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Danubian Psychiatric Association

in cooperation with

**Croatian Society for Biological Psychiatry and Clinical Psychopharmacology
of Croatian Medical Association**

School of Medicine, University of Zagreb

Clinical Hospital Centre Zagreb

Faculty of Philosophy and Religious Studies, University of Zagreb

Croatian Academy of Medical Sciences

organize

29th DANUBIAN PSYCHIATRIC SYMPOSIUM

**PSYCHIATRY, MEDICINE AND SOCIETY: HOMO DEUS OF 21st CENTURY AND
CHALLENGES OF MENTAL HEALTH AND PERSONALIZED MEDICINE**

1. Comorbidity, resilience, and epigenetics in psychiatry from the perspective of predictive, preventive and person-centered medicine;
2. Transdisciplinary integrative approach in psychiatry, personalized medicine, and creative psychopharmacotherapy;
3. Psychiatry, spirituality, and religion from the perspective of public and global mental health;
4. Psychiatry, ethics, and politics from the perspective of public and global mental health.

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- Comorbidity, Resilience, Anti-fragility, Epigenetics, Syndemics, Infodemics, Spirituality, Ethics
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- Inter- and Transdisciplinarity - Art and Practice of Learning Organization for the Better World
- Holistic, Complementary and Integrative Systemic Approach to Health and Well-Being
- Personalized and Person-Centered Medicine Approach

PSYCHIATRY, MEDICINE AND SOCIETY: HOMO DEUS OF THE 21ST CENTURY AND CHALLENGES OF THE MENTAL HEALTH AND PERSONALIZED MEDICINE

Miro Jakovljevic

*Department of Psychiatry and Psychological Medicine, University Hospital Centre Zagreb,
School of Medicine, University of Zagreb, Zagreb, Croatia*

The 29th Danubian Psychiatric Symposium with the topic “Psychiatry, Medicine and Society: Homo Deus of the 21st Century and Challenges of Mental Health and Personalized Medicine” emphasize the importance of the precise, predictive, preventive, personalized, and person-centered (P5) medicine and comorbidities in our age of the COVID-19 syndemics, as well as the essentiality of bridging personal, public and global mental health within compassionate society and empathic civilization. P5 medicine and mental health have become very challenging and exciting topics of great interest and importance. There is no health without mental health as well as there is no sane, compassionate and prosperous society without public mental health and empathic civilization without global mental health. The way we understand individual, public and global mental health and treat mental disorders is changing rapidly. Digital revolution from the start of 21st century is changing significantly all fields of society, science and medicine. As Homo sapiens are a story telling or narrative being, people think in stories and narratives rather than in facts, numbers, graphs and equations. All big stories from the 20th century have collapsed and new narratives, including those on psychiatry and mental health, are emerging with a shift from a homo centric to a data centric world view. Emerging techno-humanism argues that Homo sapiens have completed their cosmic task and high technology is going to create a much superior Homo Deus with upgraded physical and mental abilities. Dataism is promising to give all scientists a common language that easily enables them to get insights across disciplinary borders. Big data algorithms informed by a constant stream of data from biometric sensors could monitor our behavior, health and disease 24/7. Collecting, analyzing, combining and applying large quantities of various data may help to get more precise diagnosis and more effective and efficient treatments tailored to individual patients and so promoting personalized medicine instead of block-buster and stratified medicine. Although personalized medicine is still in its infancy age, it opens up new possibilities for providing old dream “right care and treatment to the right person at the right time” into reality. It tends to increase resilience, antifragility and optimize healthcare for every person at every stage of a disorder, from prevention to personalized and person-centered treatment.

The Corona Virus Disease 2019 (COVID-19) as a unique disaster has stressed the extreme importance of the three issues for medicine, society and humanity in global: comorbidity, syndemics and infodemic. The COVID-19 syndemics are very complex in its origin, its spread and its consequences at multiple levels so that they are beyond comprehension and control of any single field of knowledge and branch of medicine. Thinking about COVID-19 through a syndemics concept and taking biological, psychological, social and spiritual dimensions into account, physicians could be more effective in clinical practice and community-based interventions. Knowledge, empathy, solidarity, cooperation and unity are the key factors to long-term survival and flourishing of humankind. The COVID-19 is cruel but crucial lesson for the future of humankind. The crucial message is that we should reexamine and improve our basic understanding of how human society and global world operate in health and disease from the multidisciplinary and transdisciplinary scientific and philosophical approach. Bringing together multiple disciplines and universities with knowledge sharing is the best way to provide transdisciplinary integrative approach to our understanding and practicing of P5 medicine and psychiatry. The 29th Danubian Psychiatric Symposium is organized on the principles of art and practice of learning organization, concept of supermind, collective intelligence and culture of dialogue. Supermind, defined as a powerful combination of many individual minds, represent a group of individuals operating together in creative and intelligent ways, while collective intelligence is the result of groups of individuals thinking and acting together in creative and intelligent ways. As more and more intelligent individuals are closely connecting and acting together serving a purpose larger than themselves the concept of the greatest good for the greatest people has chance to become reality in our COVID-19 age. COVID-19 syndemics involve many threats, but also one great hope for brotherhood in medicine, science and humanity. After this preliminary Symposium’s phase (March 18-20, 2021) all accepted presentations will be published in our journal *Psychiatria Danubina* and be discussed at the final phase of Symposium which will be held in May 20-22, 2021. In the period between preliminary and final phases other colleagues can join us with their ideas and articles intended to be published in *Psychiatria Danubina*.

MENTAL HEALTH, EARLY IN THE 21ST CENTURY

Norman Sartorius

Association for the Improvement of Mental Health Programs - AMH, Geneva, Switzerland

The United Nations included the improvement of mental health among its sustainable development goals and adopted the Convention of the Rights of People with Disabilities making its provisions obligatory for all its member countries. The number of fully trained psychiatrists passed the mark of 250.000 and other professions important in the provision of mental health care show similar significant increases in numbers. Associations of people who experienced mental illness and of their families sprung up in many countries and play an important role in mental health care. Treatment of mental disorders and our knowledge about the functioning of the brain showed significant advances. All of these advances are encouraging and important at a time when society as a whole and psychiatry in particular face major new challenges.

Among these challenges is the pandemic of comorbidity of mental and physical disorders (at a time when medicine is becoming fragmented into ever finer and more limited disciplines); the tendency of reducing government's direct involvement in the provision of mental health care (with an increasing reliance on private health care); the menace of pandemics of zoonoses resulting from changes of the human environment and climate; the neglect of measures of primary prevention of mental and neurological disorders; and the reduction of the social capital resulting, in part, from trends such as that of rapid and unplanned urbanization and the uneven spread of technology of communication.

The concepts of global health (and global mental health) emerged, at least in part, as a reaction to the challenges mentioned above. Their postulates include that health is public good and that therefore all sectors of government have to work together to improve it; that health should be considered as a continuum from wellness to illness; that "global" should refer to the size of the problem not to its location; that the protection of human rights must be an essential ingredient of all health care efforts; and that determinants of health are biological, sociocultural and environmental (and that therefore health promotion must proceed on all three of these bases)

While problems might be similar in many countries and thus "global" their solution must be local taking sociocultural, environmental and political determinants into account. "Global" in this instance refers to the need (and willingness) to ensure mutual support and learning from each other about best ways to develop locally appropriate solutions.



29th Danubian Psychiatric Symposium

PSYCHIATRY, MEDICINE AND SOCIETY

Homo Deus of 21st Century and Challenges of Mental Health and Personalized Medicine



IX Croatian Congress on Psychopharmacotherapy

TRANSDISCIPLINARY INTEGRATIVE APPROACH IN PSYCHIATRY,
PERSONALIZED MEDICINE AND CREATIVE PSYCHOPHARMACOTHERAPY

PROGRAMME

Thursday, March 18, 2021

TRANSDISCIPLINARY INTEGRATIVE APPROACH IN PSYCHIATRY, PERSONALIZED MEDICINE AND CREATIVE PSYCHOPHARMACOTHERAPY

14.00-16.45 Brain Storming Session (moderators: Miro Jakovljević, Zagreb & Izet Pajević, Tuzla)

14.00-14.05 The Session Opening

14.05-14.10 *Miro Jakovljević (Zagreb): Creative, Person-Centered and Narrative Psychopharmacotherapy (CP-CNP) - From Theory to Clinical Practice*

14.10-14.15 *Izet Pajević (Tuzla): The School of Creative, Person-Centered and Narrative Psychopharmacotherapy: Our Experience in Psychiatric Clinic, University of Tuzla*

14.15-14.20 *Aron Mulahalilović, Mevludin Hasanović M, Izet Pajević (Tuzla) & Miro Jakovljević (Zagreb): Psychopharmacotherapy and the Sense of Meaning in Life*

14.20-14.25 *Zihnet Selimbašić & Mevludin Hasanović (Tuzla): Resilience Between Salutogenesis and Pathogenesis in Creative Personalized Psychopharmacotherapy*

14.25-14.30 *Emir Prljača, Izet Pajević, Mevludin Hasanović (Tuzla) & Miro Jakovljević (Zagreb): Mentalization and Change of Perception in the Context of Creative, Person-Centered Psychopharmacotherapy*

14.30-14.35 *Elvir Bećirović (Tuzla): The Preformative, Parformative and Narrative in Creative Person Centered Psychopharmacotherapy*

14.35-15.40 *Jasmin Hamidović, Mevludin Hasanović, Izet Pajević, Lejla Dostović Hamidović (Tuzla) & Miro Jakovljević (Zagreb): Emotional Contamination in the Context of Creative, Person-Centered Psychopharmacotherapy*

14.40-14.45 *Nadina Avdić Jahić, Mevludin Hasanović, Izet Pajević & Miro Jakovljević (Zagreb): The Significance of Understanding Body Language in Depressed Patients within the Context of Creative, Person-Centered Psychopharmacotherapy*

14.45-14.50 *Nada Hančević Horvat, Mirta Freisman Čobanov (Zagreb), Zoran Milivojević (Beograd) & Miro Jakovljević (Zagreb): Psychopharmacotherapy and the Hero's Journey: Mental Health Medicines and Script Change*

14.50-14.55 *Mevludin Hasanović (Tuzla): "A Beautiful Word like a Beautiful Tree ..." From the Perspective of Creative Psychopharmacotherapy"*

14.55-15.00 *Ann-Marie Jelena Golden (Liverpool), Nada Hančević Horvat & Miro Jakovljević: Acceptance and Change as Dialectic of Recovery: Examples of Storytelling, Fairy Tale and Psychopharmacotherapy as Therapeutic Modalities*

15.00-15.05 *Alija Sutović (Tuzla)*: Treatment in Psychiatry in a New Classification Attire in the Shadow of Silence and Unprocessed Traumas from the Past - The Imperative of Perfectionism in the Present and Shame and Discomfort in the Future

15.05-15.10 *Dina Šmigalović, Mevludin Hasanović, Izet Pajević, Aron Mulahalilović (Tuzla), Asim Kurjak & Miro Jakovljević (Zagreb)*: Creative, Person-Centered Psychopharmacotherapy in the Context of Prenatal Psychiatry – Dilemmas and Challenges

15.10.-15.15 *Esmina Avdibegović, Maja Brkić & Mevludin Hasanović (Tuzla)*: Integrating the Concept of Creative, Person-Centered Psychopharmacotherapy and Group Psychotherapy in Clinical Practice

15.15-15.20 *Andrea Zemba Čilić (Zagreb)*: Epigenetics of Drug Treatment in Psychiatry

15.20-15.25 *Dino Hodžić, Mevludin Hasanović, Izet Pajević & Muhammed Hasanović (Tuzla)*: Acceptance of Diagnosis in Psychiatry and Influence on Treatment in the Light of Creative Psychopharmacotherapy

15.25-15.30 *Nermina Kravić, Martina Krešić Ćorić, Marija Burgić Radmanović, Nermina Ćurčić Hadžagić, Mira Spremo, Zihnet Selimbašić, Izet Pajević, Vesna Horvat, Sabina Kučukalić, Mevludin Hasanović (Tuzla)*: Creative Psychopharmacotherapy in Child and Adolescent Psychiatry and Experiences from Bosnia and Herzegovina

15.30-15.35 *Davor Lasić, Trpimir Glavina & Boran Uglešić*: Evolution of Psychopharmacotherapy in Recent Years with an Emphasis o Antipsychotics - Experience from the Clinic for Psychiatry, UHC Split

15.35-15.40 *Mevludin Hasanović, Abdurahman Kuldija, Muhamed Hasanović, Izet Pajević (Tuzla) & Miro Jakovljević (Zagreb)*: Gambling Disorder as an Addictive Disorder and Creative Psychopharmacotherapy

15.40-15.45 *Anel Brigić, Mevludin Hasanović, Izet Pajević, Nerminka Aljukić, Jasmin Hamidović & Miro Jakovljević (Zagreb)*: Principles of Hippocratic Medicine from the Perspective of Modern Medicine

15.45-15.50 *Ahmed Pajević, Izet Pajević, Miro Jakovljević, Mevludin Hasanović, Nermina Kravić & Nera Žigić (Tuzla)*: Ibn Sina (Avicenna) As a Psychiatrist: a View From Today's Perspective

15.50-15.55 *Helena Dukić & Miro Jakovljević (Zagreb)*: Guided Imagery and Music in the Context of Trans-Integrative Approach in Psychiatry

15.55-16.00 *Helena Dukić, Asim Kurjak & Miro Jakovljević (Zagreb)*: Resilience and Pregnancy: Music as an Agent in Dopamine, Oxytocin and Growth Hormone Production

16.00-16.15 *Felix Tretter (Vienna)*: The Quest for Systems Theory: Bridging Practical Psychopharmacology and Computational Bio-Psychiatry – The Example of Alcohol Withdrawal

16.15-16.45 **Discussion and Concluding Remarks**

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17.00- 19.00 Brain Storming Session (moderator: *Mevludin Hasanović*)

17.30-17.35 The Session Opening

17.35-17.40 *Antonija Medić, Dora Herceg & Miroslav Herceg (Zagreb)*: Treatment of Resistant and Ultra Resistant Schizophrenia

17.40-17.45 *P. Sobolevskaia , L. Churilov, T. Fedotkina, A. Stepochkina, A. Dolina, A. Gvozdetskii & Y. Shoenfeld (Saint-Petersburg)*: Hyperprolactinemia and Antipsychotics in Patients with Hashimoto's Thyroiditis and Schizophrenia

17.45-17.50 *Didakamiwan Khonglah, Rudraprasad Acharya, Arghya Pal, Debes Ray & Malay Ghosal (Kolkata)*: A Prospective Hospital Based Study on C-Reactive Protein as a Response Predictor of Antidepressant Treatment in Drug Naive Patients of Major Depressive Disorder

- 17.50-17.55 *Tana Debeljak & Blanka Kores Plesničar (Ljubljana)*: Distinguishing between Neuroleptic Malignant Syndrome and Serotonin Syndrome in Polypharmacy: An Overview with a Case Report
- 17.55-18.00 *Tea Terzić & Blanka Kores Plesničar (Ljubljana)*: Selective Serotonin Reuptake Inhibitors (SSRI) Usage during Pregnancy
- 18.00-18.05 *Teodora Svalina & Anja Kokalj Palandacic (Ljubljana)*: Pregabalin Abuse – A Case Report
- 18.05-18.10 *Suzana Jonovska, Tom Sugnet & Vesna Šendula-Jengiđ (Rab)*: Ketamine: Undrawn Lines between Medical and Recreational Use - Implications for Clinical Practice
- 18.10-18.15 *Suzana Jonovska, Tom Sugnet & Vesna Šendula-Jengiđ (Rab)*: High-dose Methylphenidate Use Prior to Hospitalization Exacerbates the Withdrawal Syndrome in Inpatients Treated for Opioid and Sedative-Hypnotic Co-dependence - Case Series and Review of the Literature
- 18.15-18.20 *Tom Sugnet, Suzana Jonovska & Vesna Šendula-Jengiđ (Rab)*: Amisulpride Reduces Craving in Patients with GBL Addiction - Case Series and Review of the Literature
- 18.20-18.25 *Izet Pajević, Mevludin Hasanović, Nera Žigić, Ahmed Pajević & Leila Avdić (Tuzla)*: Do Cannabis and Cannabinoids Have a Psychopharmacotherapeutic Effect?
- 18.25-18.30 *Elena Petrova, Evgenii Nesterenko, Alexander Shutov, Natalia Bofanova, Villory Strukov & Pavel Poluboyarinov (Penza)*: Therapeutic Correction of Psychoemotional and Neurovegetative Disorders in Postmenopause
- 18.30-18.35 *Emir Prljača, Elvir Bećirović, Mevludin Hasanović, Izet Pajević & Anel Brigić (Tuzla)*: Clozapine-induced Hypersalivation Treated with Sulpiride - Is it a Solution?
- 18.35-18.40 *Nera Žigić, Mevludin Hasanović & Izet Pajević (Tuzla)*: Possible Consequences of Cannabis Legalization - What Do Research Show?
- 18.40-18.45 *Tom Sugnet, Suzana Jonovska & Vesna Šendula-Jengiđ (Rab)*: Regional Differences in Anxiolytic Prescribing in Light of Hofstede's Cultural Dimensions Theory
- 18.45-18.50 *Goranka Radmilović, Sanja Popović-Grle, Valentina Matjelić & Nenad Nešković*: The Influence of Depression, Anxiety and Stress on Changes in Locomotor Parameters in patients Who are Prone to Develop COPD
- 18.50-18.55 *S. Kocijančič, S. Demšar & J. Bon (Ljubljana)*: Cerebellar Transcranial Magnetic Stimulation for Anhedonia in Depression - Case Report
- 18.55-19.00 *Roberta Perkovic, M. Tustonja, K. Devic & B. Kristo (Mostar)*: Music Therapy and Mental Health in Pregnancy
- 19.00-19.05 *Ivana Bakija, Snježana Kaštelan, Igor Filipčić, Marija Bogadi & Ivona Šimunović Filipčić (Zagreb)*: Comparison of the Schein and Osdi Questionnaire As Indicator of Tear Film Stability in Patients with Schizophrenia

19.05-19.30 Discussion and Concluding Remarks

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29th Danubian Psychiatric Symposium

PSYCHIATRY, MEDICINE AND SOCIETY

Homo Deus of 21st Century and Challenges of Mental Health and Personalized Medicine

