INVOLUNTARY COMMITMENT: CHALLENGES AND PITFALLS

Goran Arbanas

*Department of Forensic Psychiatry, Clinic for Psychiatry Vrapče, Zagreb, Croatia  
Faculty of Medicine Rijeka, Rijeka, Croatia*

*E-mail: goran.arbanas@bolnica-vrapce.hr*

The Act on the Protection of People with Mental Disorders delineates two distinct forms of involuntary commitment: civil and forensic. Civil commitment targets individuals grappling with mental disorders where such conditions pose a tangible risk to their own or other's life, health, or safety. The presence of this peril is a prerequisite for commitment, necessitating a contemporary assessment.

However, the interpretation of what constitutes a risk to one's health varies across jurisdictions, raising questions like whether the refusal to take prescribed medications by someone with schizophrenia constitutes a direct threat to their health, warranting commitment.

Conversely, forensic commitment applies to individuals who have committed offenses but were deemed not guilty by reason of insanity. They pose a risk of re-offending due to the underlying mental disorder that absolved them of guilt. While civil commitment hinges on present risk, forensic commitment revolves around evaluating future risk.

Remarkably, forensic placement is constrained by the maximum prison sentence for the same offense, irrespective of the anticipated risk. This constraint prompts a critical dilemma: how to address situations where an imminent risk is absent, yet the prospect of future harm looms large?

Navigating these complexities requires a nuanced approach that balances the need for individual liberty with societal safety, ensuring that interventions are both effective and ethically sound.

**Key words:** forensic psychiatry - involuntary commitment - civil commitment

## References:

1. Arbanas G & Roksandić S: *Ni med cvetjem ni pravice: sličnosti i razlike Zakona o zaštiti osoba s duševnim smetnjama i Zakona o zaštiti pučanstva od zaraznih bolesti – treba li nam zakon o zaštiti osoba sa zaraznim bolestima? Liječnički vjesnik* 2021; 143:478-489
2. Beis P, Graf M & Hachtel H: *Impact of legal traditions on forensic mental health treatment worldwide. Front Psychiatry* 2022; 25:876619
3. Bloom JD & Kirkorsky SE: *Incompetent to stand trial, not restorable, and dangerous. J AM ACAD Psychiatry Law* 2020; 48:237-243
4. Goethals K (ed.): *Forensic psychiatry and psychology in Europe. Springer, Cham, 2018*
5. Nedopil N, Taylor P & Gunn J: *Forensic psychiatry in Europe: the perspective of the Ghent group. Int J Psychiatry Clin Pract* 2018; 19:80-83

\* \* \* \* \*

## THE LINK BETWEEN PSYCHIATRY AND CRIMINAL LAW: IMPLICATIONS AND MEANING OF SELECTED AFFECTS AND CONDITIONS ON COURT DECISIONS

Barbara Herceg Pakšić

*Faculty of Law, University of Josip Juraj Strossmayer in Osijek, Croatia*

*E-mail: bhercegpaksic@gmail.com*

More than ten years have passed since the Croatian criminal legislator decided to intervene in the provisions related to the culpability and thereby introduced changes in the judicial practice compared to the previous solutions. Introducing the so-called the doctrine of excuse, through the (im)possibility of demanding (legally) compliant behavior, made it possible to exclude culpability for the committed act. We are talking about situations in which a non-standard conflicting and motivational position of a person occurs, due to which the legal order refrains from reprimanding. In general, these are existential situations in which human experience dictates the appreciation of a person's specific psychological state, which is based on the affects. The Criminal Code contains a direct reference to the so-called excusing severe fright (when exceeding the limits of necessary defense). This also represents the court's obligation in the acquittal verdict to explain the basis of which it was determined that the specific mental state corresponds to excusable severe fright, which is a task that belongs to an expert psychiatrist accompanied by a significant challenge: the criminal law and psychiatric concepts of affect may not coincide, so the summarization of psychiatric terms under the legally prescribed affect can be a challenge. This challenge of interpretation, regulation and compatibility of legal definitions of affects with medical ones is a significant and comparative issue. In 2015, the Supreme Court of Croatia noted that "the legal term panic does not exist in the catalog of psychiatric symptoms, so terms such as fear, panic, helplessness and horror are used. Presentation will cover the fundamental challenges in this area and try to propose a solution.

**Key words:** psychiatry - criminal law - affects - apologetic reasons

## References:

1. Bernsmann: *Affekt und Opferverhalten*, 1989, 160
2. Herceg Pakšić: *Excuses in Criminal Law: Exceeding the Limits of Necessary Defense and Extreme Necessity, Narodne novine*, pp. 27-28; Sternberg-Lieben in Schönke, Schröder (Hrsg), *Strafgesetzbuch, Kommentar* 2019; Vor§32ff, 635, rb.108
3. *VSRH, I Kž 635/2014-9 dated 15 December 2015*

\* \* \* \* \*

## LIABILITY FOR MENTALLY ILL AND MENTALLY DELAYED PERSONS

Davorin Pichler

*Faculty of Law Osijek, Josip Juraj Strossmayer University in Osijek, Osijek, Croatia*

*E-mail: dpichler@pravos.hr*

**Background:** Vicarious liability exists in a situation where someone is responsible for damage caused by another person. A special form of vicarious liability exists for cases of liability for mentally ill and mentally delayed persons or persons who for some other reason are not capable of reasoning. These persons do not have tortuous liability, so those who are obliged to supervise them are responsible for them.



**Subjects and methods:** Examples of liability for damage caused by a mentally ill and/or mentally delayed person arising from the law, decision of the competent institution or contract will be analyzed. It is about the liability of custodian, parents due to the institute of extension of parental rights or a certain institution. The need to determine the ability of the injurer to properly understand the events around him and make decisions that are correct according to the understanding of the environment in which he lives will be emphasized in order to make a decision about whether a person was mentally ill, mentally delayed in mental development or due to other reasons was not able to reason.

**Results:** The paper should answer the question when the liable person can be released from liability for damage in connection with the supervision of the injurer to which he was obliged.

**Conclusions:** The paper will analyze all assumptions of liability for damage caused by a mentally ill and/or mentally delayed persons. Certain open questions of legal theory and practice will be highlighted and, in this sense, the need for their regulation will be pointed out with the aim of inaugurating legal security and protecting the divergent interests of society and individuals.

**Keywords:** damage - liability - equity - supervision

**References:**

1. Crnić I: *Zakon o obveznim odnosima, Napomene, komentari, sudska praksa i prilozi. Organizator, Zagreb, 2006*
2. Klarić P & Vedriš M: *Građansko pravo. Narodne novine, Zagreb, 2006*
3. Žuvela M: *Odgovornost za drugog. Naša zakonitost 1986; 9-10:1028-1039*

\* \* \* \* \*

## THE CHALLENGES IN MANAGING „DUAL DISORDERS“ PATIENTS

Ivan Čelić<sup>1,2\*</sup>, Mislav Guščić<sup>3</sup>, Miroslav Perić<sup>3</sup> & Petrana Brečić<sup>1,2</sup>

<sup>1</sup>University Psychiatric Hospital Vrapče, Zagreb, Croatia

<sup>2</sup>School of Medicine, University of Zagreb, Croatia

<sup>3</sup>Neuropsychiatric Hospital „Dr. Ivan Barbot“, Popovača, Croatia

\*E-mail: [ivan.celic@bolnica-vrapce.hr](mailto:ivan.celic@bolnica-vrapce.hr)

The term "dual disorder" refers to the coexistence of at least one substance use disorder and another mental disorder in the same person, as defined by the World Health Organization in its Lexicon of Alcohol and Drug Terms. At the beginning of the last decade, the World Psychiatric Association created a new section for this topic, choosing to use the term dual disorder/pathology. Substance use disorders are common in people with serious mental illnesses and vice versa. Dual disorders lead to worse outcomes and higher costs than single disorders. More than 50% of people with schizophrenia, bipolar disorder or other serious mood disorders have a substance use disorder at some point in their lives. Both substance use disorders and severe mental illness are chronic, they can flare up and subside. Dual disorders lead to worse outcomes in the form of greater treatment problems and more frequent rehospitalizations, higher prevalence, violence, suicidal behavior, homelessness and incarceration. Other physical problems such as hepatitis C, HIV, deep vein thrombosis are more common, which ultimately increases the number of visits to health services and higher treatment costs.

Dual disorders can be treated. Many people eventually achieve stable remission from their substance use disorder. The best results are provided by an integrated model of treatment for dual disorders in which these two disorders are treated by the same team, in the same place and at the same time. The recovery model should be driven by the patient's needs, which includes unconditional respect and compassion, the clinician's responsibility in motivating the patient to seek treatment. The patient's choice and joint decision-making are important. The focus should be on goals and functionality, not adherence to treatment.

Implementing an integrated treatment model is challenging but essential for better outcomes. Involvement of all stakeholders is important: health authorities, program teams, clinicians/supervisors, family and patient, as well as awareness of the provision of different services offered at different stages of treatment.