Friday, March 19, 2021

PSYCHIATRY, SPIRITUALITY AND RELIGION FROM THE PERSPECTIVE OF THE PUBLIC AND GLOBAL MENTAL HEALTH

09.00-12.00 **Brain Storming Session** (moderators: *Miro Jakovljević & Mijo Nikić*)

09.00-09.05 Session Opening

09.05-09.10 *Miro Jakovljevic, Asim Kurjak, Mijo Nikic, Aziz Hasanovic, Ana Jerkovic & Ivan Jakovljevic (Zagreb)*: Psychiatry, Science and Religion As Partners in Promotion of Public and Global Mental Health Through Spirituality

09.10-09.15 *Zdravko Palavra (Zagreb)*: Brotherhood in Humanity and Global Mental Health - Christian Aspect

09.15-09.20 *Aziz Hasanovic (Zagreb)*: Fraternity in Humanity and Global Mental Health - Islamic Perspective

09.20-09.25 *Iko Skoko, D. Topić Stipičić, M.Tustonja & D. Stanić (Mostar)*: Mental Health and Spirituality

09.25-09.30 *Mijo Nikić (Zagreb)*: A Spirit Is the One That Revives - The Principles of Spiritual Therapy

09.30-09.35 *Josip Blažević (Zagreb)*: The Phenomenon of Miraculous Healing Through Suggestion in the Context of Faith and Magic - Psychological-Theological Approach

09.35-09.40 *Sanda Smoljo-Dobrovoljski (Zagreb)*: Psychoanalytic Paradigm and Its Meaning for Christian Anthropology

09.40-09.45 *Stefano Tognacci (Rome)*: Spirituality and Psychology in the Face of Suffering and Illness

09.45-09.50 *Antun Volenik (Zagreb)*: Spiritual Principles of Alcoholics Anonymous

09.50-09.55 *Ivo Antunović (Zagreb)*: Why Does God Allow Suffering? Reflection About Human and Christian Suffering in the Thought of Karl Rahner

09.55-10.00 *Kotel Dadon (Zagreb)*: Miraculous Healing in Judaism

10.00-10.05 *Silvana Fužinato (Đakovo)*: Jesus's Miraculous Healings in Mt 8:1-17 Significance and Role

10.05-10.10 *Ante Mateljan (Split)*: "Therapeutic Effects" of the Sacrament of Anointment

10.10-10.15 *Marina Čavar (Zagreb)*: Faith in Hagiotherapy

10.15-10.20 *Andrea Ferenczi, Zsuzsanna Tanyi, Zsuzsanna Mirnics, Dóra Kovács, Veronika Mészáros, Andrea Hübner & Zsuzsanna Kövi (Budapest)*: Gratitude, Religiousness and Well-Being

10.20-10.25 *Andrea Ferenczi, Zsuzsanna Mirnics & Zsuzsanna Kövi (Budapest)*: Relations between God-Images and Early Maladaptive Schemas

10.25-10.30 *Zsuzsanna Kövi, T. Wongpakaran, N. Wongpakaran, P. Kuntawong & Zsuzsanna Mirnics (Budapest)*: Relationship between Personality Traits and the Inner Strengths

10.30-10.35 *Dunja Jurić Vukelić, Zorana Kušević & Bjanka Vuksan-Ćusa (Zagreb): The Role of Religiosity in Coping with Infertility Treatment*

10.35-10.40 *Ahmed Pajević, Izet Pajević & Mevludin Hasanović (Tuzla): Islamic Approach to Treatment of the Fear of Death*

10.40-10.45 *Mevludin Hasanović, Izet Pajević & Muhammed Hasanović (Tuzla): Islamic Approach to the Psychotrauma: Animation, Growth and Transformation*

10.45-10.50 *Ahmed Pajević, Izet Pajević, Edin Dedić, Mevludin Hasanović (Tuzla): A Treatse of the Islamic Philosopher Ibn Sina (Avicena) on the Fear of Death and the Treatment of Anxiety Caused by It*

10.50-10.55 *Maja Roje Novak (Zagreb): Beyond Placebo: Prayer Exploiting Synchronicities to Benefit Health*

10.55-11.00 *Ivana Ljubičić Bistrović, Mario Tomljanović & Rudolf Ljubičić: Psychooncology and Spirituality*

11.00-11.05 *Josip Bošnjaković (Osijek): Compassion: An Expression of Charity in Treatment of Physical and Mental Illness in Individuals and Communities*

11.05-11.10 *Mitar Saveljić, Damira Murić, Milena Raspopović & Damir Peličić (Podgorica): Connection between Religiosity and Attitudes towards Sexuality in Montenegro*

11.01-11.15 *I. Marčinko, N. Brdar, & M. Grgić (Osijek): The Relationship Between Eudaimonia, Psychological Needs and Mental Health*

11.15-11.20 *Ivana Gusar, Samir Čanović, Marija Ljubičić, Sonja Šare, Sanja Perić, Ivan Ljudevit Caktaš, Petra Kovačević, Zrinjka Paštar & Suzana Konjevoda: Religiousness, Anxiety and Depression in Patients with Glaucoma, Age-Related Macular Degeneration and Diabetic Retinopathy*

11.20-11.25 *Ivan Koprek (Zagreb): Exemplarism and Spirituality*

11.25-12.00 Discussion and Concluding Remarks

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COMORBIDITY, RESILIENCE, AND EPIGENETICS IN PSYCHIATRY FROM THE PERSPECTIVE OF PREDICTIVE, PREVENTIVE AND PERSON-CENTERED MEDICINE

Friday, March 19, 2021

17.00-19.00 Brain Storming Session (moderators: *Miro Jakovljevic & Norman Sartorius*)

17.00-17.05 The Session Opening

17.05-17.15 *Miro Jakovljevic, Miroslav Samarzija, Davor Milicic, Zeljko Reiner (Zagreb) & Norman Sartorius (Geneva): Comorbidities and Syndemics in the COVID-19 Age: Challenges and Opportunities for Bringing Separated Branches of Medicine to be Closer to Each Other*

17.15-17.20 *Vida Demarin & Sandra Morovic (Zagreb): Comorbidity from a Neuropsychiatric Perspective*

17.20-17.25 *Ervina Bilic, Mirea Hancevic, Barbara Sitas, Katarina Bilic, Hrvoje Bilic, Marijana Radic, Valentina Delimar, Marija Bakovic, Maja Cikes & Davor Mayer: Emotional Stress in Myasthenia Gravis - The Bridge between Thymus and Heart*

17.25-17.30 *Marija Bošnjak Pašić, Katarina Ivana Tudor, Filip Mustač, Fabijan Rajič, Hanna Pašić, Luka Vujević, Helena Šarac & Branka Vidrih: Comorbidities in Patients with Multiple Sclerosis in Croatia*

17.30-17.35 *Antonela Blažeković & Fran Borovečki: Psychiatric Comorbidities in Parkinson's Disease seen through the Prism of Genomics and Epigenetics*

17.35-17.40 *Banić M, Pleško S, Urek M, Babić Ž & Kardum D (Zagreb):* Immunosenescence, Inflammation and Resilience: An Evolutionary Perspective of Adaptation in the Light of COVID-19 Pandemic

17.40-17.45 *Iva Dediol, Mirna Situm, Vedrana Bulat, Tomo Stugnetić, Josip Juras, Dean Tomljenović & Marija Buljan:* Painful and Itchy Dermatoses Carry the Highest Psychological Burden for Dermato-venereological Patients

17.45-17.50 *Milan Stanojević, Asim Kurjak & Miro Jakovljević:* Epigenetics, Resilience and Comorbidity: Does Four-Dimensional Ultrasound (4d US) Helps in Answering the Question Whether Psychiatric Diseases Originate in Foetal Life?

17.50-17.55 *Bernarda Škegro, Sarah Bjedov, Mislav Mikuš, Filip Mustač, Joško Lešin, Valentina Matijević, Mario Ćorić, Vesna Elveđi Gašparović, Filip Medić & Vesna Sokol Karadjole:* Endometriosis, Pain and Mental Health

17.55-18.00 *Sandra Uzun, Marina Sagud & Nela Pivac:* Biomarkers of Depression Associated with Comorbid Somatic Disease – A Mini-Review

18.00-18.05 *Ivana Dellale:* MicroRNAs May Serve as Biomarkers and Provide Insights into Bipolar Disorder Pathogenesis

18.05-18.10 *Telarović Srđana:* The Many Faces of Wilson's Disease

18.10-18.15 *Darko Marčinko, Vedran Bilić & Marija Eterović (Zagreb):* Shame and COVID-19 Pandemic

18.15-18.20 *Tajana Jalušić Glunčić, Davorka Muršić, Latinka Basara, Lana Vranić, Andreja Moćan, Mateja Janković Makek & Miroslav Samaržija (Zagreb):* Overview of Symptoms of Ongoing Symptomatic and Post-COVID-19 Patients Who were Referred to Pulmonary Rehabilitation – First Single-Centre Experience in Croatia

18.20-18.25 *Anel Brigić, Elvir Bećirović, Emir Prljača, Mevludin Hasanović & Izet Pajević:* Dementia-like Syndrome – the Unusual Symptom of COVID-19: A Case Report

18.25-18.30 *Martina Matovinović, Katarina Ivana Tudor, Filip Mustač, Dujam Mario Tudor, Andrej Kovačević & Ervina Bilić:* Sexual Dysfunction in Croatian Patients with Obesity

18.25-19.00 **Discussion and Concluding Remarks**

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Saturday, March 20, 2021

09.00-12.00 **Brain Storming Session** (moderators: *Marina Šagud & Sara Bestulić*)

09.00-09.05 The Session Opening

09.05-09.10 *Szabó-Bartha & Z. Mirnics (Budapest):* Representations of Chronic Illness in Patients and Their Partners

09.10-09.15 *Nataša Đuran, Jelena Sušac, Domagoj Vidović, Dina Bošnjak, Jakša Vukojević, Neven Henigsberg & Vlado Jukić (Zagreb):* Difference of Symptoms Networks in Early and Late Phase Schizophrenia - A Cross-Sectional Network Analysis

09.15-09.20 *Adela Klemenčić, Miroslav Herceg, Dora Herceg, Krešimir Puljić & Mirna Sisek-Šprem (Zagreb):* Influence of Serum Testosterone Level on Aggression in Women with Schizophrenia

09.20-09.25 *Antonija Ružić Baršić, Lea Gudelj, Ronald Antulov, Damir Miletić, Koraljka Knežević & Gordana Rubeša (Rijeka):* Onset of Schizophrenia Prior to the End of Brain Maturation Alters Grey Matter Volume Loss

09.25-09.30 *R. Perellón Alfonso, I. Pileckyte, G. Repovš, B. Škodlar & J. Bon (Ljubljana):* Alpha Power in Visuospatial Working Memory Reveals Possible Inhibitory Deficit in Schizophrenia

- 09.30-09.35 *Marina S. Artemieva, R. Suleimanov, I. Danilin & A. Lazukova (Moscow)*: The Phenomenological Analysis of Impaired Age Self-consciousness in Latent Schizophrenia
- 09.35-09.40 *Biserka Sedić, Slađana Štrkalj Ivezić, Olivera Petrak & Boris Ilić (Zagreb)*: Differences in Resilience, Self-Stigma and Mental Health Recovery between Patients with Schizophrenia and Depression
- 09.40-09.45 *M. G. Graber, S. Kuzmina, A. B. Irkabaeva, D. P. Mason & T. M. Luhrmann (United States)*: Understanding the Cultural Context: Voice-Hearing Experiences of Russian-Speaking Patients
- 09.45-09.50 *Branka Aukst Margetić & Dalibor Karlović (Zagreb)*: Schyzotipy: From Personality Organization to Transition to Schizophrenia
- 09.50-09.55 *Necati Serkut Bulut, Neşe Yorguner & Gresa Çarkaxhiu Bulut (Istanbul)*: Comparing between the Inflammatory Profiles of Major Depressive Disorder and Bipolar Depression with an Emphasis on the Possible Role of Clinical Severity and Psychotic Features
- 09.55-10.00 *Elena Petrova, E. Nesterenko, N. Bofanova & T. Maltseva (Penza)*: Depression and Cognitive Disorders in Post-Stroke Patients
- 10.00-10.05 *Natalya Osipova, Leonid M. Bardenshteyn, N.I. Beglyankin & M. Dmitriev (Moscow)*: Early Screening for Risks of Bipolar Disorder at the Preclinical Stage
- 10.05-10.10 *Tanja Grahovac Juretić, Klementina Ružić, Marina Letica Crepulja, Ana Došen & Elizabeta Dadić-Hero (Rijeka)*: Comorbidity in Bipolar Disorder– Case Report
- 10.10-10.15 *Zsuzsanna Kövi, Zsuzsanna Mirnics, Chanchan Shen, Chu Wang & Wei Wang (Oslo)*: Person-Oriented Approach in Examining Chinese-Hungarian Personality and Affective Disorder Profiles
- 10.15-10.20 *Arda Karagöl (Turkey)*: Levels of Depression, Anxiety and Quality of Life of Medical Students
- 10.20-10.25 *Polona Rus Prelog & Maja Rus Makovec (Ljubljana)*: Intimate Partner Attachment Style and Antenatal Depression Symptoms in Nulliparas: Results from the ZRNO Study
- 10.25-10.30 *Marina S. Artemieva, Boris D. Tsygankov, Ivan E. Danilin, Roman A. Suleymanov & Anastasia G. Lazukova (Moscow)*: Psychosomatics in Eating Disorders
- 10.30-10.35 *Marina S. Artemieva, V. Kuznetsov, I. Manyakin, E. Basova & D. Shumeyko (Moscow)*: Psychosomatic Aspects of and Treatment of GI Pathology
- 10.35-10.40 *Marina S. Artemieva, A. Arseniev, A. Lazukova & D. Shumeyko (Moscow)*: Pathomorphism of Comorbid Pathological Drives in ED
- 10.40-10.45 *Marina S. Artemieva, V.I. Kuznetsov, I.S. Manyakin, E.A. Basova & L.I. Kuznetsova (Moscow)*: The Influence of Comorbid Endemic Goiter on the Quality of Life of Patients with Gastrointestinal Pathology
- 10.45-10.50 *Zsuzsanna Mirnics, Zsuzsanna Kövi, Zsuzsanna Tanyi & F. Grezsa (Budapest)*: Adolescent Drug Use, Relational Variables and Personality Factors
- 10.50-10.55 *N. Ustinova, L. Namazova-Baranova, M. Bebhuk, V. Albitskiy, E. Vishneva & G. Karkashadze (Moscow)*: Awareness of Rare Diseases in Children with Neurodevelopmental Disorders: Review of Present Guidelines and Opportunities for Improvement
- 10.55-11.00 *Alena Sidenkova, A. Novoselov, Vasilisa Litvinenko, O. Serdyuk, D. Dianova, E. Garifullina & N. V. Izmozherova (Moscow)*: The Good Compliance is an Opportunity to Avoid Pathological Brain Aging
- 11.00-11.05 *Alena Sidenkova & Vasilisa Litvinenko (Moscow)*: Gender Features of the Cognitive Reserve
- 11.05-11.10 *A. Badalov (Bishkek)*: Neurofunctional Foundations of Narcissism as a Predictor of the Development of Personality Disorders

11.10-11.15 *Arda Karagöl (Ankara)*: Charles Bonnet Syndrome Prevalence in a Younger Ophthalmology Outpatient Population

11.15-11.20 *Snježana Kaštelan, Ivana Bakija, Marija Bogadi, A. Gverović Antunica, M. Gotovac & Ivona Šimunović Filipčić (Zagreb)*: Mental Disorders as Influencing Factors for Discordances in the Signs and Symptoms of Dry Eye Disease

11.20-11.25 *Suzana Konjevoda, Ivana Gusar, Sanja Perić, Neda Striber, Marija Škara Kolega, Ana Didović Pavičić, Zrinka Paštar, David Josip Grašić, Doroteja Perić, Ivan Ljudevit Caktaš & Samir Čanović (Zagreb)*: Fear of Blindness in Patients Undergoing Cataract Surgery

11.25-11.30 *Maja Rus Makovec, Neli Vintar & Samo Makovec (Ljubljana)*: Level of Depression, Anxiety and Impairment of Social Relations with Regard to Pain Intensity in a Naturalistic Sample of Patients at the Outpatient Chronic Pain Clinic

11.30-11.35 *E. Avdibegović, M. Muminović Umihanić, C. Ziegler, A. Goci Uka, V. Haxhibeqiri, S. Haxhibeqiri, B. Hoxha, S. Kučukalić, E. Šabić Džananović, E. Ferić Bojić, N. Jakšić, B. Aukst-Margetić, A. Cima Franc, D. Rudan, R. Babić, M. Pavlović, A. Dzibur Kulenovic, A. Kučukalić, A. Bravo Mehmedbašić, D. Marjanović, O. Sinanović, F. Agani, N. Božina, M. Jakovljević, C. Wolf, B. Warrings, K. Domschke, J. Deckert & N. Kravić (Tuzla)*: Genetic and Epigenetic Findings on Monoamine Oxidase a Gene in the See-PTSD Cohort

11.35-11.40 *Nadica Laktašić Žerjavić, Emina Hrkić, Iva Žagar, Valentina Delimar, Kristina Kovač Durmiš, Sanda Špoljarić Carević, Marta Vukorepa, Andreja Matijević, Nikolino Žura & Porin Perić (Zagreb)*: Local Cryotherapy, Comparison of Cold Air and Ice Massage on Pain and Handgrip Strength in Patients with Rheumatoid Arthritis

11.40-11.45 *Mislav Pap, Ivana Sapina, Nadica Laktašić-Žerjavić, Iva Žagar, Kristina Kovač Durmiš, Nataša Kalebota, Petra Kovačević, Ivan Ljudevit Caktaš, Vanja Dekleva, Duje Birkić, Helena Kolar Mitrović & Porin Perić (Zagreb)*: Anti-TNF Therapy and the Risk of Malignancies and Infections in Inflammatory Rheumatic Diseases - Our Experience

11.45-10.50 *Miralem Mešanović, Izet Pajević & Mevludin Hasanović (Tuzla)*: Comorbidities in Alcohol Use Disorders in Tuzla Canton Area - Bosnia and Herzegovina

11.50-11.55 *Tomislav Badel, Ivana Savić Pavičin, Sandra Kocijan Lovko, Dijana Zadravec, Ladislav Krapac & Andreja Carek (Zagreb)*: Alcohol Abuse in the Dental Patient and Temporomandibular Disorder Caused by Trauma