**Key words:** dual disorders/diagnosis - substance use disorders - psychiatric comorbidity - addiction - recover

## References:

1. Adan A, Torrens M: *Special Issue: Diagnosis and Management of Addiction and Other Mental Disorders (Dual Disorders)*. *J Clin Med* 2021; 10: 1307
2. Murthy P, Chand P: *Treatment of dual diagnosis disorders*. *Curr Opin Psychiatry* 2012; 25:1 94-200
3. Pacini M, Marenmani AGI, Marenmani I: *The Conceptual Framework of Dual Disorders and Its Flaws*. *J Clin Med* 2020; 9:2098
4. Torrens M, Adan A: *Recent Advances in Dual Disorders (Addiction and Other Mental Disorders)*. *J Clin Med* 2023; 12:3315
5. Torrens M, Mestre-Pintó JI, Montanari L, Vicente J, Domingo-Salvany A: *Dual diagnosis: an European perspective*. *Adicciones* 2017; 29:3-5

\* \* \* \* \*

## THE IMPORTANCE OF TRANSITIONAL PSYCHIATRIC CARE - BETWEEN CARE FOR ADOLESCENT AND ADULT CARE

Mirela Delalle<sup>1\*</sup> & Anamarija Petek-Erić<sup>1,2,3</sup>

<sup>1</sup>Department of Psychiatry, Osijek University Hospital Centre, Osijek, Croatia

<sup>2</sup>Faculty of Medicine, Josip Juraj Strossmayer University in Osijek, Osijek, Croatia

<sup>3</sup>Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University in Osijek, Osijek, Croatia

\*E-mail: mireladelalle@gmail.com

Young people moving from adolescence to young adulthood are defined as transitional age youth. Young adults differ from adolescents and middle-aged adults because they experience their own unique developmental tasks and have higher rates of risk-taking behaviors, which places them at greater risk for preventable causes of morbidity and mortality. Psychopathology has a high persistence from an early age into adulthood and the onset of many psychopathologies has been shown to coincide with that period of life. The common demarcation from Child and Adolescent to Adult service at age 18 create the risk of transition-related discontinuity of care. The transition is based on chronological, not developmental age. The gap between services affects not only patients, but families, communities and society as a whole. Transition aims to ensure continuity of care through a planned, personalised health care process and transition planning is very important. MILESTONE project found that those with more severe illness, suicidal ideas or use psychotropic medication were more likely to transition. There are special concerns for patients with ASD, ADHD, learning disabilities, eating disorders, anxiety disorders, personality disorders.

We collect medical data of 20 patients who are in psychiatric care at Department for adults and analysed how they move from care for adolescents, which strategy was used and if there was a transition gap between services.

There are recommendations for smooth transition between service which include period of parallel care, Transition care plan, Protocol, joint meetings, staff who manage transition like transition nurse, special services like Early intervention service, Young Adult Programme for patients the age of 18-25. Engagement of young adults and families as decision makers are very important. There is need to raise awareness about mental health among young adults using e-mental health technologies.

**Key words:** adult care - young adults - mental health - transition

## References:

1. Appleton R, Elahi F, Tuomainen H: *"I'm just a long history of people rejecting referrals" experiences of young people who fell through the gap between child and adult mental health services*. *Eur Child Adolesc Psychiatry* 2021; 30:401-413
2. Broad KL, Sandhu VK, Sunderji N et al: *Youth experiences of transition from child mental health services to adult mental health services: a qualitative thematic synthesis*. *BMC Psychiatry* 2017; 17:380
3. Eke H, Ford T, Newlove-Delgado T, Price A, Young S, Anni C et al: *Transition between child and adult services for young people with attention-deficit hyperactivity disorder (ADHD): findings from a British national surveillance study*. *Br J Psychiatr* 2020; 217:616-622
4. Franić T, Davidović N, Krnić S, Boričević Maršanić V, Dodig Ćurković K: *Jazovi i prijelazi u dječjoj i adolescentnoj psihijatriji*. *Paediatr Croat* 2016; 60(Supl 1):132-136
5. Merrick H, King C, McConachie H, Parr JR: *Le Couteur A on behalf of the Transition Collaborative Group: Experience of transfer from child to adult mental health services of young people with autism spectrum disorder*. *BJPsych Open* 2020; 6:1-10

\* \* \* \* \*

## BIOPSYCHOSOCIAL APPROACH AND RECOVERY IN THE TREATMENT OF DEPRESSION

Josipa Ivanušić Pejić

*Department of Psychiatry, University Hospital Center Osijek, Osijek, Croatia*

*E-mail: josipai1982@gmail.com*

Major depressive disorder (MDD) is one of the leading causes of disability worldwide. MDD patients experience difficulties in personal, family, occupational and social functioning. Despite numerous pharmacotherapy options, achievement of full symptomatic remission and functional recovery, is still a challenge. The remission rates are less than 50% and often not followed by functional improvement. Antidepressants are also used in maintenance phase of treatment. Psychotherapy has a unique role for psychosocial functions improvement and combined with antidepressants reduces the risk of relapse and recurrence. Cognitive behavioural therapy, interpersonal psychotherapy, family-based therapy, brief psychodynamic psychotherapy and non-pharmacological interventions (physical activity, healthy diet, stress reduction, establishing a social network) are recommended. Electroconvulsive therapy and repetitive transcranial magnetic stimulation should be considered as options in severe and treatment-resistant depression. For individual treatment plan, it is necessary to examine patient's attitude toward recovery, motivation for change, personal values, purpose of life, self-confidence, self-esteem, self-stigmatization, traumatic experiences, stressful life events, social skills. Individual, multidimensional, biopsychosocial approach, that implies biological, psychological and social factors in development and course of disorder, is needed.

**Key words:** depression - major depressive disorder - recovery of function

### References:

1. Casey MF, Perera DN, Clarke DM: *Psychosocial treatment approaches to difficult-to-treat depression. Med J 2013; 199:52-5. doi:10.5694/mja12.10629*
2. Oluboka OJ, Katzman MA, Habert J, McIntosh D, MacQueen GM, Milev RV et al.: *Functional recovery in major depressive disorder: Providing early optimal treatment for the individual patient. Int J Neuropsychopharmacol 2018; 21:128-44. doi:10.1093/ijnp/pyx081*
3. Štrkalj-Ivezić S, Radić K: *Kormilo oporavka kao alat za izradu individualnog plana oporavka u svakodnevnoj psihijatrijskoj praksi. Soc Psihijat 2022; 50:436-49*
4. Yang H. et al.: *Remission of symptoms is not equal to functional recovery: Psychosocial functioning impairment in major depression. Front Psychiatry 2022; 13:915689*

\* \* \* \* \*

## THERAPEUTIC FACTORS IN GROUP PSYCHOTHERAPY

Gordana Filipović Bilić

*Clinic for Psychiatry, University Hospital Osijek, Osijek, Croatia*

*E-mail: f.gordana@gmail.com*

The group is itself a therapeutic factor. The method and theory of group analysis deal with the human mind's dynamic understanding as a social, multi personal phenomenon. The method combines psychoanalytic insight with an account of social and interpersonal functioning. The success of group therapy is attributed to various therapeutic factors that contribute to the positive outcomes experienced by participants. Here we explore these therapeutic factors that make group psychotherapy a valuable and transformative modality.

Therapeutic factors are the result of a complex interaction between the therapist and group members. Yalom described 11 therapeutic factors.

The instillation of hope is a motivating factor in group psychotherapy. Witnessing the progress and successes of fellow group members instills a sense of optimism, inspiring hope. The collective nature of group therapy amplifies the impact of hope, creating a supportive atmosphere that encourages individuals to envision positive change in their lives.

Universality, factor where group members realize that they share similar struggles and challenges. This sense of commonality fosters a supportive environment, reducing feelings of isolation and promoting empathy among participants. The mutual identification with others' experiences provides a sense of belonging, validating individuals' emotions and normalizing their difficulties.

Interpersonal learning. Members receive feedback on their behaviors, gaining insights into how their actions impact others.

The cathartic effect, facilitated by the expression of emotions within the group setting. Verbalizing emotions and receiving feedback from others can lead to emotional release, helping participants gain insight into their own feelings and experiences. This process contributes to emotional regulation and self-awareness.

Corrective Recapitulation of the Primary Family Group. Group dynamics usually mirror past family interactions. By recognizing and understanding these patterns, individuals can work towards healthier ways of relating.

Patients often point to cohesion as a major factor that encourages everyone else.

In summary understanding and leveraging these factors can enhance the facilitation of group therapy sessions and maximize the benefits for participants.

**Key words:** group psychotherapy - therapeutic factors - Yalom

**References:**

1. Bernard H, Burlingame G, Flores P, Greene L, Joyce A, Kobos JC, et al.: *Clinical practice guidelines for group psychotherapy. Int J Group Psychother* 2008; 58:455-542
2. Foulkes SH, Anthony EJ. *Group Psychotherapy: The Psychoanalytical approach Exeter. A Wheaton and Co. Ltd. 1984*
3. Roberts J, Pines M. *Group Analytic Psychotherapy: Internatiolnal Journal of Group Psychotherapy. 1992; 42:469-494*
4. Yalom ID: *The Theory and Practice of Group Psychotherapy, IV. edition, Basic Books, 1995*

\* \* \* \* \*

## LIFE WITH A MENTALLY ILL PERSON

Tanja Đukanović Mirković

National Memorial Hospital "Dr. Juraj Njavro", Vukovar, Croatia

E-mail: [tanja.169@gmail.com](mailto:tanja.169@gmail.com)

Mental disorders lead to difficulties in functioning in various aspects of life, including family functioning. Quite often, the family members of the patient can also develop psychological and physical difficulties, as a result of long-term care for a sick family member. One of the significant obstacles in the treatment and care of the patient is stigma. The aim of this work is to bring closer the impact of mental illness on family members of the patient. Numerous studies talk about the burden faced by the family of a mentally ill person and point to the importance of education about the disease and work to improve communication within the family. Family reactions to their member's mental illness include denial, sadness, mourning, feelings of failure, shame and stigma. During the treatment of an individual's mental illness, it is particularly important to include the family in the therapeutic process, i.e. to bring the nature of the illness, the possibilities of therapeutic procedures, to educate them about the way to communicate with the patient, but also to provide them with support in order to better cope with the disease of the sick member.