11.55-12.00 *Jasminka Matić, Azijada Srkalović Imširagić, M Majnarić & S. Borovec (Popovača)*: Alcohol Abuse Among Women and Challenges; Treatment of Women's Suffering and Chain for Her Strength

12.00-12.30 **Discussion and Concluding Remarks**

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MISCELLANEOUS

12.30-15.00 **The Brain Storming Session** (moderator: Maja Bajš Janović)

12.30-12.35 The Session Opening

12.35-12.40 *Maja Bajš Janović, Špiro Janović, Maja Šeparović Lisak, Sara Medved, Oliver Ojdanić & Jurica Veronek*: Phantom Earthquake Syndrome – A Pilot Study after Zagreb and Banovina 2020 Earthquake

12.40-12.45 *Sara Medved, Darko Marčinko, J. Bulum & Alma Mihaljević-Peješ (Zagreb)*: Cardiac Symptoms through the Lens of a Psychodynamics Approach: A Case Report of Myocardial Infarction

12.45-12.50 *Elma Boškailo, Darjan Franjić, Ivan Jurić, Emina Kiseljaković, Inga Marijanović & Dragan Babić (Mostar)*: Resilience and Quality of Life of Patients with Breast Cancer

- 12.50-12.55 *Danijela Delić, Dragan Babić, Darjan Franjić & Berina Hasanefendić Babić (Mostar):* Anxiety of Patients at Magnetic Resonance Imaging Screening
- 12.55-13.00 *Inga Marijanović, Marija Kraljević & Teo Buhovac (Mostar):* The Role of Family Physicians in the Prevention and Early Detection of Cancer in Herzegovina - Neretva and West-Herzegovina Canton
- 13.00-13.05 *Marko Milić, Martin Nonković, Antea Buterin, Šime Devčić & Ksenija Vitale (Zagreb):* Informed Patient Is Satisfied Patient – Qualitative Study of Patients' Experience after Total Hip Arthroplasty
- 13.05-13.10 *Bojan Miletić, Andrica Lekić & Udo Courteney (Switzerland):* Depression in Elderly - Just a Small Problem or Something More?
- 13.10-13.15 *Filip Mustač, Hanna Pašić, Filip Medić, Borna Bjedov, Luka Vujević, Maša Alfirević, Branka Vidrih, Katarina Ivana Tudor & Marija Bošnjak Pašić (Zagreb):* Anxiety and Depression as Comorbidities of Multiple Sclerosis
- 13.15-13.20 *D. Romac, B. Gracin, Z. Cavar & M. Orban (Zagreb):* Mental Health Care Professionals and Stress Management
- 13.20-13.25 *Vedran Markotić, Tina Pojužina, Dorijan Radančević, Miro Miljko & Vladimir Pokrajčić (Mostar):* The radiologist workload increase: Where is the limit? - Mini review and case study
- 13.25-13.30 *Katarina Ivana Tudor, Željka Petelin Gadže, Andreja Bujan Kovač, Ervina Bilić, Sandra Nađ Škegro, Mirko Bakula, Dinko Hauptman, Monika Mudrovčić, Barbara Sitaš, Slavko Orešković & Sanja Hajnšek (Zagreb):* Sexual Dysfunction in Patients with Epilepsy
- 13.30-13.35 *Željka Petelin Gadže, Katarina Ivana Tudor, Maja Živković, Andreja Bujan Kovač, Biljana Đapić Ivančić, Sibila Nanković, Vlatko Šulentić, Ira Brezak, Petra Nimac Kozina, Barbara Sitaš, Borislav Radić, Monika Mudrovčić, Zdravka Poljaković, Saša Jevtović, Ana Vuksanović & Sanja Hajnšek (Zagreb):* Depression and Quality of Life in Patients with Epilepsy - Single Centre Experience
- 13.35-13.40 *Omer Ć. Ibrahimagić, Suljo Kunić, Goran Imamović, Dževdet Smajlović, Zikrija Dostović, Emir Tupković & Amer Čustović (Tuzla):* Others Are to Blame (Displacement in Patients with Drug-Resistant Epilepsy)
- 13.40-13.45 *Zikrija Dostović, Omer Ć. Ibrahimagić, Dževdet Smajlović, Suljo Kunić & Amer Čustović:* Cognitive Functionality of Patients with Delirium after Stroke
- 13.45-13.50 *Omer Ć. Ibrahimagić, Anamaria Tadić, Suljo Kunić, Dževdet Smajlović, Zikrija Dostović & Amra Iljazović (Tuzla):* Oleh Hornykiewicz (1926–2020): Sixty Years Since the Pioneering L-DOPA Application - One Year Since the Death of the Pioneer
- 13.50-13.55 *Iva Žagar, Valentina Delimar, Stjepan Čota, Sanda Špoljarić Carević, Kristina Kovač Durmiš, Nadica Laktašić Žerjavić & Porin Perić (Zagreb):* The Impact of Disease Activity on Quality of Life, Fatigue, Functional Status and Physical Activity in Patients with Ankylosing Spondylitis
- 13.55-14.00 *Biljana Kojić, Zikrija Dostović, Omer Ć Ibrahimagić, Dževdet Smajlović & Amra Iljazović(Tuzla):* Does Sleep Apnea Affect the Outcome of Stroke Patients?
- 14.00-14.05 *Marija Bogadi, I. Bakija, S. Kaštelan (Zagreb) & B. Kasun (Stubičke Toplice):* Transdisciplinary Approach in Type I Neurofibromatosis - A Case Report and Review of Psychiatric Disorders
- 14.05-14.10 *Dobrila Karlica Utrobičić, Hana Karlica, Žana Ljubić & Zorana Kušević(Zagreb):* Visual Evoked Potentials in Evaluating Sudden Visual Loss in Adolescents: A Psychosomatic Perspective
- 14.10-14.15 *Tonći Mastelić, Boran Uglešić, Kristina Divić & Davor Lasić:* Comorbidity of Dissociative Motor Disorder with Organic Impairment - Case Report
- 14.15-14.20 *Sandra Kocijan Lovko (Zagreb):* How to Square a Circle?

14.20-14.25 *V. Ćorluka Čerkez & M. Vukojević (Mostar): The Relationship Between Perfectionism and Anger in Adolescents*

14.25-14.30 *Ana Došen, Tanja Grahovac Juretić, Diana Palaić, Klementina Ružić & Elizabeta Dadić-Hero: Psychogenic Stuttering - Case Report*

14.30-14.35 *Almerisa Tufekčić, Esmina Avdibegović, Mevludin Hasanović, Izet Pajević & Miro Jakovljević: Gambling from Seven Perspectives*

14.35-15.00 **Discussion and Concluding Remarks**

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PSYCHIATRY, ETHICS AND POLITICS

12.30-14.00 **The Brain Storming Session** (moderators: *Nenad Jakšić & Sarah Bjedov*)

12.30-12.35 The Session Opening

12.35-12.40 *Danijela Tiosavljević (Belgrade), Sandra Radenović & Luka Janeš (Zagreb): Ethics, Psychiatry, Politics - Homo Moralis*

12.40-12.45 *Erik Brezovec, Luka Janeš (Zagreb) & Danijela Tiosavljević (Belgrade): Psychiatry and Society: Move Towards the Transdisciplinarity in Ethics and Politics*

12.45-12.50 *Vesna Bujas, Martin Schröckenfuchs, Nataša Kličko, Marijana Braš, Sonja Badovinac & Jelena Čabo Aras (Zagreb): The Power of Transformation and the Leadership Supporting It – Including Mental Health Perspective*

12.50-12.55 *V. Švab (Ljubljana): Fact Teams: Are They Applicable in Central Eu Country*

12.55-13.00 *I. Pinchuk (Kyiev): Implementation of UNA (Ukraine-Norway-Armenia) Partnership Ideas in Ukraine*

13.00-13.05 *Alan Kubat & Veljko Miljević (Zagreb): Public Perception of the Judiciary from the Perspective of Public and Global Mental Health*

13.05-13.10 *J. Bektić Hodžić, S. Repovečki, A. Klemenčić & S. Štrkalj-Ivezić (Zagreb): Use of Coercive Measures in Psychiatry - the Experience of Nurses and Technicians*

13.10-13.15 *S. Kocijančić Azzaoui, P. Pregelj & V. Švab (Ljubljana): Evaluation of a Destigmatisation Program for Adolescents*

13.15-13.20 *A. Krampač-Grljušić, M Grgić & I. Marčinko (Osijek): Ethical Issues in the Domain of Disability - Inclusion and Education of Disabled Pupils in the Regular School System*

13.20-13.25 *Tatiana Valentinovna Ulasen & Alexey Evgenievich Bobrov (Moscow): Justification of a personified psychocorrectional approach for pupils of social protection institutions*

13.25-13.30 *M. Dvorski, M. Šelendić & I. A. Nola (Zagreb): Epigenetic Imprint of “Compassionate Society” Triggered by Vulnerability and Mental Illnesses*

13.30-13.35 *Vitimir Zecevic (Zagreb): Media in Service To Health*

13.30-14.00 **Discussion and Concluding Remarks**

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TRANSDISCIPLINARY INTEGRATIVE APPROACH IN PSYCHIATRY, PERSONALIZED MEDICINE AND CREATIVE PSYCHOPHARMACOTHERAPY

CREATIVE, PERSON CENTERED NARRATIVE PSYCHOPHARMACOTHERAPY (CP-CNP): FROM THEORY TO CLINICAL PRACTICE

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The field of psychiatry is deeply divided within itself. Psychopharmacotherapy is a hot and controversial topic, glorified by some and vilified by others. Mental disorders are multifactorial and polygenic phenomena with polymorphic clinical manifestations and poorly defined endophenotypes. They are characterized with high rate of morbidity, comorbidity, disability, mortality, and treatment failures. These relentless and commonly tragic disorders represent heavy burden on patients, their families and society and there is an urgent need to improve treatment successfulness in psychiatry. The best treatments are those that utilize and integrate multiple modalities. The time is ripe for psychiatry to find its transdisciplinary integrative soul and increase treatment effectiveness. Creation and fostering hope, meaning, personal responsibility, spirit of optimism and commitment can significantly contribute to overall positive response to pharmacotherapy, but in the other way round treatment can contribute to creation and fostering hope, meaning, personal responsibility, spirit of optimism and commitment. This review addresses the concept of creative person-centered narrative psychopharmacotherapy (CP-CNP) as a transdisciplinary integrative strategy for improvement of the therapeutic effectiveness in patients with mental disorders. The CP-CNP offers an overarching theoretical framework that permits the integration of different levels of explanation from neuroscience and clinical psychopharmacology, to psychodynamics, evolutionary psychobiology and positive psychology. It is a comprehensive/holistic concept encompassing a wide array of psychological methods and pharmacologic strategies that are aimed to achieving optimal treatment outcome. The key terms of this concept are: the focus on person in treatment instead of blockbuster and stratified medicine approaches, synergistic drug combinations, enhancing resilience, antifragility and salutogenesis, not only decreasing illness but also increasing wellness, reconstructing disease and therapeutic narratives, and promoting creativity, therapeutic alliance and partnership.

Key words: mental disorders - resilience - antifragility - creative psychopharmacotherapy - person-centered narrative medicine - personal recovery

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PSYCHOPHARMACOTHERAPY AND THE SENSE OF MEANING IN LIFE

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A personalized and holistic approach to therapy is increasingly demanding answers to questions related to the meaning of life. Over the years, research has shown a direct link between the presence of meaning in life, health and recovery. It becomes impossible to ignore this connection as well as the issues of spirituality and religiosity that are immersed in the meaning of life. The article presents different definitions of meaning, the relationship of meaning in life and parts of meaning to quality of life, allostasis, stress, pathological conditions and recovery, and finally connecting the points between creative psychopharmacotherapy and meaning. A complementary approach to the meaning of life implies a desire for a clear, reliable understanding of three related but different dimensions: continuity (as opposed to fragmentation), purpose (as opposed to pointlessness), and value (as opposed to worthlessness). Creating personal meaning in life structures can provide a context for understanding and integrating stressful situations. Finding meaning means connecting, meaning are the expected connections and associations that human beings see in their world. In this aspect, the construction of meaning is a dimension that we

impose on the world. Each person's ability is to decide what makes their life meaningful. The meaning of life is a changing cognitive-emotional framework, directly accessible to subjective assessment based on one's own needs and values. The art of living is to discover in tough and painful life situations their true meaning, values and meaning of life, and thus health and disease. Creative psychopharmacotherapy can be used to help patients discover and explore the sensation of meaning, create a new meaning in life, a new life story, manifest their potential through recovery. Mental disorders present a chance to break with misplaced life goals and values and turn to authentic values through new forms of thinking, experiencing, behaving, and creating a successful life.

Key words: creative psychopharmacotherapy - meaning - personalized medicine - values

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RESILIENCE BETWEEN SALUTOGENESIS AND PATHOGENESIS: AN IMPORTANT CONCEPT IN CREATIVE PERSONALIZED PSYCHOPHARMACOTHERAPY

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Resilience is a complex multidimensional psychobiological concept that researchers define differently depending on the context of their research and theoretical orientation. Resilience indicates the ability of a child or adolescent (person) to adequately deal with problems, to continue to improve, grow and develop, and to successfully adapt to a new situation, regardless of the threats and challenges that characterize the environment. Salutogenesis is a sociomedical concept that focuses on factors that support human health and feelings of satisfaction, rather than on factors that cause disease. Through the salutogenic model, through the sense of coherence as a basic concept and a central resource, through generalized and specific resources of resilience, a person manages to preserve his physical and mental health even in the most difficult life circumstances. Promoting salutogenesis and the search for health factors, not diseases, in the study of children and young people and the importance of the salutogenic health model in times of wars, economic crises, social change, major changes on the planet can be a significant goal of treatment.

Key words: resilience - salutogenesis - pathogenesis - creative personalized psychopharmacotherapy

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MENTALIZATION AND CHANGE OF PERCEPTION IN THE CONTEXT OF CREATIVE PSYCHOPHARMACOTHERAPY FOCUSED ON PEOPLE

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The concept of mentalization is relatively new in modern psychiatry, whose utilization is expanding daily in working with clients suffering from mental illness. Mentalization enables the incorporation of several different theoretical models and therapeutic techniques into a single whole, which encourages a holistic and integrative approach to treating patients. This theoretical model looks at different spheres of mental states, both the client seeking medical help and the doctor himself in the therapeutic process. Consequently, providing an adequate basis for the creation of a therapeutic/working alliance, which is imposed in the age of modern psychiatry, as a "condition without which it is impossible" to achieve the desired therapeutic response. Therefore, it is necessary to creatively implement treatments while creating a "therapeutic/working alliance" between the patient and the doctor in order to improve the therapeutic response and change the patient's perception.

Key words: mentalization - change of perception - creative psychopharmacotherapy

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PREFORMATIVE, PERFORMATIVE AND NARATIVE IN CREATIVE PERSON CENTERED PSYCHOPHARMACOTHERAPY

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Psychopharmacotherapy does not stand alone. The act of prescribing involves much more than solely choosing “best” medication. It seems that somewhere in the process of trying to objectify and scientify our therapy, we have neglected an important and effective dimensions of it. Psychopharmacology should consider much more than just biological dimension of drugs. Psychological, social and behavioral factors that influence drug metabolism, efficacy and side-effects are largely overlooked. Obviously, the subtext of information provided by the medical professional inevitably contains suggestion. Important part of that subtext is consisted in way we think of it, we talk of it and we perform that information.

Defining of preformative and performative psychopharmacotherapy was attempted as well as description of narrative *creative person-centered* psychopharmacotherapy. Studies that indicate that medicines (SSRI) do not work on its own but as amplifier of the influence of the living conditions on mood are provided. Undirected susceptibility to change hypothesis which request acknowledging the importance of social, psychological, environmental factors to explain such the mechanisms underlying the recovery from the disease is explained. Understanding the role of medicines (SSRIs) as amplifier of the influence of the living conditions on mood represents a critical step in developing a creative, person-centered psychopharmacotherapy aimed at better matching patients with treatment and avoiding potential harmful consequences.

Key words: preformative - narative - creative person-centered psychopharmacotherapy

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EMOTIONAL CONTAMINATION IN THE CONTEXT OF CREATIVE PSYCHOPHARMACOTHERAPY

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It is well known that emotions have always attracted the special attention of both laymen and scientists because life without emotions is unthinkable. Emotions prepare us for all life circumstances regardless of their qualities and intensities.

Reviewing the available literature, the authors described the phenomenon of emotional contamination and its importance in interpersonal relationships with a focus on "infecting" other people's emotions. Research has shown that individuals mimic facial expressions as well as other emotional reactions of others by emotional contamination in interaction with another person manifesting emotional behavior, and in such situations mimic model reactions, with the perception of their own reactions eliciting an appropriate emotional state.

They stressed the importance of patients perceptions of the emotions of the physicians treating them and the caring attitude that is crucial to contributing to treatment outcomes in clinical practice. Specific expectations between the patient and his physician, when they meet and achieve a physician-patient relationship, reduce uncertainty, and play a useful and crucial role in healing. A caring emotional practitioner who can effectively connect with patients is a huge boon to health.

The connection of emotional contamination with creative psychopharmacotherapy and with several therapeutic options is especially described, determined in different ways either through narrative psychopharmacotherapy, through assertive and positive communication, creating a favorable and positive therapeutic relationship whereby a partnership is created, which together leads to the main goal, which is the successful treatment of the patient to the mutual satisfaction. It is useful for patients to have a doctor who spends more time with them and listens carefully and, with adequate emotions, strongly and effectively facilitates treatment. They conclude that emotional contamination is a phenomenon

that happens every day in life, especially in specific situations, and that it is up to professionals to use this type of therapeutic opportunity and assistance in the right way to help their patients and be creative in a psychopharmacotherapeutic sense.

Key words: emotions - emotional contamination - creative psychopharmacotherapy - the doctor-patient relationship

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THE SIGNIFICANCE OF UNDERSTANDING BODY LANGUAGE IN DEPRESSED PATIENTS WITHIN THE CONTEXT OF CREATIVE PSYCHOPHARMACOTHERAPY

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Since it is generally known that the human body is the best image of the human soul, this paper aims to explain how important body language is when diagnosing psychiatric diagnosis "depression". It is important to point out the importance of other alternative approaches in the treatment of depression when standard psychopharmacotherapy is not enough. Body language is a powerful form of non-verbal communication that provides important traces of intentions, emotions, and motivations in other people. In everyday life, we collect information about what people think and feel by their body posture, manners, and gestures. (Tipper et al. 2015). Evaluations of clinical depression are traditionally based on verbal information. However, non-verbal expressive behavior, related to reflexive feedback of a person, may reveal negative emotional or social processes that are not fully controlled by patients (Fiquer et al. 2013). Karkou and Sanderson (2006) claim that dance therapy, along with other artistic therapies (art therapy, drama therapy, and music therapy are other artistic therapies that are applied in Great Britain) offers an attractive opportunity for patients because it enables them to work on those issues that are placed on non-verbal and pre-verbal level.

Creative psychopharmacotherapy is the concept that involves creativity as its main means (Jakovljević 2013). In this context, the importance of physical activity and body movements will be emphasized in the treatment of depression, when regular psychopharmacotherapy is not sufficient.

To conclude, the patient has the right to actively take part in creating a therapeutic relationship and responsibly contributes to overcoming psychopathology. The importance of physical activities and body movements is emphasized in the treatment of depressive people. Studies have shown that the anti-depressive effect of physical activity is increased with simultaneous use of antidepressants, as well as that movement therapy and music therapy, together with regular pharmacotherapeutic methods, help with fast recovery and that they can be used in a creative approach to problem-solving.

Key words: body language, depression, non-verbal communication, creative treatment, art therapies

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PSYCHOPHARMACOTHERAPY AND THE HERO'S JOURNEY: MENTAL HEALTH MEDICINES AND SCRIPT CHANGE

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The concept of a script in Transactional Analysis (TA) can be considered as the basis for the occurrence and duration of mental disorders. As such, a script change can be the solution leading to improved mental health and well-being. In addition to redecision therapy, offered by TA, there are other techniques for

changing the script. One of them is the psychotherapeutic technique, The Hero's Journey, by Robert Dilts, developed from Joseph Campbell's idea of a single myth; i.e. a monomyth, which is in fact the narrative of all narratives. It is this model of all myths that is actually a story about the meaning of life, which is exactly what gives the patient the power to achieve the goal. This goal is also the cornerstone of all existential psychotherapeutic modalities. Life can be viewed as a journey in which each chooses their own path by choosing their own goals, in any sphere of life; private, professional, or other. Misalignment of goals or failure to achieve them can cause mental disorders, leading to a loss of the meaning of life and with this loss, one's goals. When illness appears on the journey, the treatment itself becomes the journey. By applying personalized psychopharmacotherapy and removing the symptoms of the disease, further treatment aims to help the patient enter stabilization and socialization. In this phase of treatment, the hero's journey becomes a therapeutic journey. Through setting new goals and thus changing the meaning of life, the patient is introduced to the last phase of disease prevention, where health becomes a life goal through metaphors of achieving various personal goals. The synergy of both approaches can bring the patient into a state of remission that becomes a permanent state as the patient has established their own goals, felt fulfilled and found their own meaning and purpose in life using motivation, creativity and their forgotten or neglected resources and potentials.

Key words: psychopharmacotherapy - hero's journey - TA script - personalized medicine - generative mind - generative self

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"A BEAUTIFUL WORD LIKE A BEAUTIFUL TREE ..." FROM THE PERSPECTIVE OF CREATIVE PSYCHOPHARMACOTHERAPY

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A nice word in creative psychopharmacotherapy provides: environment for purposeful activity as creative work, structured work, enjoying the nature of essence and existence; feeling of security and safety, to be treated with respect and dignity and to allow the development of a sense of belonging, value and trust; have time to express feelings to other members sympathetically, with listening: opportunities and encouragement to develop feelings and draw conclusions from experience, including illness and its treatment; getting permission and encouragement to develop a relationship with God or the absolute (however persons experience holiness) regardless of time, place, and privacy for prayer and worship, spiritual education, encouragement in faith, a sense of universal connection and forgiveness.

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ACCEPTANCE AND CHANGE AS DIALECTIC OF RECOVERY: EXAMPLES OF STORYTELLING, FAIRY TALE AND PSYCHOPHARMACOTHERAPY AS THERAPEUTIC MODALITIES

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„Narrative medicine“ promotes therapeutic healing and recovery using fairy tales and traditional folk stories. Individuals are capable of shaping their lives through various narrative strategies and re-authoring alternative stories that are concerned with different aspects of acceptance and change, as well as meaning in life, personal growth, resilience and self-realization. Psychotherapy through the eyes of stories and fairy tales can have two perspectives. Firstly, fairy tale acts like a weft around which the very story/script of the patient is formed, which in itself becomes the basis for interpreting the occurrence of

a mental disorder. The second perspective is the perspective of healing or getting out of a "fairytale" story/script by changing an incoherent life narrative into an alternative coherent narrative. The aim of this pilot case studies approach was to use a narrative approach based on stories and fairy tales in order to promote psychological growth, meaning in life, resilience, self-realization and improved well-being and highlight the dialectic of recovery, an interplay of acceptance and change. With properly applied creative, person-centered narrative psychopharmacotherapy, the patient is capable of changing their beliefs in order to reach a new meaning and way of life, and thus to facilitate the lowering of symptomatology, its disappearance and possibly even a cure, whatever that may mean for an individual. At the end of mental health medication treatment personal recovery is a wishful therapeutic goal. Considering its promising results, clinical implications and possible further applications are discussed.

Key words: dialectics of change - fairy tale - script - psychopharmacotherapy - personalized approach - narrative psychotherapy - healing, personal recovery - coherent life story

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TREATMENT IN PSYCHIATRY IN A NEW CLASSIFICATION ATTIRE IN THE SHADOW OF SILENCE AND UNPROCESSED TRAUMAS FROM THE PAST: The Imperative of Perfectionism in the Present and Shame and Discomfort in the Future

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The new classification systems in psychiatry have dressed both patients and psychiatrists in completely new attire. One (DSM -5) is widely used and critics are hardly at peace with the psychiatry of normal living conditions and phenomena and a missed opportunity to 'save the normal'. The second attire is still standing on the mold in tailoring salon in Geneva (ICD-11) and is being ornamented by the online testing through a global network of clinical practice, now around 15,000 clinicians and mental health professionals, before it is distributed to psychiatrists worldwide.

The objective is to (be) treated better and to keep quiet. We remain silent for fear, shame and insecurity in the face of devastating tendencies in the modern world. Unprocessed traumas and mourning from the past in current global setting support various mental disorders. Trauma leaves strong emotions, so if it has not been processed and the loss has not been mourned, these charged emotions get the characteristics of emotional volcanoes or timed bombs that are easily activated. Unprocessed group trauma among political or ideological leaders can become a means of strong manipulation of the masses. And the 'masses' are immersed, globally, in the mentalization of cognitive achievement at the expense of the emotional principle.

By forcing competitiveness, perfectionism and narcissism, people try to 'be successful' at all costs. Perfectionism is a phenomenon that, under the influence of scientific and technological progress, computerization and globalization, increasingly affects the psychosocial development, functioning of the individual and society as a whole. Perfectionism is increasingly associated with anxiety and affective disorders, obsessive-compulsive disorders, eating disorders, and suicidality. Virtual reality, virtual sexuality, pornography, pervasive alienation and loneliness create a position of shame and cultural discomfort, which is so far the price of conformism. But in the Manichean prism, we might also call the new age an era of shamelessness and perversion in the broader sociocultural context leaving open the key question: "Can modern civilization avoid self-destruction?"

Key words: treatment in psychiatry - new classification - silence - unprocessed traumas - imperative of perfectionism - shame and discomfort - past - present - future

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CREATIVE PERSON-CENTERED PSYCHOPHARMACOTHERAPY IN THE CONTEXT OF PRENATAL PSYCHIATRY - DILEMMAS AND CHALLENGES

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The authors presented a psychopharmacotherapeutic approach to the treatment of women in the prenatal period that requires a personalized, person-centered treatment plan. Treatment should include care for the mental health of women of childbearing age, pregnancy planning, during the prenatal period, and then during the postpartum period. The authors highlighted creative psychopharmacotherapy which is the foundation of holistic and integrative treatment of mental disorders. They emphasize the significant role of the mother in the emotional development of the child, which begins while the child is still in the womb. Mothers who stop taking psychotropic drugs during pregnancy have an increased risk of recurrence of the mental disorder after childbirth because the mother's psychiatric illness is not a benign event and can cause significant morbidity for both the mother and her child, therefore, discontinuation or denial of medication during pregnancy is not always the safest option. For more serious disorders, such as schizophrenia, bipolar disorder, and severe depression, medications may be needed during pregnancy and lactation, despite complex evidence based on the effects of psychotropic medications on the fetus and newborn. Perinatal mental health has become a significant focus of interest in recent years. The randomized controlled examinations provide evidence of the effectiveness of psychological and psychosocial interventions at the individual level. It is necessary to make a new conceptual shift in the approach to maintaining the mental health of pregnant women and newborns, and that is to optimize the mental health of pregnant women, and not simply reduce the symptoms of mental disorders from which they suffer before conception, during pregnancy and after childbirth. Dilemmas and challenges of psychopharmacotherapeutic treatment in the prenatal period are intensified by the knowledge that the psychological difficulties of mothers can significantly affect the integrity of the safe relationship between mother and child, which is essential for the emotional, cognitive, and behavioral development of the child. Often, these problems existed before pregnancy or occurred during pregnancy, and they are often the deterioration of the mental state due to discontinuation of pharmacotherapy during this period.

The quality of the biopsychosocial milieu in the fetal period and childhood during the early neuroplastic development phase is one of the determinants of risk for diseases during the life cycle. For this reason, the mental health of pregnant women and mothers must be optimized. For many of these women, health is optimized with pharmacotherapy.

Key words: creative person-centered psychopharmacotherapy - prenatal psychiatry - mental disorders

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INTEGRATING THE CONCEPT OF CREATIVE PSYCHOPHARMACOTHERAPY AND GROUP PSYCHOTHERAPY IN CLINICAL PRACTICE

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Modern psychiatric treatment is largely dictated by national and international guidelines rested on evidence-based data, including psychopharmacotherapy and psychotherapy. An alternative to the rigid application of official guidelines and criterion for the standards of treatment in psychiatric practice is the concept of creative psychopharmacotherapy. It is a concept based on the integration of different

approaches to a person as whole, mental disorders and their treatment into person-centered clinical practice. In this sense, group psychotherapy and creative psychopharmacotherapy today are part of the overall integrative efforts in psychiatry. Neuroscientific discoveries suggest that they share similar neural pathways that lead to changes in brain function and symptoms relief. Various integrative elements make group psychotherapy and psychopharmacotherapy in combination more effective and efficient. The integration of the concept of creative psychopharmacotherapy and group psychotherapy into everyday clinical practice can improve treatment options as well as clinical practice by creating opportunities for research and development of new modalities of overall treatment.

Key words: creative psychopharmacotherapy - group psychotherapy - clinical practice

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EPIGENETICS IN PSYCHIATRY

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Changes in gene expression that lead to predictable, stable and possibly heritable alterations in cell function that are not due to changes in DNA sequence is the current definition of epigenetics. Ever growing evidence suggests that antipsychotic drugs used routinely for schizophrenia therapy induce their effects by modulating the host epigenome. The key epigenetic mechanisms targeted by antipsychotic drugs include DNA methylation, histone modification, and noncoding RNA expression. Understanding the pharmacoepigenetics of an antipsychotic drug is crucial to predicting its extrapyramidal effects, therapeutic dosage, treatment efficacy, and treatment strategy, and will facilitate personalized interventions. Further related drug discovery should target the induction of selective chromatin remodeling and gene-specific expression effects.

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ACCEPTANCE OF DIAGNOSIS IN PSYCHIATRY AND INFLUENCE ON TREATMENT IN THE LIGHT OF CREATIVE PSYCHOPHARMACOTHERAPY

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In this paper, we focused on the complexity of diagnosis in psychiatry and problems during its communication, and its acceptance / non-acceptance, both by the patient and family members of the patient, which has a significant impact on the success of treatment. It is not uncommon for somatic diseases to be related to mental illness, which due to damage to certain organs requires adequate psychiatric therapy. The treatment process is a joint agreement between the patient, his / her family members and the psychiatrist regarding the explanation of the illness, how to take the medication and the agreement with the patient about the psychotherapy that would suit him / her best. Psychosocial support to the patient(s) is also very important in the treatment of psychiatric patients, because only with such support do we empower sick people, their families and the social environment, and the result is successful treatment and reintegration into everyday life in the community.

Key words: diagnosis in psychiatry, stigmatization, treatment, creative psychopharmacotherapy

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CREATIVE PSYCHOPHARMACOTHERAPY IN CHILD AND ADOLESCENT PSYCHIATRY AND EXPERIENCES FROM BOSNIA AND HERZEGOVINA

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Introduction: Pediatric psychopharmacology involves the application of psychotropic agents to the treatment of children and adolescents with mental disorders and gathered knowledge from child and adolescent psychiatry (CAP), neurology, pediatrics and pharmacology. Defining elements of this discipline are: the metabolism of drugs is different in children than in adults (pharmacokinetics), the developing brain reacts specifically to the drug (pharmacodynamics), and psychopathology itself is not differentiated yet. To make an overview of specifics in psychopharmacological use in CAP and emphasize some experiences from Bosnia and Herzegovina in that field.

Methods: Through insight in current literature, we presented comprehensive findings and compare it with situation in Bosnia and Herzegovina.

Results: The most common conditions in which psychopharmaceuticals are used in CAP were attention deficit hyperactivity disorders (ADHD), depressive and bipolar disorder, obsessive compulsive disorder and the treatment of early psychosis. Psychopharmaceuticals were also used to treat agitated conditions in various causes.

We made an overview of psychopharmaceuticals use in Bosnia and Herzegovina CAP and emphasized the fact that psychostimulants are not approved for the use yet, although they are mostly prescribed medication in CAP over the world. That limits us in the effectiveness of the treatment in ADHD and put us in the situations to use other medications instead (anxiolytics, antipsychotics, mood stabilizers) which are not approved for that condition.

Conclusion: The use of psychopharmacotherapy in CAP is justified in cases where it is necessary to reduce the suffering of children and to improve their functionality at the time when cognitive, social and emotional advancement is most pronounced. Further research and clinical monitoring of efficacy and safety in the use of psychopharmaceuticals in youngsters are necessary.

Key words: psychopharmacotherapy - child and adolescent psychiatry - Bosnia and Herzegovina

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EVOLUTION OF PSYCHOPHARMACOTHERAPY IN RECENT YEARS, WITH AN EMPHASIS ON ANTIPSYCHOTICS, FROM THE PERSPECTIVE OF THE CLINIC FOR PSYCHIATRY OF UHC SPLIT

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At the 4th Croatian Psychiatric Congress entitled "For Betterment without Stigma" held in Cavtat, from October 4 to 8, 2006, Prof. Goran Dodig, PhD, MD, in a discussion on the future of Croatian psychiatry, pointed out the allegation from the British research that for the most part the psychiatric doctrine changes significantly every fifteen years. Modern psychiatry is about 200 years old. The first European psychiatric clinic was founded in Florence in 1802. Modern psychopharmacotherapy dates back to 1952 with the discovery of chlorpromazine (Jean Delay & Pierre Deniker), considered the third psychiatric revolution. The sequence of events in the field of psychopharmacotherapy over the last 70 years can be traced as evolution, which in shorter and shorter time intervals results in significant shifts in the development of psychiatry from almost all points of view. The process of globalization equals psychiatric

standards of diagnosis and treatment in the world, and Croatian psychiatry does not lag behind world achievements. Our goal is to look more clearly at the perspective ahead of us, by looking at the achievements behind us, from the point of view of the Clinic for Psychiatry at the University Hospital Center Split.

Key Words: psychopharmacotherapy, evolution, perspective

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GAMBLING DISORDER AS AN ADDICTIVE DISORDER AND CREATIVE PSYCHOPHARMACOTHERAPY

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Addiction does not mean "addiction to substances" only. At the core of the definition of substance dependence is the loss of control. Gambling addiction belongs to non-substance / non-chemical addictions or behavioral/behavioral addictions. The concept of behavioral addictions is new and revolutionary in psychiatry. Gambling addiction, formerly pathological or problematic gambling occurs due to loss of control over gambling. There is growing evidence to suggest that behavioral addictions resemble substance addictions in many domains, including phenomenology, tolerance, comorbidity, overlapping genetic contribution, neurobiological mechanisms, and response to treatment. Behavioral addiction has been proposed as a new class in the Diagnostic Statistical Manual Fifth Revision (DSM-5), but the only category included is gambling addiction. The prevalence of gambling disorders in adolescence is very high and for certain disorders (especially related to the use of the Internet) it becomes more pronounced over time. In this paper, we presented a comprehensive overview of gambling disorders from definition, epidemiology, manifestations, comorbidities, assessment, treatment options, and existing forms of treatment. Given the complexity of the approach to the treatment of gamblers, a creative individualized integrative approach is necessary, which is the basis of creative psychopharmacotherapy. Due to the possibility of the emergence of problem gambling and other impulse-control deficits we need to be very careful when commencing a patient on dopamine replacement therapy or therapy with aripiprazole.

Key words: gambling - non-substantial addictions - behavioral/behavioral addictions - DSM-5, creative psychopharmacotherapy

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PRINCIPLES OF HIPPOCRATIC MEDICINE FROM THE PERSPECTIVE OF MODERN MEDICINE

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In this paper authors described some of the principles and theses of Hippocratic medicine. They emphasized that regardless existing controversial opinions as to whether Hippocrates stated some theses or not, and controversial views on some of his principles, he is often called the "father" of medicine, who laid the foundations in medicine as a science. Hippocrates gave recommendations on the doctor's behavior towards the patient, which is relevant up today. His holistic approach to medicine is becoming more and more relevant in the modern medicine. The application of the Hippocratic Oath today depends on the

legislation of individual states, related to how legal solutions in some states are pro or contra to it. Authors opened and discussed his attitudes that mental illnesses are a sign of a diseased brain, his consideration the food as medicine and that the disease came from the intestines. Also issue of prognosis of the disease was opened and discussed as well as and Hippocrates's consideration of work and physical activity as the most appropriate medicine. Furthermore, authors considered importance of Hippocratic medicine related to Creative psychopharmacotherapy based on therapeutic communication and the creative satisfaction of needs in the therapeutic relationship with patients and in the recovery itself. Finally, an example of creatively use of the principle of Hippocratic medicine: "work as the most appropriate medicine" in therapeutic communication with patients through an ecological approach called "Ecopsychiatry", under the slogan presented in the media to the general public: "Cleansing nature improves your mental health" was described.