**Keywords:** psychiatric patients - family members - stigma

**References:**

1. Alexander E, Morison B: *Mental illness and the Family Brigham Young University, 2004*
2. Finkelman AW: *Psychiatric patients and families: moving from a catastrophic event to long-term coping. Home Care Provid* 2000; 5:142-7
3. Štrkalj Ivezic S, Martić-Biočina S: *Reactions of family with member with mental disorder. Medicina fluminensis* 2010; 46:318-324

\* \* \* \* \*

## MODERN TECHNOLOGY DEPENDENCE

Vlatko Rotim

Teaching Institute of Public Health for Osijek-Baranja County, Osijek, Croatia

E-mail: [vrotim@gmail.com](mailto:vrotim@gmail.com)

Excessive use of computer games has become associated with health and social problems. Addiction to gaming is becoming a large problem all over the world, with rapid spread of computer games. Online games with their specific characteristics encourage players to continue playing with pleasure for very long

time thus strongly relate to formation of addiction. Addiction often becomes an important aspect especially in the case of massive multiplayer online role playing games. Playing computer games has spread rapidly in many countries over the past few years and the amount of time of the young persons involved is increasing. Prevalence of game addiction is higher in youths, men, and online gamers. Many gamers can easily achieve the various magnificent aims in the virtual rather than in the real world. These characteristics of the games are strongly related to addiction. Excessive computer game playing may be maintained by stimulatory effects on reward and sensitization, similar to long-term changes in the brain reward circuitry believed to maintain substance dependence. Craving in online gaming addiction and craving in substance dependence might share the same neurobiological mechanisms. Playing computer games in a level of addiction consists of a number of core components such as salience, mood modification, tolerance, withdrawal, conflict and relapse. Personal characteristics and environmental factors contribute to the gaming addiction onset. Association exists between various developmental disorders and gaming addiction. Motivational interviewing is highly useful in this type of treatment, and a good therapeutic relationship is the key component in patient motivation. CBT focuses on changing inappropriate gaming behaviors and reducing their harmful influences on daily life. As far as social networking services goes to addiction are more prone younger users and secondly there is a female preponderance. SNS addiction manifest itself through sleep disturbance, lower average grade points, intrafamilial conflicts and negative impact on self-esteem and well-being. Another big concern is that in recent years Internet pornography use has increased significantly because of its accessibility, affordability and anonymity. Mobile or cell phone compulsion in which individuals are preoccupied with checking for new messages text or email, new social media posts or other smartphone-related activities.

**Keywords:** gaming - social media and social networking - mobile or cell phone compulsion

#### References:

1. *Saunders JB, Conigrave KM, Latt NC, Nutt DJ, Marshall EJ, Ling W, Higuchi S: Addiction Medicine, second edition, Oxford University Press, 2016*
2. *Boland R, Verduin ML, Ruiz P: Kaplan & Sadock's Synopsis of Psychiatry, twelfth edition, Wolters Kluwer, 2022*
3. *American Psychiatric Association: Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing, 2013*

\* \* \* \* \*

## ADHD CHALLENGES IN THE THERAPEUTIC APPROACH - A CASE REPORT

Stanislav Rogulja<sup>1\*</sup>, Domagoj Benić<sup>1</sup>, Marina Bježančević<sup>1</sup>, Ivana Groznica Hrčić<sup>1</sup>,  
Zlatna Andraković<sup>1</sup>, Krešimir Melnik<sup>1</sup>, Sanja Jandrić<sup>1,2</sup> & Vlatka Kovač<sup>1,2</sup>

<sup>1</sup>Department of Child and Adolescent Psychiatry, University Hospital Center Osijek, Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, Osijek, Croatia

\*E-mail: [rogulja.st@gmail.com](mailto:rogulja.st@gmail.com)

We often encounter challenges in the therapeutic approach to the patient, however, when our patient is a minor, the parent/guardian is involved in the story, so it is clear that the challenges multiply. Different views on the mental health on their own child is only one of the challenges, we also have parental denial of a mental disorder in a child, different educational approaches, somatic illness of parents as well as mental disorders of parents, all of these are therapeutic challenges that we must overcome before we get caught up in solving the child's difficulties. When we agree on disagreements such as therapeutic steps and goals, only then do interventions begin with the aim of further helping our small patients in their growth and development.

Through the presentation of the case report, I will try to bring closer some of the challenges listed above and the success that was achieved through clear instructions, mutual cooperation, trust and, finally, an adequate therapeutic approach to the child.

**Key words:** ADHD - therapeutic challenge - therapeutic approach

#### References:

1. *Begovac I, Majić G, Vidović V i sur.: Hiperkinetički poremećaj. U: Barišić N, ur. Pedijatrijska neurologija. Zagreb: Medicinska naklada, 2009, str. 744-747*
2. *Lempp T. Kinder- und Jugendpsychiatrie BASICS. 2. izd. München: Urban & Fischer, 2014*

3. *Sonuga-Barke EJS, Taylor E: ADHD and hyperkinetic disorder. U: Thapar A, Pine DS, Leckman JF i sur., ur. Rutter's child and adolescent psychiatry. Sixth edition. The Atrium: Wiley & Sons, 2015, str. 738-756*
4. *Taylor E, Döpfner M, Sergeant J i sur.: European clinical guidelines for hyperkinetic disorder - first upgrade. Eur Child Adolesc Psychiatry 2004; 13(Suppl 1):17-30*
5. *Thapar A, Cooper M: Attention deficit hyperactivity disorder. Lancet 2016; 19;387:1240-50*

\* \* \* \* \*

## COGNITIVE BEHAVIORAL TREATMENT OF A PATIENT WITH PANIC DISORDER AND AGORAPHOBIA IN COMBINATION WITH PSYCHOPHARMACOTHERAPY

Anja Kereta<sup>1\*</sup>, Vlatka Kovač<sup>2,3</sup>, Marina Perković Kovačević<sup>1,3</sup> & Iva Vidanec Bandić<sup>1</sup>

<sup>1</sup>*Clinic for Psychiatry, Clinical Hospital Center Osijek, Osijek, Croatia*

<sup>2</sup>*Department of Child and Adolescent Psychiatry, Clinical Hospital Center Osijek, Osijek, Croatia*

<sup>3</sup>*Faculty of Medicine Osijek, Osijek, Croatia*

\*E-mail: [anja.kereta@kbco.hr](mailto:anja.kereta@kbco.hr)

**Introduction:** Cognitive-behavioral therapy is a combination of two theoretical and therapeutic approaches in explaining the origin of mental disorders - behavioral and cognitive. According to the behavioral paradigm, every human behavior is learned behavior, and according to the cognitive paradigm, mental disorders occur due to specific cognitive errors during the information processing process (Kostelić-Martić 2017). Numerous previous studies indicate the effectiveness of cognitive-behavioral therapy in combination with psychopharmacotherapy in the treatment of anxiety disorders, reducing the level of anxiety, and improving the individual's quality of life (Hoffman et al. 2009, Mitte 2005).

This study aims to present the cognitive-behavioral treatment of a patient suffering from panic disorder in combination with psychopharmacotherapy.

**Subjects and methods:** The treatment included an initial assessment, psychoeducation on cognitive-behavioral therapy, panic disorder, and agoraphobia, as well as a series of cognitive and behavioral interventions adapted to the specific characteristics of the disorder and the patient. Psychopharmacotherapy included the implementation of an antidepressant and an anxiolytic if necessary.

**Results:** The patient participated in the cognitive-behavioral treatment for six months through 28 individual sessions. All initially set general and specific goals were achieved. Following the completion of the treatment, as assessed by the psychiatrist, psychopharmacotherapy was discontinued.

**Conclusion:** Based on the results achieved, it can be concluded that the integrated approach in the treatment of panic disorder with agoraphobia is effective.

**Keywords:** cognitive-behavioral therapy - panic disorder - psychologist - psychopharmacotherapy - psychiatrist

### References:

1. *Hoffmann SG, Sawyer AT, Korte KJ, Smits JAJ: Is it beneficial to add pharmacotherapy to cognitive-behavioral therapy when treating anxiety disorders? A meta-analytic review. International Journal of Cognitive Therapy 2009; 2:160-175*
2. *Kostelić-Martić A: Napadaj panike ili neka teška bolest: kako prepoznati napadaj panike i kako si pomoći u okviru kognitivno-bihevioralne terapije. Medicinska naklada, Zagreb, 2017*
3. *Mitte K: Meta analysis of cognitive-behavioral treatments for generalized anxiety disorder: a comparison with pharmacotherapy. Psychological Bulletin 2005; 131:785-795*

\* \* \* \* \*

## THE CORRELATION BETWEEN SOCIO-EMOTIONAL FUNCTIONING AND COGNITIVE TASK PERFORMANCE IN INDIVIDUALS DIAGNOSED WITH SCHIZOPHRENIA

Iva Vidanec Bandić<sup>1\*</sup>, Marina Perković Kovačević<sup>1,2</sup>, Anja Kereta<sup>1</sup> & Ivana Erkapić<sup>1,2</sup>

<sup>1</sup>*Clinic for Psychiatry, Clinical Hospital Center Osijek, Osijek, Croatia*

<sup>2</sup>*Faculty of Medicine, Osijek, Croatia*

\*E-mail: [iva.vidanec@kbco.hr](mailto:iva.vidanec@kbco.hr)

**Introduction:** Socio-emotional dysfunctionality is one of the key diagnostic criteria for diagnosing schizophrenia and represents an important aspect in understanding psychopathological vulnerability, influencing the quality of life and the ability to cope with the challenges of daily functioning in individuals

affected by the condition (Pinkham & Penn 2016). Earlier studies suggest an insufficiently explored relationship between emotional competence, self-efficacy, stress-coping strategies, and levels of cognitive functioning (Ritsner et al. 2003, Kurtz et al. 2013), hampering the development of a comprehensive approach to the treatment of affected patients.

This study aims to examine the correlation between socio-emotional factors (emotional competence, self-efficacy, stress-coping strategies) and cognitive abilities (intelligence, concentration, memory) in individuals with schizophrenia.

**Subjects and methods:** The study included 102 individuals diagnosed with schizophrenia (according to ICD-10 and DSM-V criteria), treated at the Clinic for Psychiatry, Clinical Hospital Center Osijek, for a period of one year. The battery of instruments used for assessment included the following: clinical and sociodemographic status questionnaire designed for research purposes, KNT test for intelligence measuring, AVLT test for verbal memory assessment and d2 test of attention. Emotional competence was estimated by the UEK-45 questionnaire, self-efficacy by the SOS questionnaire and coping strategies by the CISS questionnaire.

**Results:** Emotion-focused strategies are negatively correlated with intelligence and concentration, while overall emotional competence and task-focused strategies are positively correlated with memory measures. Correlations were identified between certain socio-emotional factors and cognitive test results in individuals with schizophrenia, depending on gender, education level, and employment status.

**Conclusion:** Success in cognitive tasks is associated with certain socio-emotional factors. It is important to emphasize the complexity of the relationships among these factors, which can vary among individuals with schizophrenia. Comprehensive assessment and individualized interventions are often crucial components of the approach to treating individuals with schizophrenia.

**Keywords:** schizophrenia - memory - concentration - intelligence - socio-emotional factors

#### References:

1. Kurtz MM, Olfson RH, Rose J: *Self-efficacy and functional status in schizophrenia: relationship to insight, cognition and negative symptoms. Schizophr Res 2013; 145:69-74*
2. Pinkham A & Penn DL: *Neurocognitive and social cognitive predictors of interpersonal skill in schizophrenia. Psychiatry Res 2006; 143:167-78*
3. Ritsner M, Ben-Avi I, Ponizovsky A, Timinsky I, Bistrov E, Modai I: *Quality of life and coping with schizophrenia symptoms. Qual Life Res 2003; 12:1-9*

\* \* \* \* \*

## LIFE SATISFACTION IN PSYCHIATRIC PATIENTS AFTER TREATMENT IN A DAILY HOSPITAL

Ana Grgić Koprivčić\*, Ana-Marija Šibalić, Marta Gašparović & Verica Todorović

*Clinic for Psychiatry, University Hospital Osijek, Osijek, Croatia*

\*E-mail: ana.grgic-koprivcic@kbco.hr

Life satisfaction can be defined as the cognitive and global evaluation of one's overall life. Individuals with mental illnesses often report reduced quality of life. Many studies have shown that life satisfaction improves during psychotherapeutic treatments. Longer hospital treatments are often associated with a slight increase in life satisfaction. The same is true of inpatient treatments.

This study examines the impact of a four-week treatment in a daily hospital on patients' perception of quality of life and emotional state. The study included patients enrolled in the Daily Hospital program at Clinical Hospital Center Osijek. The Life Satisfaction Scale and the Scale for Measuring Current Emotional State were administered at the beginning and end of the treatment. Paired samples t-test was used for comparisons. At the end of the program, no significant change in life satisfaction was found overall, although the results point at an improvement, especially in female patients. However, a significant increase was found for Happiness and Pride on the scale measuring patients' current emotional state.

The results corroborate the findings of previous research about the quality of life as a measure covering multiple areas of life and requiring more time for change. Hence, a longer treatment could lead to a desired significant improvement of life satisfaction.

**Keywords:** life satisfaction - emotional state - daily hospital treatment

## References:

1. Büssing A, Heusser P & Mundle G: *Course of life satisfaction in patients with depressive and addictive disorders after therapeutic intervention. International Journal of Social Psychiatry* 2011; 58:239–245
2. Koivumaa-Honkanen H, Rissanen T, Hintikka J, Honkalampi K, Haatainen K, Saharinen, Viinamaki H: *Factors associated with life satisfaction in a 6-year follow-up of depressive out-patients. Soc Psychiatry Psychiatr Epidemiol* 2011; 46:595–605
3. Meule A & Voderholzer U: *Life satisfaction in persons with mental disorders. Quality of Life Research* 2020; 29:3043–3052

\* \* \* \* \*

## THE EFFECTS OF TREATMENT IN DAY HOSPITAL ON MENTAL HEALTH OF PSYCHIATRIC PATIENTS

Ana-Marija Šibalić\*, Ana Grgić Koprivčić & Kornelija Bušić

*Clinic for Psychiatry of the University hospital Centre Osijek, Croatia*

\*E-mail: ana-marija.sibalic@kbco.hr

**Introduction:** Day hospitals are becoming an increasingly common method of treatment for people with mental disorders (Vranješ et al. 2021). Studies have shown that day hospital treatment is as effective as inpatient treatment (Curral et al. 2014), reduces depressive and anxiety symptom severity (Hoggarth 2018), relapse rates and readmission (Curral et al. 2014), can increase level of social and general functioning (Priebe et al. 2011), as well as subjective quality of life (Hoggarth 2018, Vranješ et al. 2021). Although majority of psychiatric clinics in Croatia have organized treatment within day hospitals, research that measure treatment outcomes is still scarce (Vranješ et al. 2021).

To measure changes in depression, anxiety and stress symptoms, as well as overall mental health in psychiatric patients who are attending four weeks treatment program in psychiatric day hospital.

**Materials and methods:** Fortytwo patients (so far) diagnosed with depression, anxiety and stress related disorders (54.8% male) provided self-report data on DASS and MHI-5 at intake and discharge. Also, at discharge patients fulfilled evaluation list that gave insights in their feelings, level of personal contribution and activity in group work. Statistical analyses consisted of descriptive statistics and a comparison of intake and discharge data.

**Results:** Preliminary results showed significant reduction in anxiety and stress symptoms, as well as significant increase in their overall mental health. Although there is decline in symptoms of depression it didn't reach statistical significance. Patients report about feeling accepted and comfortable, having enough opportunity to express their thoughts, treatment topics find interesting and useful, saw themselves as active, cooperative, communicative and that they gave personal contribution.

**Conclusion:** Psychiatric day hospital treatment is associated with significant reduction in anxiety and stress symptoms, as well as improvement in patients overall mental health. This study supports earlier findings indicating that day hospital treatment can make positive impact on patients with mental disorders and represents additional contribution to this under-researched area.

**Keywords:** mental health - mental disorders - psychiatric day hospital - treatment outcomes

## References:

1. Curral R, Lopes R, Silveria C, Norton A, Domingues I, Lopes F, Ramos E & Roma-Torres A: *Forty years of psychiatric day hospital. Trends in Psychiatry and Psychotherapy* 2014; 36:52-58
2. Hoggarth PA: *Psychogeriatric day hospital reduces depression and anxiety symptoms and improves quality of life. The New Zealand Medical Journal* 2018; 131:17-22
3. Priebe S, McCabe R, Schützwohl M, Kiejna A, Nawka P, Raboch J, Reininghaus U, Wang D & Kallert TW: *Patient characteristics predicting better treatment outcomes in day hospitals compered with inpatients wards. Psychiatric Services* 2011; 62:278-284
4. Vranješ J, Petrić D, Grahovac Juretić T & Tovilović Z: *Quality of life and treatment satisfaction of hospitalized and day hospital psychiatric patients. Croatian Nursing Journal* 2021; 5:5-16

\* \* \* \* \*



## STIGMATIZATION OF MENTALLY AND PHYSICALLY ILL PERSONS

Ksenija Galić<sup>1,2\*</sup>, Kornelija Bušić<sup>1</sup> & Ana-Marija Šibalić<sup>1</sup>

<sup>1</sup>*Clinic for Psychiatry, University Hospital Osijek, Osijek, Croatia*

<sup>2</sup>*Faculty of Dental Medicine and Health, Osijek, Croatia*

\*E-mail: ksenijagali@gmail.com

Stigmatization of mentally and some physically ill persons is one of the main obstacles to successful health care for patients suffering from those stigmatized illnesses and also refers to inadequate education about mental and physical sicknesses. According to the theory of social stigma, it is clear the problem is a result of two people interacting - the stigmatized one and the one who stigmatizes. This research aims to analyze the presence of stigmatization in certain groups containing physically and mentally ill people and the relationship between them.