Key words: Hippocratic medicine - Holistic approach - Hippocratic Oath - Creative psychopharmacotherapy - Ecopsychiatry

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IBN SINA (AVICENNA) AS A PSYCHIATRIST: A VIEW FROM TODAY'S PERSPECTIVE

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Ibn Sina (Avicenna) is primarily known for his philosophy and medicine, but there is almost no scientific discipline in which this great man didn't leave a significant mark. This paper gives a brief review of his contributions to medicine, especially to psychiatry. Medical works of Ibn Sina represent a pinnacle of most important medical achievements of his time. These works contain synthesis of all Greek, Indian and Iranian medical schools, but also new breakthroughs achieved by Muslim scholars through their own experimentation and practice. Although he wrote many medical works, his most important one is *El-Kanun fit-tib*, which can be translated as *The Canon of Medicine*. It's made out of five books which systematically show everything known in the area of medicine up until that point in time. In it, Ibn Sina discusses, among other things, the structure of psychological apparatus of human being and the connection of psychological functions with the brain as well as the role of psyche in etiology of somatic diseases. He also describes certain psychiatric diseases along with the explanation of their etiology and recommended therapy. He considered psychology to be very important for medicine, so in his psychological works he discusses, in great detail, the essence of human soul, consciousness, intellect and other psychological functions.

Key words: Ibn Sina - Avicenna - psychiatry - psychology - mental disorders - the law of medicine

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GUIDED IMAGERY AND MUSIC IN THE CONTEXT OF TRANS-INTEGRATIVE APPROACH IN PSYCHIATRY

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This paper aims to present the use of Guided Imagery and Music (GIM) therapy in psychiatric setting. It focuses on different modifications made to the original Bonny GIM method and their effect on the patients' conditions concentrating on three major psychiatric disorders: PTSD, depression and psychosis. The modified GIM methods are described and the therapeutic outcomes described.

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RESILIENCE IN PREGNANCY: MUSIC AS AN AGENT IN DOPAMINE, OXYTOCIN AND GROWTH HORMONE PRODUCTION

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This paper is a short review of current research on the influence of music on resilience in pregnancy and its consequential effect on the production of dopamine, oxytocin and growth hormone in pregnant women. The importance of resilience in pregnancy is discussed first, as is the prenatal bonding and its impact on the future mental and physical health of mothers and babies. Finally, most notable studies exploring the music influence on oxytocin, dopamine and growth hormone are discussed and necessary future developments are proposed.

THE QUEST FOR SYSTEMS THEORY: BRIDGING PRACTICAL PSYCHOPHARMACOLOGY AND COMPUTATIONAL BIO-PSYCHIATRY - THE EXAMPLE OF ALCOHOL WITHDRAWAL

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The wealth of data by biotechnologies in psychiatry justifies a field like "theoretical psychiatry". However, clinical experience must also be represented in this field. One important pillar for theory building might be Systems science that has collected many methods of formal modeling and simulation of a heterogenous set of real systems. Here the integrative potential of synergetics as one successful approach in the field of systems sciences is demonstrated with regard to non-linear state transitions of the mind after consumption of psychedelic substances. Also the utility for qualitative modelling of clinical observations in alcohol withdrawal is shown by the application of the concept of a "neurochemical mobile" that captures the clinical stages of this syndrome and relates them to neurochemistry. This model can be formalized and has been tested already by usual methods of computational science. Within the conceptual framework with this model, also the conditions and dynamics other mental disorders can be explored and understood consistently.

It is concluded that philosophically sound and systems-based efforts towards a theoretical psychiatry could improve understanding of mind and brain with regards health and disease.

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TREATMENT OF RESISTANT AND ULTRA RESISTANT SCHIZOPHRENIA

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Schizophrenia is a psychiatric disease which affects one percent of population. It is most common in young adults. It is primarily treated with typical and atypical antipsychotics. Resistant schizophrenia is a condition diagnosed after no response is noticed to two different antipsychotics of which one is atypical. The treatment has to be undertaken with adequate doses and duration of therapy. Clozapine is the golden standard in the treatment of therapy-resistant schizophrenia. It has shown its superiority among other antipsychotics in various studies. Aside from greater effectiveness, advantages include absence of extrapyramidal side effects. During clozapine treatment, regular blood tests should be performed as a screening method for agranulocytosis. Twenty to thirty percent of schizophrenia patients suffer from treatment resistant schizophrenia. Sixty percent of the latter ones show no therapeutic response to clozapine. In conclusion twelve to eighteen percent of all patients suffering from schizophrenia show no response to any form of treatment. Attempts to augment clozapine effectiveness are being made by

increasing the dose of monotherapy, using antipsychotic polypharmacy or adding other types of drugs to clozapine. Unfortunately, these augmentation methods have not yet proven themselves to be effective enough to be added to standard therapy algorithms. On the other hand, electroconvulsive therapy is neuromodulatory method that shows promise in increasing therapeutic success. Although many methods of treatment are being researched, therapy-resistant schizophrenia remains a clinical challenge which affects a significant percentage of population and will require additional research.

Key words: clozapine - electroconvulsive therapy - resistance schizophrenia - treatment

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HYPERPROLACTINEMIA AND ANTIPSYCHOTICS IN PATIENTS WITH HASHIMOTO'S THYROIDITIS AND SCHIZOPHRENIA

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Background: Aim of the study is to analyze risks of hyperprolactinemia (HPRL) in antipsychotic treatment, to identify an association between the antipsychotic therapy (AT) and HPRL in Hashimoto's patients receiving AT, to identify the association of HPRL and other laboratory parameters in patients with Hashimoto's thyroiditis (HT) and schizophrenia receiving AT.

Materials and methods: We studied 17 patients with HT in comorbidity with schizophrenia receiving AT (mean age 46.5±12.8 years). Different laboratory parameters such as anti-thyroid peroxidase antibodies (antiTPO), anti-thyroglobulin antibodies (antiTG), thyroid stimulating hormone (TSH), free thyroxine (FT4), free triiodothyronine (FT3) and prolactin (PRL) were studied.

Results: The level of PRL in the studied group was increased 1191 [734.7; 1932.9] mIU/l as well as the levels of antiTG 108.2 [9.2; 221.9] IU/ml and antiTPO 44.5 [3.3; 209.8] IU/ml. Thus, patients were divided into 3 groups by the degree of risk of HPRL from the drugs - without risk, low and high risks. The correlation analysis detected the inverse significant correlation ($R=-0,51$; $p=0,037$) between drug-associated risks of HPRL and PRL levels in studied group. At the same time, we detected a positive significant correlation between levels of PRL and FT4 in studied group ($R=0,53$; $p=0,03$). The correlations between levels of prolactin and other parameters such as TSH, FT3, antiTPO, antiTG, antiTSH receptor antibodies were not significant.

Conclusions: 1. HPRL in our study wasn't associated with receiving of antipsychotic drugs with high risk of it. 2. We have find a significant positive correlation between the levels of prolactin and free thyroxine. It cannot be ruled out that antipsychotics may interfere with prolactin metabolism, which creates a false effect of a positive correlation between prolactin and free thyroxine levels.

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A PROSPECTIVE HOSPITAL BASED STUDY ON C-REACTIVE PROTEIN AS A RESPONSE PREDICTOR OF ANTIDEPRESSANT TREATMENT IN DRUG NAIVE PATIENTS OF MAJOR DEPRESSIVE DISORDER

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Background: C-reactive protein (CRP) is an acute phase reactant that is implicated in the pathogenesis of Major Depressive Disorder (MDD), due to its role in the execution of various important neurological events, including neurogenesis, mediation of neural plasticity and synaptic transmission. This study was conducted to determine the relation between level of CRP to remission rates after antidepressant therapy.

Methods: 50 patients of first episode MDD with no past history of antidepressant exposure and other medical comorbidity were recruited after obtaining consent for Escitalopram therapy. The CRP levels of the patients were evaluated on the day of recruitment and depressive symptoms were monitored using Montgomery Asberg Depression Rating Scale (MADRS) at week 0, 3, 6, and 12. Compliance to pharmacotherapy and disability were assessed using Morisky Medication Adherence Scale and World Health Organization disability assessment schedule respectively. The patients with low (≤ 10 mg/l) and high (> 10 mg/l) CRP levels were compared for time taken to achieve remission using Kaplan-meier survival analysis.

Results: The Kaplan-meier survival analysis showed significantly higher proportion of patients with low CRP levels attained remission than patients with higher CRP levels (Log-rank= 7.594; $dF=1$; $p=0.006$). The age, compliance to pharmacotherapy and disability did not significantly affect the remission rates of the patients.

Conclusion: Our study confirms that higher levels of CRP can lead to poorer remission rates in patients with MDD after antidepressant therapy and can predict treatment resistance.

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DISTINGUISHING BETWEEN NEUROLEPTIC MALIGNANT SYNDROME AND SEROTONIN SYNDROME IN POLYPHARMACY: AN OVERVIEW WITH A CASE REPORT

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We present a case of a 53-year old patient with schizophrenia taking clozapine, amisulpride, venlafaxine, lorazepam, gabapentin and lamotrigine. He was admitted to the ER with rigidity, fever, encephalopathy, sweating, tremor, muscular spasms, hypersalivation, elevated creatinine kinase and myoglobin, leucocytosis and acute kidney failure. We discuss the overlap of symptoms and subsequent management of neuroleptic malignant syndrome and serotonin syndrome. Distinguishing between the two in a clinical setting, when the patient currently takes multiple drugs, can sometimes present a real challenge, since polypharmacy is also an important risk factor for both syndromes. We further discuss clinical difficulties in everyday clinical practice and how personalized medicine approach can alleviate some of them.

Key words: neuroleptic malignant syndrome - serotonin syndrome - pharmacogenetics - therapeutic drug monitoring - personalized medicine

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SELECTIVE SEROTONINE REUPTAKE INHIBITORS (SSRI) USAGE DURING PREGNANCY

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Depressive disorders in pregnancy are common and generate concerns regarding their treatment. The effects of untreated maternal depressive symptoms on preterm birth, low birthweight, fetal growth restriction and postnatal complications are well known. When left untreated, depressive disorders continue postpartum and have a big impact on the patients' functioning. Selective serotonin reuptake inhibitors (SSRIs) are the first choice of treatment of depressive disorders. However, there are some concerns which should be addressed. The aim of this systematic review is to explore the SSRI usage in pregnancy. We studied the latest literature in the PubMed databases and recommendations from the guidelines. Decision to treat depression in pregnancy should be taken with careful consideration of many factors. Clinicians should weigh the use of SSRIs during pregnancy against the risk of untreated depressive disorder.

Key words: perinatal depression - serotonin - SSRI - pregnancy - breastfeeding

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PREGABALIN ABUSE - A CASE REPORT

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Pregabalin is a medication with anticonvulsant, anxiolytic and analgesic effects. In Slovenia the indications for its use are neuropathic pain, some types of epilepsy and generalised anxiety disorder. There is a lot of off-label clinical use of pregabalin (e.g. bipolar disorder, insomnia, fibromyalgia, restless leg syndrome). Because of its GABA analogue activity without directly interfering with GABA metabolism there have been proposals for its use as the main therapy for benzodiazepine and alcohol withdrawal treatment. Coincidentally there has been a growing number of reports showing abuse and potential dependency following 15 years since it has been on the market. We will present a case report of a 55-years-old woman with alcohol use disorder and generalized anxiety disorder. Pregabalin was used for anxiety treatment, but the patient started to abuse it. Our aim is to review published data and literature of pregabalin abuse and/or dependence, since it is a widely used substance with an increasing number of prescriptions.

Key words: pregabalin - dependency - abuse - psychiatry

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KETAMINE - UNDRAWN LINES BETWEEN MEDICAL AND RECREATIONAL USE - IMPLICATIONS FOR CLINICAL PRACTICE

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Ketamine, synthesized in 1962, approved in 1970, is considered safe for use in controlled conditions, mainly as an anesthetic, especially in pediatric populations and in people suffering from pulmonary diseases, as well as in emergency departments and in war situations. Dissociative states (derealization and depersonalization) produced by ketamine made it a popular recreational drug, which led to increased regulation in most countries. Intravenous application of ketamine has shown rapid, although transitory antidepressant and antisuicidal effects in patients with unipolar and bipolar depression. Esketamine, the S(+) enantiomer of ketamine, with better pharmacodynamic selectivity, has just been approved for treatment-resistant major depressive disorder, in the form of a nasal spray. Presently, the high cost of the spray not only limits its widespread use, but also makes it less prone to abuse and diversion. Additional measures are needed to hinder it from becoming a new "street drug".

Key words: ketamine - esketamine - antidepressant - ketamine abuse

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HIGH-DOSE METHYLPHENIDATE USE PRIOR TO HOSPITALIZATION EXACERBATES THE WITHDRAWAL SYNDROME IN INPATIENTS TREATED FOR OPIOID AND SEDATIVE-HYPNOTIC CO-DEPENDENCE - CASE SERIES AND REVIEW OF THE LITERATURE

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Methylphenidate (MPD) is a drug used to treat attention deficit hyperactivity disorder (ADHD) and narcolepsy. Due to its stimulant qualities, illicit use is common in some populations. Cognitive side effects of excessive doses of MPD are widely reported in the literature. Less is known about illicit use of high-dose MPD in polydrug users and its influence on withdrawal symptoms of other psychoactive substances. We

report two clinical cases of inpatients treated for opioid and sedative-hypnotic co-dependence, in which prolonged use of high-dose MPD prior to hospitalization seemed the most important factor affecting withdrawal syndrome duration and severity.

Key words: methylphenidate - sedative-hypnotics - withdrawal

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AMISULPRIDE REDUCES CRAVING IN PATIENTS WITH GBL ADDICTION - CASE SERIES AND REVIEW OF THE LITERATURE

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γ-butyrolactone (GBL), a prodrug of γ-hydroxybutyric acid (GHB), is increasingly abused, mainly as a recreational intoxicant with subjective effects similar to barbiturates. Its popularity might be due to not being classified as an illegal substance in many jurisdictions. At lower doses it has euphoric effects, while sedative effects are prominent at higher doses. Many users enhance its effects with other psychostimulants, such as MDMA or amphetamines. When consumed frequently or in excessive amounts, physical and psychological dependence can develop. GBL and GHB act as GABA-B receptor agonists and GHB-receptor agonists. GABA-B agonists, like baclofen, are useful in acute GBL/GHB withdrawal but are insufficient in long term therapy of GBL/GHL addiction. Benzamide antipsychotics were found to upregulate GHB receptors. We report a case of two GBL-addicted patients who were treated with low to moderate doses of amisulpride. Amisulpride was found to reduce cravings for GBL, as well as GBL-seeking behavior. Benzamide antipsychotics might be useful in long-term treatment of GBL/GHB addiction.

Key words: amisulpride - GHB - GBL

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DO CANNABIS AND CANNABINOIDS HAVE A PSYCHOPHARMACOTHERAPEUTIC EFFECT?

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Backgrounds: Written historical evidence reveals that Cannabis sativa has been used medically, recreationally and spiritually for more than five centuries in many cultures. It is considered the most-used plant-based psychoactive substance with millions of different usages across the world. To review what the studies, conducted over the past two decades, indicate about effects of the cannabis on physical and mental health as well as the impact on social functioning.

Methods: We selected literature review using PubMed resources, to summarize the findings of the existing publications on cannabis and cannabinoids and their possible psychopharmacological therapeutic effects only.

Results: Research supports cannabis' clear acute effect on neurocognition, while non-acute effects for prolonged use of marijuana are unclear and still insufficiently explored. Due to cannabidiol's (CBD) safety and tolerability, the absence of psychoactive or cognitive effects, the existence of clinical trials with positive results and its broad pharmacological spectrum, CBD is a cannabinoid whose initial results will likely lead to implementation into clinical practice. The fact that the results of previous studies establish the claim of CBD as an antipsychotic and anxiolytic, makes the above developments even more likely. However, long-term, double-blind, placebo studies with samples of patients with different psychotic and anxiety disorders are still necessary. Likewise, due to CBD's biphasic effects, determining an adequate therapeutic dose remains a challenge to conclude, the cannabinoid system represents a promising target for new therapeutic interventions in psychiatry.

Conclusion: Further controlled studies are essential to determine the precise mechanisms of action of cannabinoids on various neuropsychiatric disorders as well as the safety of their use are needed. Never just the use of 'smoking cannabis in an unlicensed way'. The use of simple 'smoked cannabis' remains dangerous because of the effects on inducing psychosis which the article itself refers to, and needs to remain illegal.

Key words: cannabis - cannabinoids - psychopharmacological therapeutic effects

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THERAPEUTIC CORRECTION OF PSYCHOEMOTIONAL AND NEUROVEGETATIVE DISORDERS IN POSTMENOPAUSE

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Background: To assess the psychoemotional and neurovegetative disorders in postmenopausal women depending on therapy.

Materials and methods: A survey of 58 postmenopausal women with psychoemotional and neurovegetative disorders was conducted (54.4±0.7 years old). The patients were divided into two groups: 1st group used symptomatic metabolic and sedative therapy, psychotherapy; in patients of 2nd group - additionally used the biologically active drug «Femo-Clim» 2 tablets 3 times a day (it includes β-alanine, which regulates pituitary-hypothalamic interactions, as well as drone brood homogenate (HDBA organic complex), which helps to normalize the level of steroids during menopause). Research methods were Kupperman menopausal index (KI) scale; Hospital Anxiety and Depression Scale (HADS); SF-36 Health Status Survey (SF-36). The final evaluation was carried out after 30 days of treatment.

Results: There was a significant difference between 1st and 2nd groups. KI's neurovegetative component (hot flashes, sweating, palpitations, headaches, dizziness) in the 2nd group decreased to 10.0±1.8 points, in the 1st group - 18.4±2.0 (p<0.02). According to HADS, in the 2nd group, anxiety stopped and amounted to 6.7±0.3 points, while in the 1st group, subclinical 10.1±0.2 points remained (p<0.05). The average level of depression was reduced to normal - 6.5±0.3 - only in the 2nd group, in the 1st group - 9.7±0.3 (p<0.05). The average value of the indicator «Physical health» of the questionnaire SF-36 in the 1st group was 36.3±2.5 points, in the 2nd group 65.4±2.8 points (p<0.05); the indicator «Mental health» in the 1st group - 25.6±2.5 points, in the 2nd - 59.4±2.8 points (p<0.05).

Conclusions: In postmenopausal women, the therapeutic correction of psychoemotional and neurovegetative disorders was associated with taking «Femo-Clim». Adequate therapy in this category of patients contributed to the improvement of indicators of quality of life in general.

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CLOZAPINE-INDUCED HYPERSALIVATION TREATED WITH SULPIRIDE - IS IT A SOLUTION?

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Clozapine-induced hypersalivation is a common phenomenon whose etiology is not completely clear up to date. A sulpiride may be a potential pharmacological options for treating clozapine-induced hypersalivation. We described a male patient aged 29, who has been treated as an inpatient since 2009 to 2020 because of schizophrenic disorder. After the introduction and titration of the clozapine, hypersalivation occurred as a side effect. The adjuvant therapy with sulpiride was introduced as an "off-label" option to stop it. The initial therapeutic response was satisfactory. The patient was discharged recovered

with no side effects associated with clozapine-induced hypersalivation. However, during subsequent follow-ups, hypersalivation reappeared, despite regularly taking sulpiride. Though, sulpiride as an adjunctive therapy has been shown to be effective in the initial reduction of clozapine-induced hypersalivation, but has not been proved to be satisfactory as the long-term treatment. Since the treatment did not maintain initial progress in the long run, the conclusions remain vague, as in the majority of comparable literature.

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POSSIBLE CONSEQUENCES OF CANNABIS LEGALIZATION - WHAT DO RESEARCH SHOW?

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Background: Indian hemp (lat. *Cannabis sativa* subs. *Indica*) has been used as a source of industrial fiber, seed oil, food, medicine for some somatic diseases, and it is also used as a psychoactive substance. Cannabis can be used by smoking, evaporation, as a food ingredient, or as an extract. Acute and chronic cannabis use has been shown to be detrimental to several aspects of psychological and physical health and many experimental studies done on healthy people indicate the potential of Δ^9 - tetra hydro cannabinoid (THC) in inducing transient, dose-dependent psychotic symptoms, but also affective, behavioral, cognitive, neurovegetative, and psychophysical symptoms. Cannabis is the most commonly used illegal drug globally. In many communities, cannabis is perceived as a low-risk drug, leading to political lobbying to decriminalize its use. The wave of laws and initiatives to liberalize cannabis use continues to spread across the United States and the rest of the world, and there seems to be a political debate in the background about the potential risks and benefits of cannabis use. Aim is to present the possible consequences that the legalization of cannabis would have from the aspect of mental health and mental disorders.

Methods: Authors reviewed the literature using PubMed resources on the effects of cannabis using the keywords: cannabis use, cannabis use and psychoticism, cannabis use and depression, cannabis use and anxiety, cannabis use and cognition, cannabis use and insomnia, legalization of cannabis.

Results: Authors examined the effects of cannabis use on psychiatric disorders and the review of the legal status of cannabis use in the world was also made. The possible consequences of cannabis legalization on the public health system were also considered, based on experiences from countries where legalization has already been done. The evidence cited in this article suggests that strong claims about the need to legalize cannabis are still questionable, and may, even in the long run, remain mixed, inconclusive, or even contradictory. Political interference in this issue can trigger a wide range of unintended but profound and lasting consequences for the health system and the health of the individual.

Conclusion: We recommend further research on this topic and data collection with an emphasis on the effects and consequences of cannabis use on mental health, and in particular the benefits and harmful effects of medical cannabis use.

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REGIONAL DIFFERENCES IN ANXIOLYTIC PRESCRIBING IN LIGHT OF HOFSTEDE'S CULTURAL DIMENSIONS THEORY

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Background: Anxiolytics such as benzodiazepines are widely used in the treatment of anxiety disorders, although they are no longer recommended as first-line therapy for these conditions due to

increased risk of dependence, as well as cognitive adverse effects, especially among the elderly. High prescribing rates of anxiolytics may be indicative of higher prevalence of anxiety-related phenomena in a given society, either in a form of an anxiety disorder or as pressure on physicians to keep prescribing them, against current guidelines.

Subjects and method: We inspected prescribing rates of anxiolytics in 21 European countries and compared them with six dimensions of Hofstede's cross-cultural framework, namely uncertainty avoidance (UAI), power distance (PD), individualism (IDV), masculinity (MAS), long-term orientation (LTO) and indulgence (IND).

Results: According to our findings, anxiolytic prescribing patterns in selected European countries correlate positively with Hofstede's dimensions of UAI and PD and negatively with IDV.

Conclusion: Differences in prescribing rates of anxiolytics and trends in their use may be affected by cross-cultural factors. More research is needed to shed light on these regional differences in anxiolytic prescribing.

Key words: anxiety - anxiolytics - benzodiazepines - cross-cultural - Hofstede - prescribing

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THE INFLUENCE OF DEPRESSION, ANXIETY AND STRESS ON CHANGES IN LOCOMOTOR PARAMETERS IN PATIENTS WHO ARE PRONE TO DEVELOP COPD

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Background: Depression and anxiety are the most prevalent diseases that contribute to global disability, especially if they are not early recognised and properly treated. They occur as part of many chronic diseases, often remain unrecognised at an early stage, and significantly contribute to the progression of the underlying disease reducing the quality of life in these patients. Numerous studies have shown that anxiety / depression and dyspnea are the leading symptoms in patients with COPD that are associated with high morbidity and mortality. The aim of this study was to determine the relationship between the degree of depression, anxiety and stress, using DASS- 21 scale, and changes in locomotor parameters in smokers who are prone to develop COPD.

Subjects and methods: The study included 164 patients, smokers and non-smokers, who underwent spirometry, 6-minute walk test and bicycle ergometer. They were all measured for body weight, height, waist circumference, pulse, blood pressure and each patient completed DASS-21, CAT and IPAQ questionnaire.

Results: The results of the IPAQ questionnaire indicated a statistically significant difference in the physical activity of smokers and non-smokers. A statistically significant association was found between DASS-21 and patients physical activity ($p=0.0001$), 6-minute walk test ($r=-0.186$, $p=0.017$), VO₂ max ($r=-0.220$, $p=0.005$) and weekly calorie consumption ($r=-0.222$, $p=0.004$).

Conclusion: According to the results of the study, an increased degree of anxiety, depression and stress is an important factor influencing changes in locomotor parameters in smokers who are prone to develop COPD.

Key words: depression - anxiety - stress - smoking - COPD

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CEREBELLAR TRANSCRANIAL MAGNETIC STIMULATION FOR ANHEDONIA IN DEPRESSION - CASE REPORT

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Transcranial magnetic stimulation (TMS) is an established method for treatment-resistant depression, although its efficacy in individual patients is quite varied. Diagnostic biomarkers that would lead to more personalized therapy are currently not known. Magnetic resonance imaging (MRI) shows promise as a tool for delineation of structural or functional characteristics that could prove as valuable markers for the selection of individualized TMS treatment protocols.

A 52-year old patient had depressive episodes since the age of 26 years. He experienced multiple and long-lasting relapses, regardless of different antidepressant medication and other interventions during multiple hospitalizations. He was enrolled in a TMS treatment research study. MRI was performed as part of pre-treatment evaluation and an enlarged CSF cistern next to the cerebellum was found. Neuroradiologist concluded that it represented a developmental anomaly and judged it as a benign formation not exerting any pressure on the cerebellum. We performed a standard 10 Hz DLPFC stimulation protocol, after which objective evaluation with depression scales did not show any kind of improvement. Patient reported anhedonia as one of the most significant and treatment-resistant symptoms of his depressive disorder.

The study by Drysdale et al (2016) pointed towards the existence of different neurophysiological subtypes of depression, which also respond differently to TMS treatment. One of the described subtypes is strongly related to anhedonia. Brady et al (2019) described the efficacy of cerebellar TMS treatment in patients with schizophrenia for functional recovery of disrupted cerebellar-prefrontal network, related to negative symptoms such as anhedonia. We hypothesized that a similar approach could be useful for anhedonia in depression and treated the patient with a stimulatory cerebellar TMS protocol, where the coil was positioned over the midline of the cerebellum. As this intervention was not a part of the research study, we did not use formal clinical scales for the evaluation of treatment efficacy, but clinical observation and the patient's subjective experience showed noticeable, although short-lived improvement of anhedonia and his mood in general.

The individualization of TMS treatment can make a huge difference in its efficacy. Determination of functional dysconnectivity patterns in brain disorders like depression can lead to a selection of more appropriate treatments for individual patients.

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MUSIC THERAPY AND MENTAL HEALTH IN PREGNANCY

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Introduction: In a woman's life, pregnancy is a unique experience accompanied by significant physiological, biochemical, and psychological changes that can affect mental health status. Participation in preventive activities during pregnancy has an impact on better emotional state after childbirth.

Discussion: The therapeutic effects of listening to music on the health of mother and child have been proven in numerous studies. Listening to music during pregnancy contributes to a better sense of well-being and less pronounced symptoms of postpartum depression. Scientific evidence confirms the effects of music therapy on the level of stress and anxiety in pregnant women, but also calmer children and better emotional bonding. The application of GIM therapy - music - induced imagination - also provides significant results in strengthening psychological resilience.

Conclusion: Music therapy is a simple, non-pharmacological and safe method that significantly contributes to mental health in pregnancy and after childbirth. The application of music therapy has a scientific potential that offers many ideas for the development of medical - music research.

Key words: mental health - pregnancy - music therapy

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COMPARISON OF THE SCHEIN AND OSDI QUESTIONNAIRE AS INDICATOR OF TEAR FILM STABILITY IN PATIENTS WITH SCHIZOPHRENIA

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Background: The aim of this research was to determine which of two chosen questionnaires for subjective symptoms of dry eye (Ocular Surface Disease Index and Schein questionnaire) is more reliable in the assessment of dry eye in patients with schizophrenia.

Subjects and methods: Our research included 80 patients (160 eyes) of both sexes with schizophrenia ranging between the age of 25 and 55 who have been taking one of three antipsychotic drugs namely clozapin, olanzapin, quetiapin for five or more years and were in a stable phase of the disease or remission. All participants were required to satisfy all included and excluded criteria. They all filled out the Schein and OSDI questionnaires for assessment of subjective symptoms. Tear break-up time test (TBUT) for objective evaluation of tear film stability was also performed. In order to determine the correlation between two subjective and objective tests we calculated Spearmans correlation coefficients.

Results: Results of the correlation between the OSDI questionnaire and TBUT test for the right eye was $r=-0.73$; $p<0.01$ and for the left eye $r=-0.72$; $p<0.01$. Results of the correlation between the Schein questionnaire and TBUT test for the right eye was $r=-0.62$; $p<0.01$ and for the left eye $r=-0.60$; $p<0.01$. A detailed analysis showed that there are no statistically significant differences between the correlations. Both subjective questionnaires were statistically significantly and negatively correlated with the TBUT test, showing that an increase in the results on the OSDI and the Schein questionnaires led to the decreases in the results on the TBUT test.

Conclusion: In patients with schizophrenia, OSDI and Schein questionnaire are equally reliable in the assessment of subjective symptoms of Dry eye disease (DED). Considering that, OSDI is more common in clinical practice and includes questions regarding QOL it is recommended for use in patients with schizophrenia.

Key words: schizophrenia - Schein questionnaire - OSDI questionnaire - dry eye - tear film stability - TBUT

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PSYCHIATRY, SPIRITUALITY AND RELIGION FROM THE PERSPECTIVE OF THE PUBLIC AND GLOBAL MENTAL HEALTH

PSYCHIATRY, SCIENCE AND RELIGION AS PARTNERS IN PROMOTION OF PUBLIC AND GLOBAL MENTAL HEALTH THROUGH SPIRITUALITY

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Our world is still divided into rival nations and religions, with confronting ethics, many examples of pathological religiosity and violent extremism, malignant nationalism, terrorism and many war conflicts across the globe producing and perpetuating huge mental health problems. Current world divided as it is, risks sliding deeper into instability, a "dark anti-Utopia" and possible the end civilization. For some, God represent a primitive concept to interpret the world or delusion while religion is "opium for people". However, healthy spirituality and sound religiosity make us more human and are essential component of individual and public and global mental health. We are basically spiritual beings of faith that gives meaning to our life and makes our life worth of living. Our positive and negative beliefs impact every dimension of our life as well as our mental health. Faith in God helps us taming our selfish brain and monkey mind as well as to change "us versus them" mentality. Ideas of God, spiritual practice and contemplation may changing our brain functions enhance cognition, creativity, wellness, compassion, altruism, communication, peace. Some the most famous scientists claim that the sensation of the mystical is the power of all true science. Psychiatry, religion and science are continually changing. Through creative dialogue and partnership as allies they could significantly contribute to the healing of our divided world as well as to promotion of compassionate society and empathic civilization.

The aim of this paper is to address "humanity's wake-up call" and stress and support mutual understanding and creative cooperation between religions, psychiatry and science for better world in promotion of public and global mental health, research, patient care and education.

Key words: psychiatry - religion - science - spirituality - public & global mental health - empathic civilization

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BROTHERHOOD IN HUMANITY AND GLOBAL MENTAL HEALTH - CHRISTIAN ASPECT

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Brotherhood or fraternity is a very broad term, so its various aspects are described. These are the rhetorical, political, religious and psychological aspects of the fraternity. An interdisciplinary approach with an emphasis on communication theory, especially media ecology, is used. The author gives a short periodical historical review of the brotherhood through the various developmental phases of human consciousness. The thesis is that spiritual guidance is an extremely important element for the quality of growth and realization of brotherhood in humanity, because with every transition of consciousness there is a risk for mental health. However, scientific research shows that spirituality and spiritual development have positive effects on the psychophysical condition of humans. The paper shows that brotherhood can have positive and negative manifestations. The positive manifestation of brotherhood and spiritual friendship in today's global society has an invaluable influence on the mental health of people and provides guidelines for healthy integration and healing of the world burdened with conflicts. The development of civilization of compassion is possible through growing up and ingrowth in mystical Body of Christ through brotherhood.

Key words: brotherhood - mental health - Christology - spiritual guidance - media

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FRATERNITY IN HUMANITY AND GLOBAL MENTAL HELATH - ISLAMIC PERSPECTIVE

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The aim of this paper is to give islamic perspective to the topic mentioned above. Qur'anic verses and Prophet's hadiths will be our source in defining the key words what will further guide us towards the explanation how islam affects, influences and in general contributes to the mental, spiritual, individual and global health. Considering that spiritual health is not only the absence of illness, rather it is soul contention, it is necessary to include observation of the ways for strenthening the faith, what will, consequently, lead to the spiritual well being and, in the end, towards better mental health for the individual and community in general. Since the faith is confirmed through humantiy and fraternity, the observation on the faith's influence on more human picture of mankind is inevitable. Almost every individual strives to find the answer on the question what is the purpose of his/hers life. The faith gives answer on this question and the presence of this awareness (purpose of life) strengthens mental health.

Key words: fraternity in faith and humanity - global mental helath - individual mental health - spirituality

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MENTAL HEALTH AND SPIRITUALITY

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The paper deals with relation of spirituality and religion as well as its influence on mental and spiritual health. It analyzes how people use their beliefs and religion as help in restoring balance necessary for attaining mental health. The paper also points out the significance of spirituality and spiritual peace as the component of mental health and its preservation. The purpose of this paper is to show that religious people deal easier and better with dangers which can damage mental health. That is noticed through longer lifespan and rare illnesses. However, spirituality is not a guarantee that religious persons will not suffer from mental disorders which can result in mental illnesses and their consequences. Illness usually leads to distorted self-image and the environment which surrounds the patient. Being a religious person does not mean being exempt from illness, but religious persons deal easier with illness and going through the healing process.

Key words: health - mental health - spiritual health - belief - religion

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A SPIRIT IS THE ONE THAT REVIVES - THE PRINCIPLES OF SPIRITUAL THERAPY

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Spiritual therapy starts with the belief that a man is an original spiritual being and the human spirit is the strongest source of his power. In fact the spirit is the most powerful and most important factor in a complete healing. Spiritual therapy respects and accepts all the help a person can receive from other types of psychotherapy, provided that those also respect the fundamental principles of theological anthropology and the basic two are: 1) the faith in God - the Creator of all that exists; and 2) the belief in the Biblical teaching that Man was created in the image of God Himself, and that he is therefore free, responsible and transcendent (open to God and absolute values) finding the meaning to his life in realizing the plan God intended for him. Spiritual therapy aims to help a person establish contact with the living God, the source of life and joy. The human spirit receives its being from God and if this connection is disturbed in any way, the person in whole will feel those harmful consequences. When a human spirit returns to God and establishes an authentic communion with Him through faith, hope and love, the person flourishes on all levels of its personality. The author analysis mental illnesses and proposes successful therapy in order for a healthy mind through the soul and its impact on the body to confirm the well-known saying: "A healthy mind in a healthy body". The basic principles of spiritual therapy brought in

this text are: 1) Residing in peace with God, other creations and yourself; 2) Activate main abilities of the spirit: faith, hope and love within yourself; 3) Live in the liberating truth; 4) Accept and devise in faith the inevitable suffering; 5) Strengthen the power of the spirit through trust in God, prayer and sacramental life.

Key words: diseases of the spirit - spiritual therapy - faith - hope - love - God - health - sacraments

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THE PHENOMENON OF MIRACULOUS HEALING THROUGH SUGGESTION IN THE CONTEXT OF FAITH AND MAGIC - PSYCHOLOGICAL-THEOLOGICAL APPROACH

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The example of the practices of three eighteenth and nineteenth century physicians, the author points out the importance of the profile of healers whose role (suggestion) in the healing process was more effective than their controversial methods. The following represents the impact mechanisms of suggestion (placebo effect) on the amazing healing phenomenon, indicating the possibility of the fatal consequences of suggestion in the context of (black) magic (nocebo effect), corroborating the facts stated. It warns of the frequent confusion of the fields of psychology and religion (the resuscitation of Mesalianism, the ancient misconception of confusing authentic spiritual experiences with psychological states), which has become the dominant feature of New Age self-help literature and psychology. It concludes with Christian miracle theology and features of Christian prayer for healing, suggesting guidelines useful for the pastoral and therapeutic work that has been derived from this research.

Key words: faith - magic - suggestion - miracle - healing

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PSYCHOANALYTIC PARADIGM AND ITS MEANING FOR CHRISTIAN ANTHROPOLOGY

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This paper explores the contribution of the psychoanalytic paradigm to Christian anthropology. In three thematic units, the author explores how certain classical psychoanalytic phenomena and concepts can contribute to a better understanding of growth and development in Christian maturity.