The research is being conducted across Clinics and Departments in KBC Osijek until mid-February 2024, with the active participation of nurses and technicians. The following questionnaires were given: a Socio-demographic questionnaire, The Bogardus Social Distance Scale, and The Emotional and Behavioral Reactions in Interactions with Physically and Mentally Ill Patients Questionnaire, which was specifically designed for this research. Statistical analyses of the data will consist of descriptive statistics and a comparison of stigmatization levels of individuals with physical and mental health illnesses. Depending on the distribution of the results, appropriate parametric or non-parametric tests will be administered. The presence of experiential social stigmatization is a big factor in the postponement of well-timed health care in both mentally and physically ill groups. Despite recognizing the stigmatization problem and experiences from all over the world, it is necessary to investigate this subject while also recognizing and defining it. It is imperative to work on the education and sensitization of nurses and technicians<sup>1,2</sup> to reduce or overall prevent stigmatization to improve work quality.

**Key words:** stigmatization - physically ill - mentally ill - nurses/technician

### References:

1. Goffman E: *Stigma: Notes on the management of spoiled identity*. Simon and Schuster, 2009
2. Sartorius N, Schulze H: *Reducing the Stigma of Mental Illness: a Report from a Global Association*. New York: Cambridge University Press, 2005
3. Schulze B, Angermeyer MC: *Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals*. *Social Science & Medicine* 2003; 56:299–312

\* \* \* \* \*

## ELECTROCONVULSIVE THERAPY (ECT) IN PSYCHIATRY AND THE ATTITUDES OF NURSES AND TECHNICIANS TOWARDS ECT

Matea Klarić<sup>1\*</sup>, Vesna Pintar<sup>1</sup>, Anita Žemberi<sup>1</sup> & Anamarija Petek Erić<sup>1,2</sup>

<sup>1</sup>*Department for Acute and Biological Psychiatry with Intensive Care, Psychiatry Clinic, University Hospital Centre Osijek, Osijek, Croatia*

<sup>2</sup>*Department of Psychiatry and Psychological Medicine, Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia*

\*E-mail: matea.klari7@gmail.com

**Objectives:** To gain insight into the knowledge and attitudes of nurses and technicians employed at KBC Osijek regarding the application of electroconvulsive therapy.

Study Design: Cross-sectional survey.

**Subjects and methods:** The research was conducted among nurses and technicians employed at the Osijek Clinical Hospital Center. The respondents were employed at the Clinic for Surgery, the Clinic for Internal Medicine, and the Clinic for Psychiatry. The research was conducted using the "Google Forms" program. An anonymous online questionnaire of 6 questions from the general part and 32 questions for evaluating knowledge and 15 questions for evaluating respondents' attitudes were used for the research.

**Results:** 126 subjects, 39 men and 87 women, participated in the research. Most respondents belong to the 20-30 age group. Most respondents had a high school education. 56% of the respondents stated that they think that ECT cannot be applied against the consent of the family. A little more than half of the respondents have satisfactory knowledge about ECT, while as many as 43% of respondents have an

unsatisfactory level of knowledge about ECT. There is no significant difference in the knowledge category of respondents concerning gender. Respondents of younger age groups have poorer knowledge of ECT than respondents of older age groups. Most of the respondents with a higher professional degree have a satisfactory level of knowledge about ECT. Respondents employed at the Clinic for Psychiatry have a higher level of knowledge than respondents employed at the Clinic for Surgery and the Clinic for Internal Medicine.

**Conclusion:** Respondents of older age groups and higher education and respondents employed at the Clinic for Psychiatry have a higher level of knowledge about ECT than other respondents.

**Keywords:** education - electroconvulsive therapy - health

**References:**

1. Jensen HM, Bolwig T: *Electroconvulsive therapy. Ugeskr Laeger* 2018; 180
2. Singh A, Kumar Kar Sujita: *How Electroconvulsive Therapy Works?: Understanding the Neurobiological Mechanisms. Clin Psychopharmacol Neurosci* 2017; 15:210-221
3. Suleman RA: *Brief History of Electroconvulsive Therapy. The American Journal of Psychiatry Residents' Journal* 2020; 16:6
4. Šagud M, Goluža E, Mihaljević-Peš A, Kosanović Rajčić B, Bradaš Z, Božičević M: *Elektrokonvulzivna terapija: osamdeset godina iskustva u Hrvatskoj i u svijetu. Liječ Vjesn*

\* \* \* \* \*

## QUALITY OF LIFE OF PEOPLE SUFFERING FROM POST-TRAUMATIC STRESS DISORDER AFTER TREATMENT IN A DAY HOSPITAL

Šime Ševerdija\*, Domagoj Rupert, Mario Živko, Mirko Ćosić, Igor Jelkić & Danijel Kostić

*Department for Acute and Biological Psychiatry with Intensive Care, Psychiatry Clinic, University Hospital Centre Osijek, Osijek, Croatia*

\*E-mail: severdija995@gmail.com

**Introduction:** Post-traumatic stress disorder can be caused by witnessing or experiencing a severe trauma such as a natural or man-made disaster, sexual, physical or psychological abuse, mass conflict and displacement, war, a serious traffic accident or other situations that can result in physical injury, illness, trauma from childhood, and other extreme life events. The wounds of Croatian veterans from the Homeland War have not healed even after more than 30 years since the war; people who were wounded, captured, and witnesses of torture or brutal murders of loved ones will bear this burden for the rest of their lives. Aware that they cannot continue to walk through life without help, they decide to ask for help at our institution. The service they receive is drug therapy and psychotherapy, and also adequate psychological help, which is confirmed by the results.

The aim of this research was to examine the quality of life in patients of the Day Hospital, and to compare the results obtained before and after treatment.

**Subjects and methods:** An online questionnaire via the Google Forms platform was used for this research. The questionnaire consists of two parts; the first part has 13 independently constructed questions of a sociodemographic character and second has 26 questions related to the standardized WHOQOL-BREF questionnaire.

**Results:** The result of the research is a statistically significant improvement in the quality of life in the domains of mental health and social relations according to the WHOQOL-BREF questionnaire.

**Conclusion:** Users of the Day Hospital of the Psychiatry Clinic of University Hospital Centre Osijek show positive effects of the therapeutic effect on their quality of life.

**Keywords:** post-traumatic stress disorder; PTSD; quality of life

**References:**

1. Filaković P et al.: *Psihijatrija [Psychiatry]. 1st edition, Osijek: Josip Jurja Strossmayer University of Osijek – Faculty of Medicine Osijek, 2014*
2. Komar Z & Vukušić H: *Posttraumatski stresni poremećaj u populaciji hrvatskih branitelja: precijenjen ili ignoriran problem? [Post-traumatic stress disorder in the population of Croatian veterans: an overestimated or ignored problem?] Zagreb: Ivo Pilar Institute of Social Sciences, 2004*
3. *National Institute of Mental Health: Post-Traumatic Stress Disorder. (NIMH Identifier No. 23-MH-8124) U.S. Department of Health and Human Services, National Institutes of Health. Retrieved October 4, 2023, from [https://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd#part\\_2241](https://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd#part_2241)*

\* \* \* \* \*

## THE INFLUENCE OF PHYSICAL ACTIVITY ON THE QUALITY OF LIFE OF PATIENTS WITH PSYCHOTIC DISORDERS

Nives Balog<sup>1\*</sup>, Marin Mamić<sup>2,3,4</sup> & Ivana Jelinčić<sup>1,2,3</sup>

<sup>1</sup>Clinic for Psychiatry, Osijek University Hospital Centre, Osijek, Croatia

<sup>2</sup>Faculty of Medicine Osijek, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

<sup>3</sup>Faculty of Dental Medicine and Health Osijek, University of Osijek, Osijek, Croatia

<sup>4</sup>Department of Psychiatry, Našice County General Hospital, Našice, Croatia

\*E-mail: balognives@gmail.com

Exercise in patients with psychotic disorders has a positive effect on reducing the symptoms of the disease, as well as the side effects of antipsychotic treatment, and helps reduce stigmatization and better inclusion in the community. The greatest effect of exercise and physical activity is in raising the general quality of life, which reduces the risk of relapse, whereby exercise makes these phenomena less stressful, and the patient gains the impression of better control over them. The main goal of this research was to examine the impact of physical activity on the physical domain of quality of life. The research was conducted from December to February 2024 at the Clinic for Psychiatry, Osijek Clinical Hospital Center. 11 patients of the Day Hospital participated in the survey and filled out the standardized questionnaires Lawton Scale, WHOQOL-BREF, IPAQ - short version. 6 male patients (54.5%), 5 female patients (45.5%) participated in the examined sample. The median age of the respondents is 35 years. The results showed that the median of social relations is Me = 75 (IQR = 44 - 75), while physical activity is Me = 1 (IQR = 1 - 2) and independence is Me = 2 (IQR = 2 - 3). Physical health is significantly positively related to mental health (Spearman's correlation;  $p = 0.042$ ), while social relationships are strongly negatively related to the level of physical activity (Spearman's correlation;  $p = 0.011$ ). The domain of physical health is positively related to mental health, while social relationships are negatively correlated with physical activity.

**Keywords:** daily activities - physical activity - psychotic disorders - quality of life

### References:

1. De Winter L, Couwenbergh C, van Weeghel J, Hasson-Ohayon I, Vermeulen JM, Mulder CL et al.: Changes in social functioning over the course of psychotic disorders-A meta-analysis. *Schizophr Res* 2022; 239:55-82. doi:10.1016/j.schres.2021.11.010. Epub 2021 Nov 26. PMID:34844096
2. Fett AJ, Hanssen E, Eemers M, Peters E, Shergill SS: Social isolation and psychosis: an investigation of social interactions and paranoia in daily life. *Eur Arch Psychiatry Clin Neurosci* 2022; 272:119-127. doi:10.1007/s00406-021-01278-4. Epub 2021 Jun 15. PMID:34129115
3. Gouveia RI, Ferreira-Junior AJ, Schuch FB, Zanetti GG, da Silva AHS, Del-Ben CM et al.: Physical Activity, Quality of Life and Global Functioning an Early Stages of Psychosis. *Psychiatr Danub* 2020; 32:373-379. doi:10.24869/psyd.2020.373
4. Makris K & Kollias K: Schizophrenia spectrum disorders and physical exercise. *Psychiatriki* 2021; 32:132-140. Greek, Modern. doi:10.22365/jpsych.2021.019. Epub 2021 May 28. PMID:34052791
5. Swora E, Boberska M, Kulis E, Knoll N, Keller J & Luszczynska A: Physical Activity, Positive and Negative Symptoms of Psychosis, and General Psychopathology among People with Psychotic Disorders: A Meta-Analysis. *J Clin Med* 2022; 11:2719. doi:10.3390/jcm11102719. PMID:35628845

\* \* \* \* \*

## MULTIMODAL BIOMARKERS OF MOOD DISORDERS

Sarah Kittel-Schneider

Department of Psychiatry and Neurobehavioural Science, University College, Cork, Ireland

E-mail: skittelschneider@ucc.ie

**Introduction:** Mood disorders like major depressive disorder (MDD) and bipolar affective disorder (BD) are common mental disorders and affect around 7% of the adult population worldwide. Up to date, there are no objective biomarkers available in clinical routine to predict the course of the disorders, treatment response or to distinguish between bipolar and unipolar depression in first-episode patients.

The aim of our studies is to identify predictive and diagnostic biomarkers in mood disorders. Materials and methods: In the different studies, that will be presented, we used different and partially combined approaches to investigate potential biomarkers like brain imaging, psychometric data, genetic markers, blood-derived proteins, and were also using machine-learning approaches.

**Results:** Own studies could show that using early recognition questionnaires was not very efficient to predict conversion into bipolar disorder, future combination with imaging data might improve the results. Polygenetic risk scores for bipolar disorder were significantly increased in at risk individuals with ADHD, MDD and early signs of BD with regards to early recognition instruments. In another study, using a machine learn algorithm, a proteomic profile could be identified, that distinguished between unipolar and bipolar depression with an accuracy of at least 67%. The most important components were then validated in a subsequent study, showing significant differences of PDGF-BB levels between bipolar and unipolar depressive episodes and could discriminate with an accuracy of 72.3% (in prep).

**Conclusions:** Most probably, a combination of multimodal data and the use of AI will lead to develop biomarkers of mood disorders in the future.

**Keywords:** major depression - bipolar disorder - biomarker - prediction - machine learning

#### References:

1. Clemente AS, et al.: *Bipolar disorder prevalence: a systematic review and meta-analysis of the literature. Braz J Psychiatry 2015; 37:155-61*
2. Fedko IO, et al.: *Measurement and genetic architecture of lifetime depression in the Netherlands as assessed by LIDAS (Lifetime Depression Assessment Self-report). Psychol Med 2020; 1-10*
3. Martini J, et al.: *Young people at risk for developing bipolar disorder: Two-year findings from the multicenter prospective, naturalistic Early-BipoLife study. Eur Neuropsychopharmacol 2024; 78:43-53*
4. Biere S et al.: *Risk Stratification for Bipolar Disorder Using Polygenic Risk Scores Among Young High-Risk Adults. Front Psychiatry 2020; 11:552532*
5. Kittel-Schneider S, et al.: *Proteomic Profiling as a Diagnostic Biomarker for Discriminating Between Bipolar and Unipolar Depression. Front Psychiatry 2020; 11:189*

\* \* \* \* \*

## AUGMENTATION STRATEGIES IN NEUROSTIMULATION MODALITIES

Jakub Albrecht<sup>1,2\*</sup>, Jozef Buday<sup>3</sup>, Tadeas Mares<sup>4</sup>, Jakub Opelka<sup>5</sup>,  
Diana Klimankova<sup>1</sup> & Vratislav Fabian<sup>6</sup>

<sup>1</sup>Department of Psychiatry, Most Hospital, Krajska zdravotni a.s., Czech Republic

<sup>2</sup>Department of Psychiatry, Faculty of Health Studies, University of J.E. Purkyne and Masaryk Hospital in Usti nad Labem, Czech Republic

<sup>3</sup>Department of Psychiatry, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czech Republic

<sup>4</sup>Department of Neurology and Centre of clinical Neurosciences, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czech Republic

<sup>5</sup>Faculty of Arts, Charles University, Prague, Czech Republic

<sup>6</sup>Department of Physics, Faculty of Electrical Engineering, Czech Technical University in Prague, Prague, Czech Republic

\*E-mail: jakub.albrecht@kzcr.eu

Neurostimulation modalities or Noninvasive Brain Stimulation Techniques (NIBS) are widely perceived as powerful tools in the treatment of large variety of neuropsychiatric conditions with very scarce adverse effects and vast efficacy.

Electroconvulsive therapy (ECT) was invented nearly 90 years ago and improved in efficacy and tolerability since then. The stigma of ECT is substantially decreasing, however it is the clumsiest aspect of this lifesaving procedure. Transcranial magnetic stimulation (TMS) uses the same electromagnetic force delivered into the brain via magnetic waves minimizing local and side effects of stimulation. Although the transcranial direct and alternating current stimulation (tDCS and tACS) use the lowest current and voltage of the aforementioned techniques, the effect is robust as the portion of delivered electric current is the highest.

The up-to-date practice of ECT consist of:

- the general anesthesia and myorelaxation to eliminate majority of adverse effects;
- the electrode placement,
- the titration of current parameters, waveform (total 'energy') and session schedule.

If refined well, these approaches minimize the side effects (especially transitory cognitive impairment) and enable the out-patient setting. Furthermore, continuation and maintenance treatment are necessary for full remission. Surprisingly, ECT is the only somatic treatment discontinued once it starts working. In 2019 we administered ECT in older depressed man, and even though we used maximal output of energy of Mecta® Spectrum™ 5000 device (200 J), we were unable to induce adequate epileptiform seizure. After discussing with the leader in the field, Harold S. Sackeim from Colombian University New York, we combined two modalities to influence the seizure threshold. We used high frequency TMS over the supplementary motor area prior to ECT, lowered the seizure threshold by half, and demonstrating the feasibility of such treatment. We were the first to do so in a single session.

Furthermore, we proceeded with a double-blind, placebo-controlled trial, which confirmed the immediate effect of TMS pre-stimulation on lowering the seizure threshold by an average decrease by 34.55%. Combining various protocols of NIBS and co-stimulation is now being experimentally researched but also used in a general practice. Some new modalities are tested out. Very promising is Focal Electrically Administered Seizure Therapy (FEAST) and some seem to be a dead (Magnetic Seizure Therapy or MST). Nevertheless, need for further co-operation across the nations is essential for success.

**Key words:** NIBS - ECT - TMS - tDCS - FEAST

### References:

1. Sackeim HA: *Staging and Combining Brain Stimulation Interventions: Vagus Nerve Stimulation and Electroconvulsive Therapy. J ECT* 2021; 37:80-83. doi:10.1097/YCT.0000000000000745. PMID:34029304
2. Albrecht J, Buday J, Mareš T et al.: *Lowering seizure threshold in electroconvulsive therapy using transcranial magnetic stimulation: a case report. Brain Stimul* 2019; 12:781-784. doi.org/10.1016/j.brs.2019.01.012
3. Buday J, Albrecht J, Podgorná G, Mareš T et al.: *Seizure threshold manipulation in electroconvulsive therapy via repetitive transcranial magnetic stimulation. A novel way of augmentation? Brain Stim* 2020; 13:1631-1638. doi.org/10.1016/j.brs.2020.09.008
4. Nikolin S, Owens K, Francis-Taylor R, Chaimani A, Martin DM, Bull M, Sackeim HA, McLoughlin DM, Sienaert P, Kellner CH, Loo C: *Comparative efficacy, cognitive effects and acceptability of electroconvulsive therapies for the treatment of depression: protocol for a systematic review and network meta-analysis. BMJ Open* 2022; 12:e068313. doi: 10.1136/bmjopen-2022-068313
5. Youssef NA, George MS, McCall WV, Sahlem GL, Short B, Kerns S, Manett AJ, Fox JB, Dancy M, Cook D, Devries W, Rosenquist PB, Sackeim HA: *The Effects of Focal Electrically Administered Seizure Therapy Compared with Ultrabrief Pulse Right Unilateral Electroconvulsive Therapy on Suicidal Ideation: A 2-Site Clinical Trial. J ECT* 2021; 37:256-262. doi:10.1097/YCT.0000000000000776. PMID: 34015791; PMCID: PMC8606010

\* \* \* \* \*

## COGNITIVE CONTROL AND SYMPTOMS, SYNDROMES AND GENERAL PSYCHOPATHOLOGY IN ADOLESCENTS

Sanja Jandrić

*Department for Child and Adolescent Psychiatry, University Hospital Center Osijek, Osijek, Croatia*  
*Department of Psychiatry and Psychological Medicine, Faculty of Medicine,*  
*Josip Juraj Strossmayer University of Osijek, Osijek, Croatia*