In the first part of the article, the author interprets the instance of the unconscious within the psychic apparatus, with particular emphasis on the analysis of untapped potentials, repressed abilities, and conflicts that can obstruct growth in evangelical values.

Since the imbalanced psychic structure can affect the spiritual dimension and impede its authentic growth and development, the contribution of psychoanalytic theory, which enters into deep dynamic and motivational categories, has a significant role in pastoral activities. Therefore, the second part of the paper focuses on the differential picture of the application and understanding of the psychoanalytic model of the unconscious in the pastoral context.

In the third part, from the perspective of Christian anthropology, the author elaborates through the analysis and presentation of specific clinical cases how psychological maturation, which inevitably leads to a re-examination of motivational forces, can prepare the ground for a "dark night of the soul", after which a person, with the action of grace, can experience a qualitative leap of faith, and turn a psychological struggle into a spiritual struggle.

In the concluding part, the author emphasizes the importance of integrating the natural and the supernatural dimension, and concludes that the psychoanalytic model and Christian anthropology should not be viewed from an exclusive „or-or“ perspective, or through a model of identification, but rather that these two autonomous areas should be viewed in a dialogical and cooperative relationship.

Key words: psychoanalytic paradigm - Christian anthropology - psychological and spiritual struggle - dialogue - integration

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SPIRITUALITY AND PSYCHOLOGY IN THE FACE OF SUFFERING AND ILLNESS

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This contribution aims to explore the main aspects and concerns due to suffering and illness in psychological and spiritual terms. It will be given to everyone in life to make experiences of suffering and sickness - even if for the latter not necessarily in the first person -, dramas and fundamental faces of humanity inaggrabili of our earthly pilgrimage, despite the narcissism of a society that tends to anesthetize every little human pain and suffering. In general one is never fully equipped to face suffering and illness, especially when it involves a lot of pain, and basically all possible declensions to understand them fail, at least partially, the enterprise. Without any pretension of resolving the issue, occasionally bringing it up may offer or remind us of the existence of some possibility of meaning and significance, thus contributing to greater understanding and acceptance. Appealing to the Bible and to Christ himself, and particularly to some extremely significant experiences, including the figure of Job and the experience of V. Frankl, the "nonsense" of suffering and illness could take on an unthought out meaning and face, and encounter a healing that goes beyond the purely, though important, corporal. The revisitation of the psychological and spiritual dimensions, the latter not always easily accepted, sometimes completely rejected, could thus become weapons and support in the common and often daily intrusiveness of suffering and illness. Thus, after a brief anthropological passage, these will be addressed in their main psychological and spiritual dimensions, in order to find possible ways of meaning, which often seemingly or superficially seems impossible to exist.

Key words: pain - illness - meaning - suffering - spiritual

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SPIRITUAL PRINCIPLES OF ALCOHOLICS ANONYMOUS

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Alcoholics Anonymous is, according to the Program's basic documents, a spiritual program - especially regarding Steps 2-3, 5-7, and 11-12. This paper reviews the history of the Program with emphasis on its spiritual background, as well as on the roots of the spiritual side of the program, and showing the spiritual accents in the Big Book of Alcoholics Anonymous. The paper also considers the Christian background of the movement and, more broadly, explores the connection of AA founders William (Bill) Wilson and Dr. Robert (Bob) Smith with several Catholic people, such as Edward (Ed) Dowling, SJ, and John C. Ford, SJ, and indicates some points of contact between the Program and Ignatian spirituality. The paper illustrates the pioneering role of the Alcoholics Anonymous program in integrating spirituality into the process of recovery from and treatment of addictions, an integration that just recently has been embraced by modern psychotherapy and psychiatry. The paper shows the theoretical and spiritual underpinnings of the Program in the religious context. The paper illustrates the orientation of the Program in assisting addicts to integrate into their recovery their own spirituality, a clearer image of God, and personal spiritual and religious progress.

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WHY DOES GOD ALLOW SUFFERING? REFLECTION ABOUT HUMAN AND CHRISTIAN SUFFERING IN THE THOUGHT OF KARL RAHNER

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The article deals with the problem of suffering in the world based on reflection of Karl Rahner. He observes the problem through the perspective of traditional points of view and based on the same, he puts the question about God's allowing suffering in the world and notices the inadequacy in answers given by traditional points of view. Suffering presents itself as a natural companion to the human existence from the beginning till present times. In this respect Rahner observes suffering as the consequence of created imperfect human freedom, although it is true grace given to human beings. Our author observes suffering

as a test which serves human being as a means for growth in love to God and neighbour. He reflects on suffering as an act of human person being directed to others, and even more, as a certain attitude of human direction towards eternal life. Rahner agrees with every answer that traditional points of view offer but also finds a space for further development in giving an answer to the question: Why God allows that we suffer? At the end he notices that incomprehensibility of presence of suffering in our life is in fact an acceptance of God's incomprehensibility (cf. K. Rahner, *Esperienza*, pp. 175-191) and concludes that we do not have an answer which would be satisfying for all people in every period of time. He also concludes that in human life suffering has a therapeutic role and gives a deeper meaning to human existence.

Key words: God - man - free will - sin - suffering - eternal life

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MIRACULOUS HEALING IN JUDAISM

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This paper explores and discusses the miraculous powers attributed to certain figures in Judaism, a power to revive or kill, heal, or harm. This idea already appears in the Bible, but also in many places all over the Talmud and rabbinic literature. Sometimes, the action performed is passive, the sages do not ask for it directly, while sometimes it is active and deliberate.

Since Judaism is known for its attitude to witchcraft, which is explicitly prohibited in the Torah, it is clear that such powers are not based on magic. If so, what forces are involved and what is their origin?

In this paper, we attempt to answer these questions and discuss other issues, such as the relationship between medicine and Jewish law, the attitude of Judaism toward medical healing and intervention in God's affairs, healing and the power of prayer and healing as a fulfillment of the obligation to save lives. The main part of this paper examines miraculous healings in the Bible, in the Talmud and during the rabbinic period. The last part investigates the source of the righteous metaphysical power and the attitude of Judaism regarding sorcery.

Finally, in the end of this paper we attempt to define the appropriate attitude toward those who seek blessings for medical healing from rabbis.

Key words: magic - sorcery - miraculous healing - medicine - Torah - Talmud - rabbis

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JESUS'S MIRACULOUS HEALINGS IN MT 8:1-17 SIGNIFICANCE AND ROLE

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Jesus's messianic identity is the central topic of the Gospel of Matthew, where the author presents the Messiah of Words and the Messiah of Actions in an original way. Namely, after chapters 5 - 7, in which Matthew writes about the Messiah of Words who restores the original meaning of the Law in the Sermon on the Mount, in chapters 8 - 9, the Evangelist presents not only Jesus's messianic identity, but also the model of his deep and fundamental messianism, which is evident in the power of miraculous healing, as well as the powerlessness of the servant, the authority of the call to follow in his footsteps, and the charity toward the poor. Therefore, we are addressing Jesus's miraculous healings, which demonstrate not only Jesus's messianic identity, but also the specific character of his »to be the Messiah«, i.e. the special significance and role of his actions that lead to salvation.

In Mt 8:1-17, the Evangelist presents three miraculous healings by Jesus: The healing of the leper, the healing of the Roman centurion's son, and the healing of Peter's mother-in-law, which represent three vulnerable and marginalised groups: lepers, heathens, and women. Matthew ends the account of those three miraculous healings with a summary about Jesus's exorcisms and healings of many sick people, according to the words of the prophet Isaiah: »He himself took our weaknesses and carried our diseases«. In that specific quote, Matthew offers the key for the interpretation of Jesus's miraculous healings to the readers. Unlike the suffering servant from the book of the prophet Isaiah, Jesus does not accept the weak-

nesses of man onto himself; he instead removes them through his power as the saviour. By using the quote from the book of the prophet Isaiah 53:4 freely, Matthew does not attribute it to the suffering of Jesus, but instead to his miraculous healings. By replacing the noun hamartias »sins«, with the noun hasteneias »weaknesses«, and the verb ferô »to bear«, with the verb lambanô »to take away«, Matthew recognises the Messiah in Jesus, who removes the weaknesses and diseases of men in his power as the saviour; a Messiah who is in solidarity with the weaknesses of men; a Messiah who heals and saves with his solidarity, by giving the weakest and the marginalised back the dignity of the sons of God. Therefore, Matthew recognises the messianic actions in Jesus's miraculous healings, which is realised in the suffering of Christ, which is the obedience to the intent of the God Saviour and solidarity with the rejected: lepers, heathens, and women.

Key words: Matthew - miraculous healing - Messiah - solidarity - salvation

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"THERAPEUTIC EFFECTS" OF THE SACRAMENT OF ANOINTMENT

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The first part of this paper provides a theological and anthropological insight into Christian understanding of the relations between illness, sin, death and Christian salvation idea. The second part of the paper explains the foundation of the present sacramental Church practice with regard to the Jesus's relation to the sick and with regard to the actions taken by the Apostolic Church, as testified in the New Testament, especially in the Epistle of James (Jam 5, 14-15) and as expressed in the teaching of the Church. The third part of the paper emphasizes the therapeutic significance of the Sacrament of Anointing which is analysed through the speech on the sacrament effects which are: relief and spiritual strengthening, forgiveness of sins and preparation for death. In order to realize this "sacramental therapy" in pastoral practice, a certain type of diagnosis of the patient's spiritual condition is needed. Suitable preparation for the sacramental therapy, unified with faith and prayers, is needed as well.

Key words: patient anointing - spiritual relief and care - forgiveness of sins - preparation for death

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FAITH IN HAGIOTHERAPY

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Background: If vegetative life carries a vegetative soul, and rational life a rational soul, what does spiritual life carry? What are the differences between a spiritual and rational soul? Can a spiritual soul somehow touch and see, can it be subjected to scientific experiments? What is hagiotherapy? Why is lack of faith a defect in spiritual terms? What happens in people who believe? The aim of this paper is to answer these questions and also explain spiritual abilities or power - faith in terms of hagiotherapy, how it affects a person's life and work, and also society.

Cases and methods: We will be relying on the most important and recently published scientific books from the founder of hagiotherapy, Tomislav Ivančić, PhD, titled Hagiotherapy Encountering Man, Man's Total Woundedness, Hagiotherapeutic Anthropology, but also an older booklet titled "Spiritual Life in the Prayer and Word Community".

Results: We will discover the meaning of hagiotherapy in this paper - therapy for that part of a person which has not been previously therapeutically investigated and which poses a challenge to the contemporary world. We have found that the spiritual soul, specifically a person's specificity, carries in it a mechanism affecting the brain's functioning, and also a person's complete psychophysical existence. The investigation reveals that a person who has faith, where faith is a power or ability of the spiritual soul in terms of hagiotherapy, acquires an amazing perspective, develops entirely and expects goodness, creates projects for the future and is directed with great reverence to creating a spiritual reality in the psychophysical world. Not believing means being broken, void of strength and will power, tied to the "now", and depressed.

Conclusion: Based on this research, it seems that hagiotherapy offers new perspectives in resolving the difficulties of human existence, on a personal and global level. The person who believes, always moves

forward, discovers new worlds, is ahead of their time and a leader of their generation. Hagiotherapy evidently wants to be a return to a person's true values and a proven path towards a good future.

Key words: hagiotherapy essence - person/man - spiritual soul - faith

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GRATITUDE, RELIGIOUSNESS AND WELL-BEING

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Background: Previous researches have identified the positive effects of gratitude on happiness and well-being. It has been found that spirituality can enhance gratitude and well-being. Our study aimed to examine the link between gratitude and subjective well-being among religious and non-religious people. Furthermore we tested if a 4-week long gratitude diary has a positive effect on subjective well-being.

Subjects and methods: In our online, qualitative investigation the sample consisted of 54 males and 169 females (mean age = 39.13, SD=15.90). 54.1% of respondents regarded themselves as "religious with a given religion", 24.8% as "religious on my own way" and 21.2% as "non-religious". The experimental group (leading a gratitude diary for 4 weeks) with 103 individuals and a control group with 120 individuals with no differences in age, gender and religiousness. We compared the questionnaires' results (filled out both before and after the intervention) of the experimental group (n=103) with the results of the control group (n=120) similarly filled out on two different occasions. We applied Gratitude Resentment and Appreciation Test and Subjective Well-being Scale.

Results: Our results showed that religious people showed elevated level of gratitude ($F(2, 219)=23.66$, $p<0.001$) but same well-being ($F(2, 219)=1.97$, $p=0.142$) compared to non-religious groups. In the experiment group the gratitude and the subjective well-being both increased ($p<0.01$), and there was no significant changes in control group. 2x2 ANOVA showed significant interaction effect (Subjective well-being: $F(1, 221)=13.32$, $p<0.001$); Gratitude: $F(1, 221)=12.43$, $p<0.001$).

Conclusion: Religiousness is linked to higher gratitude and an increase in gratitude can result in an increase in subjective well-being. The importance of gratitude diary both among religious and non-religious people will be discussed.

Key words: religious - non-religious - gratitude - gratitude diary - subjective-well-being

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RELATIONS BETWEEN GOD-IMAGES AND EARLY MALADAPTIVE SCHEMAS

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Introduction: Research has shown that early attachment is linked to the attachment to God. We aimed to test if early maladaptive schemas (Young & Brown 1994) can be linked to loving and controlling God images. We aimed to examine relations between the Image of God, religiousness, and Defectiveness and Punitiveness Schema.

Method: We administered the Loving and Controlling God Scale (LCGS, Benson & Spilka 1973), two subscales (Defectiveness and Punitiveness) of Young Schema Questionnaire (Young & Brown 1994), and the INSPIRIT Religiousness Scale (Index of Core Spiritual Experience, Kass et al. 1991). Our sample consisted of 181 individuals (mean age 32.01, SD=12.75). We applied the rank correlations.

Results: Our results revealed that religiousness was not linked to either schema, but Loving GodImage was significantly (and negatively) linked to Punitiveness ($\rho=-0.230$, $p=0.003$), and Controlling God-Image

was positively and significantly linked to Defectiveness ($\rho=0.170$, $p=0.022$) and Punitiveness as well ($\rho=0.265$, $p=0.001$). Neural network modeling pointed out that only Controlling God-Image is directly linked to Punitiveness. Discussion: Early maladaptive schema of punitiveness is significantly linked to Controlling GodImage. Therapeutic interventions that deal with the understanding image of God must take into consideration the link to early experiences.

Key words: early maladaptive schemas - God images - religiousness

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RELATIONSHIP BETWEEN PERSONALITY TRAITS AND THE INNER STRENGTHS

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Background: Zuckerman-Kuhlman-Aluja Personality questionnaire (ZKA-PQ) is a 200-item questionnaire measuring five personality factors (activity, aggression, extraversion, neuroticism, and sensation seeking). The inner strength (from the ten perfections based on Theravada Buddhism) deems positive character, which includes truthfulness, perseverance, wisdom, generosity, morality (five precepts), mindfulness and meditation, patience and endurance, equanimity, determination, and loving kindness measured by the strength-based inventory (SBI). Our aim was to unfold the relationship between ZKA and SBI.

Methods: A total of 121 participants, 91.7 % female, average aged of 22.9 (SD, 6.7), 95.9% live alone, and 76% bachelor level completed the neuroticism scale of ZKA-PQ. Equanimity scale of Strengthbased inventory. Pearson correlation and person-oriented methodology (model-based clustering) were conducted for analysis.

Results: We found the positive correlations between extraversion and perseverance, generosity and loving kindness ($r=0.35$, $p<0.01$, $r=0.23$, $p<0.05$, and $r=0.19$, $p<0.05$, respectively), likewise activity with perseverance and determination ($r=0.24$, $p<0.01$, $r=0.22$, $p<0.05$). Neuroticism showed to have negative relationship with perseverance, wisdom, morality, equanimity, and determination ($r=-0.32$, $p<0.01$, $r=-0.19$, $p<0.05$, $r=-0.23$, $p<0.05$, $r=-0.28$, $p<0.01$, respectively). Similar findings were found in aggressiveness but more with generosity and patience, and loving kindness ($r=-0.20$, $p<0.05$, $r=-0.43$, $p<0.01$, $r=-0.35$, $p<0.01$, respectively). Sensation seeking was also negatively associated with wisdom, morality, and determination ($r=-0.31$, $p<0.05$, $r=-0.21$, $p<0.05$, respectively). Model-based clustering identified four typical personality profiles (overcontrolled: 15.7%, neurotic undercontrolled: 32.2%, resilient: 37.2%, impulsive sensation seeker: 14.9%). Significant differences in SBI scores have been found among clusters [$F(3,117) = 9.639$, $p<0.001$], with highest SBI scores in the resilient profile with high extraversion and activity and low sensation seeking, aggression and neuroticism).

Conclusion: Negative traits are, as expected, conversely related with strength, while positive traits (extraversion and activity) are positively related with strength. Sensation seeking, based on inner strength-based theory, seems to be placed on the opposite side of the strength. Further investigation about the role of these relationships especially on other interested outcomes such as depression is encouraged.

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THE ROLE OF RELIGIOSITY IN COPING WITH INFERTILITY TREATMENT

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Background: To analyze relationship between religiosity and psychological distress in woman undergoing in vitro fertilization.

Subjects and methods: The study was based on 103 woman engaged in a fertility treatment with in vitro fertilization. The questionnaires (Religiosity Questionnaire, Clinical Outcomes in Routine Evaluation - Outcome Measure, and socio-demographic questionnaire) were administered by investigators.

Results: The results suggest that the level of religiosity significantly differs participants in terms of problems ($F=1.92$, $p=0.01$), functioning ($F=1.79$, $p=0.03$), risk behaviors ($F=3.02$, $p=0.00$), anxiety ($F=1.72$, $p=0.03$) and physical problems ($F=1.82$, $p=0.02$). There were no significant differences in subjective wellbeing, depression and traumatization according to religiosity.

Conclusion: Results of a present study point out that religiosity could be considered as a protective factor for psychological distress.