*E-mail: sanja.jandric@kbco.hr; sjandric@mefos.hr*

Given the high prevalence of mental disorders among adolescents, it is necessary to define the factors affecting the development and course of psychopathology. The findings of previous studies of cognitive control as a transdiagnostic risk factor for psychopathology suggest that cognitive control deficits underlie all psychiatric disorders in adults and adolescents Hardin et al. We investigated the effects of cognitive control on different levels of adolescent psychopathology (symptoms, syndromes) and tested whether gender differences are associated with cognitive control and psychopathology. The study included 150 adolescents of both genders diagnosed with internalizing and externalizing psychiatric disorders at the Unit for Child and Adolescent Psychiatry at University Hospital Center Osijek. During psychodiagnostic assessment, subjects completed Youth selfreport, CANTAB Intra-dimensional/extra-dimensional task, Beck Depression Inventory-II, Beck and Aggression Scale for Children and Adolescents. Our results did not show significant main effects of cognitive control on adolescent psychopathology at any level of symptoms, but results did show that adolescent girls with better cognitive control exhibit more general psychopathology symptoms, internalizing problems, as well as higher levels of depression symptoms than boys. These

effects can be interpreted within contemporary approaches in developmental psychopathology, which emphasize the role of deficits in mechanisms of emotional control and regulation in the development of different forms of psychopathology different in each gender.

**Keywords:** adolescents - cognitive control - psychopathology - internalizing - externalizing

**References:**

1. Caspi A, Houts RM, Belsky DW, et al.: *The p factor: one general psychopathology factor in 28 the structure of psychiatric disorders?* *Clin Psychol Sci* 2014; 2:119–137
2. Cicchetti D, Cohen DJ (ur): *Developmental psychopathology: Theory and method*. New Jersey: John Wiley & Sons, Inc, 2006
3. Hardin MG, Schroth E, Pine DS & Ernst M: *Incentive-related modulation of cognitive control 25 in healthy, anxious, and depressed adolescents: Development and psychopathology 26 related differences*. *Journal of Child Psychology and Psychiatry* 2008; 48:446–454

\* \* \* \* \*

## SOMATIC MULTI-COMORBIDITY AND DISABILITY IN PATIENTS WITH PSYCHIATRIC DISORDERS IN COMPARISON TO THE GENERAL POPULATION: A QUASI-EPIDEMIOLOGICAL INVESTIGATION IN 54,826 SUBJECTS FROM 40 COUNTRIES (COMET-G STUDY)

Konstantinos N. Fountoulakis

*3<sup>rd</sup> Department of Psychiatry, and WHO Collaborating Center, Division of Neurosciences, School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece  
Mental Health Section, Research Institute, Panhellenic Medical Association Thessaloniki, Greece  
Hellenic Psychiatric Association, Greece*

*E-mail: kostasfountoulakis@gmail.com; fountoul@auth.gr*

**Introduction:** The prevalence of medical illnesses is high among patients with psychiatric disorders. The current study aimed to investigate multi-comorbidity in patients with psychiatric disorders in comparison to the general population. Secondary aims were the investigation of factors associated with metabolic syndrome and treatment appropriateness of mental disorders.

**Subjects and methods:** The sample included 54,826 subjects (64.73% females; 34.15% males; 1.11% non-binary gender) from 40 countries (COMET-G study). The analysis was based on the registration of previous history that could serve as a fair approximation for the lifetime prevalence of various medical conditions.

**Results:** 24.5% reported a history of somatic and 26.14% of mental disorders. Mental disorders were by far the most prevalent group of medical conditions. Comorbidity of any somatic with any mental disorder was reported by 8.21%. One-third to almost two-thirds, of somatic patients were also suffering from a mental disorder depending on severity and multi-comorbidity. Bipolar and psychotic patients and to a lesser extent depressives, manifested an earlier (15-20 years) manifestation of somatic multi-comorbidity, severe disability, and probably earlier death. The overwhelming majority of patients with mental disorders were not under treatment or were treated in a non-recommended. Antipsychotics and antidepressants were not related to the development of the metabolic syndrome.

**Conclusion:** The finding that one-third to almost two-thirds, of somatic patients were also suffering from a mental disorder strongly suggests that psychiatry is the field with the most trans-specialty and interdisciplinary value and application points to the importance of teaching psychiatry and mental health in medical schools and also to the need for more technocratically oriented training of psychiatric residents.

\* \* \* \* \*

## PSYCHOLINGUISTIC PATTERNS OF DEPRESSION: WE SHOULD LISTEN TO WHAT OUR PATIENTS WANT TO TELL US

Daria Smirnova<sup>1\*</sup>, Elena Sloeva<sup>2</sup>, Natalia Kuvshinova<sup>2</sup>, Paul Cumming<sup>1,3</sup> & Gennadii Nosachev<sup>2</sup>

<sup>1</sup>*International Centre for Education and Research in Neuropsychiatry, Samara State Medical University, Samara, Russia*

<sup>2</sup>*Samara State Medical University, Samara, Russia*

<sup>3</sup>*School of Psychology and Counselling, Queensland University of Technology, QIMR Berghofer Institute, Brisbane, QLD, Australia*

\*E-mail: [daria.smirnova.md.phd@gmail.com](mailto:daria.smirnova.md.phd@gmail.com)

Mild depression (MD) is often related to life stresses, and its chronic course within dysthymia causes an increased suicidality risk, as well as makes it prodromal to major depressive disorder. Our project investigates the linguistic characteristics of the narratives in MD-individuals compared to those experiencing normal sadness (NS) and healthy controls (HC). We aimed to identify specific language patterns that could potentially aid in the non-pharmacological MD-treatment, focusing on both content (what patients tell us about the state) and structure of speech (how patients describe their situation) as potential therapeutic targets in language remediation approach.

Quantitative analysis of 402 written narratives revealed that MD-individuals produced longer texts, characterized by a descriptive rather than analytic style, with a higher prevalence of spoken and figurative language, predominance of single-clause over multi-clause sentences, atypical word order, and increased use of personal and indefinite pronouns, as well as verbs in continuous/intransitive/ imperfective and past tenses. Discriminant analysis highlighted the significance of linguistic variables in differentiating between MD, NS, and euthymic states, with word order, ellipses, colloquialisms count, verb tense, and pronoun use being among the strongest predictors.

The study employed component lexis analysis to examine semantic features and the system of life meanings, revealing significant differences in the thematic content of MD narratives compared to HC and NS, particularly, existential (“to live”), and family (“to help relatives”) categories have been exaggerated in patients, whereas self-realization (“to make a career”) meanings have been devaluated as a life priority in MD. However, certain semantic themes, such as “to love” (existential category), “to live for the sake of the family” (family category), and “to know God” (cognitive category) did not significantly differ between MD, NS and HC groups, that points to them as life priorities that are resilient to or independent of depressive mood.

These findings suggest that linguistic analysis can provide valuable insights into the mental state of MD-individuals. The results have implications for developing diagnostic tools and evidence-based (precise linguistic target-focusing) language remediation interventions as a part of action language treatment, potentially offering a novel avenue for psychotherapy treatment of MD.

**Key words:** language remediation - life priority - linguistic markers - mild depression - normal sadness

### References:

1. Kessler R: *The effects of stressful life events on depression. Annu Rev Psychol 1997; 48:191–214. doi:10.1146/annurev.psych.48.1.191*
2. Fogel J, Eaton WW, Ford DE: *Minor depression as a predictor of the first onset of major depressive disorder over a 15-year follow-up. Acta Psychiatr Scand 2006; 113:36–43. doi:10.1111/j.1600-0447.2005.00654.x*

\* \* \* \* \*

# GUIDELINES FOR AUTHORS

## General considerations

Psychiatria Danubina is a peer-reviewed open access journal of the Psychiatric Danubian Association, aimed to publish original scientific contributions in psychiatry, psychological medicine and related science (neurosciences, biological, psychological, and social sciences as well as philosophy of science and medical ethics, history, organization and economics of mental health services). Its scope includes mental health in general and all psychological aspects of any branch of medicine, surgery, or obstetrics; and any subspecialty of psychiatry and related clinical and basic sciences.

The specific aim is to promote psychiatry in Danube region countries as well as to stimulate collaboration and joint projects.

Manuscripts are published in English language only. All submitted manuscripts are given equal consideration, irrespective of the country they originate from, as long as the following main criteria are met:

A manuscript is written and prepared according to the Journal's Instructions for authors.

Throughout the entire editorial process, Psychiatria Danubina follows the best practice guidelines given by the Committee on publication ethics (COPE) (available at: [http://publicationethics.org/files/Code\\_of\\_Conduct.pdf](http://publicationethics.org/files/Code_of_Conduct.pdf)) and Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals by International Committee of Medical Journal Editors (ICMJE) (available at: <http://www.icmje.org/recommendations/>)

Editors at Psychiatria Danubina are committed to ensure the integrity and promote innovative and evidence-based sources of information in order to maintain the quality and ensure the impact of the papers published in our Journal, according to the principles set by Sarajevo Declaration on Integrity and Visibility of Scholarly Publications communication (<http://www.cmj.hr/2016/57/6/28051276.htm>).

## Instructions for authors

Manuscripts must be written in standard and grammatical as well as clear and concise scientific *English*. It is the responsibility of the authors to ensure the quality of the language. The acceptance criteria for all papers are the quality and originality of the research and its significance to our readership.

### Submission of the manuscript

Submission of a manuscript implies:

- that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review or thesis);
- that it is not under consideration for publication anywhere else;
- that its publication has been approved by all co-authors, if any, as well as by responsible authorities – tacitly or explicitly – at the institute where the work has been carried out.

This must be stated in the *Covering letter*.

Manuscripts submitted for publication must contain a statement to the effect that all human studies have been approved by a suitably constituted Ethics Committee of the institution within which the work was undertaken and that it conforms to the provisions of the Declaration of Helsinki in 1995 (as revised in Edinburgh 2000). All investigations on human subjects must include a statement that the subject gave informed consent and patient anonymity should be preserved. Any experiments involving animals must be demonstrated to be ethically acceptable. This should be stated in the Subjects sections of the manuscript (see below).

Authors are asked to refrain from submitting papers which have overlap in content with previously accepted papers by the same authors. If the differences between the two are substantial enough that the papers should be considered as distinct, authors are advised to forward copies of both to the Editorial Office.

The editors reserve the right to reject manuscripts that do not comply with the above-mentioned requirements. The author will be held responsible for false statements or for failure to fulfil these requirements.

The manuscript, together with the Covering letter, should be uploaded electronically to the official page of Psychiatria Danubina: [http://www.hdbp.org/psychiatria\\_danubina/about.html](http://www.hdbp.org/psychiatria_danubina/about.html).

By accessing the online submission at <http://journal.sdewes.org/psych-dan> you will be guided stepwise through the creation and uploading of the various files. The Editorial Office will acknowledge the receipt of the manuscript and provide it with a manuscript reference number. The reference number of the manuscript should be quoted in all correspondence with the Chief Editor and Editorial Office. Each manuscript will be assigned to at least two peer reviewers. Where revisions are sought prior to publication, authors are advised to incorporate any suggestions which they agree would improve their paper. The response letter (separate Word file) should thoroughly respond to each reviewer's comment (numbered), indicating where in the text it has been dealt with, or why the authors disagree or cannot incorporate it. After the assessors' further comments have been received, the editors will make the final decision, including priority and time of publication, and the right to modify and, if necessary, shorten the material for publication.

### Types of papers

Types of accepted papers are given below. Word count for the manuscript includes only the plain text (not tables, figures, abstracts or references). Contributions will be considered for the following categories:

- **Original research;**
- **Review/Mini-review;**
- **Brief report;**



- **Viewpoint;**
- **Letter to the Editor: 600-800 words, up to 10 references, 1 figure/table;**
- **Case report;**
- **Book review;**
- **Invitation/Announcement.**

### *Preparation of the manuscript*

- Submit the manuscript as an editable Word (preferred) or rich text format (rtf) document.
- Use Times New Roman in 12 point size and double line spacing.
- All pages should be numbered.
- Use a clear system of headings to divide up and clarify the text, with not more than three grades of headings.
- Figures should be submitted as separate TIF or EPS format files and the desired position of figures and tables should be indicated in the manuscript.
- Footnotes to the text are not allowed.
- All measurements must be given in standard SI units.
- Abbreviations should be used sparingly and only where they ease the reader's task by reducing repetition of long terms. Initially use the word in full, followed by the abbreviation in the parentheses. Thereafter use the abbreviations.
- Drugs should be referred to by their generic names. When a brand name is used, it shall begin with a capital letter and the manufacturer's address details should be given.
- Do not use pejorative labels such as 'schizophrenics', instead refer to 'patients with schizophrenia'.

### *Manuscripts should be presented in the following order:*

#### 1. Title page

The first page should contain:

- the title of the paper - should be short, informative and contain the major key words;
- the full names of the authors and position titles at the respective institutions;
- the addresses of the institutions at which the work was carried out (addresses for authors other than the correspondence author should contain the department, institution, city and country);
- indicate all affiliations with superscript number after the author's name and in front of the appropriate address;
- corresponding author - the full postal and email address, plus facsimile and telephone numbers, the department, institution, city and country.

The title page should be uploaded separately. The rest of the manuscript should not contain personal information of the authors.

#### 2. Summary and Key words

The second page should carry on a Summary in the region of 300 words, followed by a list of 3-5 key words or short phrases drawn, if possible, from the medical subject headings (MeSH) list of *Index Medicus* (<http://www.nlm.nih.gov/mesh/meshhome.html>). The Summary should state, whenever applicable, very specifically, the main purposes, procedures, findings, and conclusions of the paper, emphasizing what is new or important.

For original papers and review articles, a structured Summary using the headings is preferred:

- **Background** (questions addressed; principal aims of a review);
- **Subjects and Methods** (design, setting, sample, interventions, chief outcome measures; for reviews sources of data and criteria for their selection);
- **Results** (main findings together with their statistical significance, if possible);
- **Conclusions** (those related to results, limitations as appropriate, clinical and research implications; for reviews principal conclusions and clinical and research implications).

#### 3. Text

It should be divided by subheadings into the following sections:

- **Introduction** (authors should provide an adequate background and end with the aims of the study);
- **Subjects and methods** (*Subjects* with ethical considerations and informed consent, *Methods*, *Statistical Analyses*; *authors should provide sufficient detail to enable possible reproduction of the study*);
- **Results** (the results section should simply state the findings of the research arranged in a logical sequence without bias or interpretation);
- **Discussion** (the discussion section should contain interpretation of the results and their comparison with previous studies, also include limitations of the study);
- **Conclusions** (needs to summarize the content and purpose of the paper).

#### 4. Acknowledgements

The source of financial grants and other funding should be acknowledged. The contribution of institutions, colleagues, technical writers or language editors should be noted. Thanks to anonymous reviewers are not needed. If there are no acknowledgements please state so by putting 'None' in the respective section.

## 5. Conflict of Interest

Authors are requested to disclose any commercial or other associations that might pose a conflict of interest in connection with the submitted articles. If there is no conflict of interest please put 'None to declare' in the respective section.

## 6. Contributors

It is required to declare every author's individual contribution to the manuscript. Every author should be mentioned for his exact work (e.g. design of the study, literature searches and analyses, statistical analyses, interpretation of data).

## 7. References

- In the text give the author last name and publication year within parentheses (e.g. Jakovljevic 2008, Sartorius 2009).
- If there are two authors, both should be named (e.g. Svrakic & Cloninger 2010, Sher & LaBode 2011).
- If there is an article with more than two authors, only the first author's name plus 'et al.' need to be given (e.g. Sartorius et al. 1996, Stinson et al. 2008).
- *If there is more than one reference by the same author or team of authors in the same year, differentiate between papers by adding a, b, c, etc. to the publication year, both in the text and the list of references.*

All references cited in the text are to be listed in the References section at the end of the text, in alphabetical and chronological order under the last name of the first author.

Where there are more than six authors, list the first six authors and use 'et al.'. All works cited must be listed at the end of the paper, ordered alphabetically by first author's name. Names of journals should be abbreviated in the style used in *Index Medicus*.

References should be listed in the following form:

1. *Svrakic DM & Cloninger RC: Epigenetic perspective on behavior development, personality, and personality disorders. Psychiatr Danub 2010; 22:153-66*
2. *Grant BF, Hasin DS, Blanco C, Stinson FS, Chou SP, Goldstein RB et al.: The epidemiology of social anxiety disorder in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. J Clin Psychiatry 2005; 66:1351-61*
3. *Reiter RJ & Robinson J: Melatonin. Bantam Books, New York, 1995*
4. *Doghramji K, Brainard G & Balaicuis JM: Sleep and sleep disorders. In Monti DA & Beitman BD (eds): Integrative Psychiatry, 195-339. Oxford University Press, 2010*

## 8. Tables

Tables should be included on separate pages and numbered consecutively with Arabic numerals (e.g. Table 1). Column headings should be brief, with units of measurement in parentheses. All abbreviations and symbols should be defined in the legend. The table and its legend should be understandable without reference to the text. Desired position of tables should be indicated in the text.

## 9. Figures

Illustrations such as graphs, diagrams or photographs should also be numbered consecutively with Arabic numerals (e.g. Figure 1) on separate pages, after the Tables. They should contain a short title followed by a concise description. All abbreviations and symbols should be defined in the legend. The figure and its legend should be understandable without reference to the text. Provide a letter stating copyright authorization if figures have been reproduced from another source. Photographs of persons must be made unidentifiable or the subject's written permission must be obtained. Desired position of figures should be indicated in the text. The cost of reproducing colour illustrations is charged to the authors. Please contact the publishers for an estimate of this cost ([marketing@medicinskanaklada.hr](mailto:marketing@medicinskanaklada.hr)).

## Copyright

All materials sent for publication will become the property of the Journal until, and if, publication is refused. The material so referred should not be sent elsewhere for publication.

## Galley proofs

Unless indicated otherwise, galley proofs are sent to the corresponding authors as Acrobat PDF files and should be returned with the least possible delay. Authors are advised that they are responsible for proof-reading of the text, references, tables and figures for absolute accuracy. Major alterations made in galley proofs, other than essential correction of errors, are unacceptable at this stage and authors may be charged for excessive alterations.

**For further information about Psychiatria Danubina**, as well as full-text articles published in this Journal, visit the homepage: [http://www.hdbp.org/psychiatria\\_danubina/](http://www.hdbp.org/psychiatria_danubina/)