Key words: in vitro fertilization - religiosity - psychological distress

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ISLAMIC APPROACH TO THE TREATMENT OF THE FEAR OF DEATH

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Although the question of death and the fear of it is one of the oldest questions man has dealt with, we have no discussions from ancient times about fear in an existential sense. The thematic approach to this phenomenon in Western philosophy and theology occurs in Hellenism and in the Christian religion, but it gains its full meaning only in the philosophies of existence. The famous Islamic philosopher and physician Ibn Sina, better known in the West as Avicenna (980-1037), wrote *A Treatise on the Cure for the Fear of Death and the Treatment of Anxiety Caused by It* more than nine centuries ago. Relying on Islamic teachings, Ibn Sina made a comprehensive analysis of this problem in the *Treatise*, giving precise instructions on how to deal with people who have mental impediments due to the fear of death, which in modern psychiatry are called anxiety and fear-related disorders. In this paper, a brief analysis of the *Treatise* is made in order to point out possible guidelines in the approach to the problem of fear of death, which in modern psychiatry, psychopathology and psychotherapy is obviously not given enough attention.

Keywords: fear of death - anxiety - Ibn Sina - Avicenna - psychiatry - psychotherapy

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ISLAMIC APPROACH TO THE PSYCHOTRAUMA: ANIMATION, GROWTH AND TRANSFORMATION

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The paper gives an approximate significance of religion in the mental health of believers. Islamic views of the soul are presented, as a basic principle of human life. The correct, beneficial effects in the attitudes and behavior of individuals towards their souls are also shown. It is also shown what can negatively affect the soul, which creates a basis for the disruption of mental well-being, which causes a mental disorder or mental illness. The paper focused on Islam, as a complete worldview based on the theory of the Revelation of the Qur'an and the practices of God's Messenger, Muhammad, peace be upon him (p.b.u.h.) through which the Revelation was given to all mankind. The basic Islamic theoretical and practical principles and their beneficial protective and healing effect on the mental, psychosocial and psychosomatic well-being of the individual and the community are enumerated and briefly explained when the daily routine of Islamic living is properly applied. The paper presents the basic Islamic principles that help people who suffer sudden, short-term or long-term troubles and catastrophes, because of which psychological trauma and its acute and chronic consequences are formed, which makes the treatment of traumatized faster, and more efficient.

Key words: mental health - Islam - psychotrauma - growth - transformation

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A TREATISE OF THE ISLAMIC PHILOSOPHER IBN SINA (AVICENNA) ON THE FEAR OF DEATH AND THE TREATMENT OF ANXIETY CAUSED BY IT

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Although the issue of death and fear of it is one of the oldest issues that man has dealt with, modern secular psychiatry today, as before, does not pay enough attention to the phenomenon of fear of death. The famous Islamic philosopher and physician Ibn Sina, better known in the West as Avicenna (980-1037), wrote *A Treatise on the Cure for the Fear of Death and the Treatment of Anxiety Caused by It* ten centuries ago. Bosnian Islamic scholar Mehmed Handžić translated this treatise from Arabic into Bosnian 80 years ago. This paper provides basic data and a summary of this translation with a focus on the analysis of key terms from the Arabic language used by the author in the original paper from the perspective of today's psychiatric terminology and then its integral translation into English. In addition to its historical significance, we believe that this discussion has its practical significance today, so we hope that this paper could encourage further fruitful discussions in professional circles dealing with this topic.

Keywords: fear of death, anxiety, Ibn Sina, Avicenna, psychiatry, psychotherapy

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BEYOND PLACEBO: PRAYER EXPLOITING SYNCHRONICITIES TO BENEFIT HEALTH

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According to the law of attraction the Universe works with us to bring us what we desire. However, there is commonly a gap between what our conscious mind desires and what our subconscious mind attracts and brings into our lives. Prayer makes us feel connected to God and help us to attract what is good for us. We invite God in to help us create physical, psychological, social and spiritual well-being. Placebo reactors tend to be individuals who: have a predisposition to be cured; are motivated to regain health; seek out medical services; agree to medical procedures, and experience empowerment through rituals that provide a direct experience or being in contact with culturally-recognized healing influences. God wants us to be happy and healthy and to free us from pain and suffering. Synchronicity refers to the occurrence of two parallel events that are connected by meaning and not by cause, which have been described in association with prayer. According to the principle of similarity or symmetry, a kind of "law of attraction", in a holographic universe one situation attracts a similar situation. In medicine this phenomenon may be useful to aid healing. If we form a mental picture or simulate the situation of being cured, the principle of similarity will occur and draw in our reality the wanted outcome. If we connect this process with prayer, it will be more likely that we can attract wanted similarities into our lives. Praying can attract healing by promoting synchronicities, and we can conclude that prayer does not work simply via the placebo reaction but also in a transpersonal, non-local manner by facilitating convenient synchronicities

Key words: the law of attraction- prayer - placebo - rituals - synchronicity

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PSYCHO-ONCOLOGY AND SPIRITUALITY

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The prevalence of malignant diseases is increasing, and, although a number of oncological treatments lead to high survival rates, in order for a person to cope with the challenges of a serious diagnosis, mental health should be preserved in the first place. Psycho-oncology has recognized the importance of mental health in the treatment of carcinoma, and numerous clinical studies have stressed the importance of distinguishing normal emotional reactions from mental disorders. A task of modern medicine is to be personality-centred and participatory, taking into account the patient's physical, psychological and spiritual

health. The psycho-oncological approach is a multidisciplinary one, as modern medicine recognizes more and more the role of spirituality in the treatment and recovery from various pathological conditions. Spirituality is the adaptive capability of intelligent beings to retain the will for life in spite of adversities and awareness of the imminence of death. The struggle with this life-threatening disease requires an adaptation to a new life situation characterized by changed routines of everyday life and dynamics of personal relationships. Faced with a challenge of malignant disease people are nevertheless able to react with positive personality changes, which leads them to a more meaningful and substantial life. Malignant disease can represent an opportunity for spiritual growth, a dimension often neglected by contemporary lifestyles. A healthy spiritual life presumes spiritual guidance in recognizing the authentic values and purpose of life, and it can empower us in times of crisis, such as having to face a malignant condition.

Religion, as an important constituent part of spirituality, can offer the believer a meaning of suffering and thus turn the disease into an opportunity for self-knowledge and development of a more mature spirituality. Christian spirituality can represent a path which helps an individual to cope with malignant disease. Through the practice of religious life (prayer, Mass, contemplating the Gospel, etc.) a Christian can mitigate feelings of fear, suffering, pain and gain help in achieving inner peace. Religiosity as a key ingredient of spirituality can help a person come to terms with malignant disease and facilitate a favourable treatment outcome. Clinical studies confirm that spirituality and religiosity are able to reduce anxiety and depression in patients with malignant disease (Chaar et al. 2018). Also, highly pronounced religiosity has been shown to reduce the incidence of depression in patients with breast carcinoma (Margetić et al. 2005). In Christian spirituality, the goal is not only to accept our feelings, wounds and illnesses by growing in manhood and discovering inner wealth, but also to acquire the experience of faith precisely where our human ability stops, thus opening up our relationship with God at the point where we feel entirely alone (Grun & Dufner 2004).

“Psycho-oncology and spirituality” is an interdisciplinary field which opens up the way to a personalized approach, envisioning the patient as a whole and encouraging him to actively participate in the treatment process, thus achieving spiritual growth and a higher quality of life.

With the aim of educating and sensitising students in accordance with current medical trends, the Medical Faculty of the University of Rijeka has introduced in 2019 an elective course called “Psycho-oncology and spirituality”. The goal of this course is to enable students to identify emotional reactions to the disease in oncological patients, recognize parallel mental comorbidities, and finally, clarify the need for a multidisciplinary approach involving an oncologist, a psychiatrist and a psychotherapist, as well as to elucidate the importance of spirituality in the process of oncological treatment. Through lectures and exercises, students familiarize themselves with theory, clinical studies as well as clinical practice relating to interconnectedness of oncological pathology with certain psychiatric disorders, along with acquiring an all-encompassing view of spirituality, as seen from several perspectives (biological, theoretical principles, etc.). Students are also taught to observe the religious life of patients, in order to be able to understand, appreciate and encourage patients to affirm their faith with the aim of achieving therapeutic goals.

Key words: psycho-oncology - spirituality - religion

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COMPASSION: AN EXPRESSION OF CHARITY IN TREATMENT OF PHYSICAL AND MENTAL ILLNESS IN INDIVIDUALS AND COMMUNITIES

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This article discusses the notion of compassion using interdisciplinary approach - theological and psychological - providing a brief development of the notion, as well as distinct image in relation to other, similar notions. Seeing that compassion contributes to psychological, spiritual, as well as social health, the article also discusses the importance of compassion in life of individuals and communities. Compassion is also one of the core notions in world religions, and it is key to making communication between religions possible, and equally importantly, opens up a dialogue between religion and various scientific approaches. This article mostly refers to the notion of compassion as described in the Bible, namely New Testament, from aspect of Christianity. Still, in a smaller extent, we researched how Hinduism, Buddhism, Islam, and

Judaism perceive and describe compassion. Development of compassion in personal and social relations greatly helps in achieving a healthier society, both for individuals and for the whole communities.

Key words: compassion - suffering - psychology - theology - religion

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CONNECTION BETWEEN RELIGIOSITY AND ATTITUDES TOWARDS SEXUALITY IN MONTENEGRO

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The aim of the study was to examine the relationship between religiosity and liberal versus conservative attitudes about sex. The study involved 1287 residents of Montenegro over the age of 18, of which 848 women and 439 men. They completed the scale for examining the liberality of attitudes about sex, which the authors of the article compiled for the purposes of this research. Respondents declared their religiosity as believers, agnostics or atheists, so there were 957 believers, 171 atheists and 159 agnostics in the sample. We found that agnostics are the most liberal in terms of attitudes about sex, then atheists and then believers. In addition to religiosity, we examined the connection of attitudes about sex with gender, age, and education level. More educated respondents proved to be more liberal than less educated ones. The women in our sample proved to be more conservative than the men. We did not confirm the assumption that younger respondents would be more liberal than older ones, which can be partly explained by the numerical inequality of age groups. The knowledge we have gained in this study can be of great use primarily as guidelines for further research work, and can also be implemented in various educational programs.

Key words: religion - sex - education - psychology - sexuality

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THE RELATIONSHIP BETWEEN EUDAIMONIA, PSYCHOLOGICAL NEEDS AND MENTAL HEALTH

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Eudaimonia means fulfilling our unique potential as human beings, not only in terms of happiness but also in virtue, morality, and meaningful life. The aim of this study was to investigate the relationship between eudaimonia and mental health and to look into the moderating role of psychological needs (autonomy, relatedness, and competence) in this relationship. In total 340 participants took part in this study, of which 124 (36.5%) males and 216 (63.5%) females. Global mental health, positive and negative mental health were measured with the Mental Health Inventory. Hedonic and Eudaimonic Motives for Activities was used to determine eudaimonia, while three psychological needs were investigated with the Basic Psychological Needs Scale. Hierarchical regression analyses and analyses of variance were used to analyze the data. The results indicate that eudaimonia significantly contributes to global mental health ($R^2=0.08$, $p<0.001$), negative mental health ($R^2=0.07$, $p<0.01$) and positive mental health ($R^2=0.09$, $p<0.0005$). Of all psychological needs, relatedness was shown to moderate the relationship between eudaimonia and global mental health ($R^2=0.47$, $p<0.05$) as well as the relationship between eudaimonia and negative mental health ($R^2=0.40$, $p<0.05$). The findings indicate that eudaimonia positively affects all aspects of mental health and that relatedness amplifies the effects of eudaimonia on global and negative mental health.

Key words: eudaimonia - mental health - relatedness

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RELIGIOUSNESS, ANXIETY AND DEPRESSION IN PATIENTS WITH GLAUCOMA, AGE-RELATED MACULAR DEGENERATION AND DIABETIC RETINOPATHY

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Background: Many chronic medical conditions such as glaucoma, senile macular degeneration and diabetic retinopathy are further complicated by emotional and psychological disorders. Religiousness represents a part of a social culture and has a significant role in the prevention of mental difficulties of the patients, especially those belonging to older population. The aim of this study was to investigate the connection between religiousness, anxiety, and depression in patients with glaucoma, age-related macular degeneration and diabetic retinopathy and to test their connection related to different diagnosis.

Subjects and methods: This cross-sectional study included 163 patients divided into three groups (glaucoma group, senile macular degeneration group and diabetic retinopathy group). Respondents voluntarily agreed to participate in the study and with assistance they fully completed the Scale of Religiousness, Hospital Anxiety and Depression Scale, General Health Questionnaire and demographic information (age, gender, education, employment and marital status).

Results: The results showed noticeable religiosity of the respondents ($M=18.31$, $SD=5.28$), but also the presence of anxiety ($M=7.55$, $SD=3.73$), especially in patients with glaucoma, as well as impaired mental health in AMD patients ($M=19.56$, $SD=4.14$). No differences were found in the severity of anxiety, depression, general health and religiosity between groups, but the presence of depression in subjects with age-related macular degeneration significantly affects the level of religiosity ($p=0.032$).

Conclusion: These results unequivocally point to the need for further research and raising awareness of all health professionals about the importance of a holistic approach to the patient regardless of his diagnosis in order to identify the possible effective ways to deal with chronic disease considering all levels of patient's needs.

Key words: glaucoma - age-related macular degeneration - diabetic retinopathy - religion, anxiety - depression

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EXEMPLARISM AND SPIRITUALITY

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In the age of pluralism and efficiency, it is less and less common in everyday life, even in wider social circles, to talk about the right upbringing, about values, and then about examples of good practice - that is, about role models. While a person presents himself to us as a role model, we recognize in him a call to inherit a certain value that he ideally-typically lives. In this sense, concrete role models, primarily people who have lived from deep spirituality (for example, saints!), contribute to the healthy development of personality and understanding of ethics.

Key words: ethics, spirituality - role model - ideal - values - exemplarism - upbringing

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COMORBIDITY, RESILIENCE, AND EPIGENETICS IN PSYCHIATRY FROM THE PERSPECTIVE OF PREDICTIVE, PREVENTIVE AND PERSON-CENTERED MEDICINE

COMORBIDITIES AND SYNDEMICS IN THE COVID-19 AGE: CHALLENGES AND OPPORTUNITIES FOR BRINGING SEPARATED BRANCHES OF MEDICINE CLOSER TO EACH OTHER

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The Corona Virus Disease 2019 (COVID-19) as a unique disaster has stressed the extreme importance of the three challenging issues for medicine, society and humanity in general: comorbidity, pandemic and syndemic. There are many reasons why the study of comorbidities and syndemics of COVID-19 is of great importance for researchers, clinicians and health policy makers who are responsible for health care organization and funding in a bid to develop more effective and efficient prevention and treatment. Thinking about COVID-19 through a syndemics concept and taking biological, psychological, social and spiritual dimensions into account, physicians could be more effective in clinical practice and community-based interventions. The outcome of SARS-CoV-2 infection is determined by the virus-host interaction, with pathogenicity of SARS-CoV-2 being related to the presence of comorbid diseases. The risk for severe COVID-19 clinical manifestations and death increases with age of patients and comorbidity. General mechanisms of multi-system dysfunction and multi-organ damage reported in COVID-19 are probably related to ubiquitous expression of angiotensin-converting-enzyme-2 (ACE2) in many tissues and its important role in the renin-angiotensin-aldosterone system (RAAS) functioning. Physicians all over the world should be aware of COVID-19 related comorbidities, multisystem disorders and syndemics, as well as treatment and preventive strategies. COVID-19 age is a right time to reconsider the state of science and practice in comorbidity medicine field from the both epistemological and treatment perspective. Comorbidities and multimorbidities are indifferent to medical specializations, so the integrative and complementary medicine is an imperative in the both education and practice. Shifting the paradigm from vertical and mono-morbid interventions to comorbidity, multimorbidity and multi-system disease approaches enhances effectiveness and efficiency of human resources utilization. The aim of this review is to summarize the theoretical concepts and clinical experience and research regarding comorbidity in general, and specifically related to the COVID-19 pandemic, syndemics and infodemic.

Key words: comorbidity - multimorbidity - epigenetics - SARS-CoV-2 - COVID-19 - multi-system disorders - diseases interactions - syndemics

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COMORBIDITY FROM A NEUROPSYCHIATRIC PERSPECTIVE

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Comorbidity in neurology and psychiatry involves the onset of a mental illness with the simultaneous presence of a neurological disorder or other illness. The degree of comorbidity of mental and neurological disorders is unexpectedly high. In addition to the direct connection and simultaneous occurrence of mental and neurological illness, the indirect impact of mental illness on the occurrence of neurological problems is even more significant. This link is realized through the influence of mental illness on risk factors for the development of cerebrovascular and cardiovascular diseases. Their incidence is higher in the psychiatric population than in the general population. Numerous studies have confirmed that risk factors for cerebrovascular disease (hypertension, hyperlipidemia, diabetes mellitus, etc.) are more common among patients with mental disorders than in the general population. Also, research shows that patients with mental disorders are less frequently controlled, have less control over risk factors, and that numerous comorbidities are detected later or remain undetected. Given that cerebrovascular and cardiovascular diseases represent one of the most important public health and socioeconomic problems of today, both in the world and in Croatia, this problem should not remain in the shadow.

Key words: comorbidity - neurological diseases - mental disorders - epidemiology - somatic disorders

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EMOTIONAL STRESS IN MYASTHENIA GRAVIS- THE BRIDGE BETWEEN THYMUS AND HEART

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Clinical and scientific evidence points towards the connection between emotional stress and immunity. This review article explains the association of immunological response and stress with emphasis on a specific autoimmune disease myasthenia gravis (MG) and its connection with broken heart syndrome. Predisposing genetic and environmental factors as well as sex hormones have a role in MG induction. Research has demonstrated that stress can increase or suppress immunological response depending on different genetic and epigenetic characteristics. Effect of glucocorticoids and catecholamines on immunological processes can differ in systemic and local response. Experimental model of myasthenia gravis has shown that increased share of Th1 and Th17 cells contributes to MG development while increased share of Th2 and regulatory T cells mitigates it. Takotsubo cardiomyopathy (TTC) is among most frequent cardiological complications of myasthenia gravis and is usually associated with thymoma or thymic hyperplasia. Although there isn't an unambiguous explanation of TTC pathophysiological mechanism, evidence points to the excessive sympathetic and catecholaminergic stimulation. Takotsubo cardiomyopathy is dominantly described in women which points to the importance of the role sex hormones have in TTC during MG or myasthenic crisis. We emphasize the significance of interdisciplinary approach in treating myasthenia gravis patients which includes evaluation and teaching of stress management techniques.

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COMORBIDITIES IN PATIENTS WITH MULTIPLE SCLEROSIS IN CROATIA

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Background: Comorbidities in multiple sclerosis (MS) have a big role in management of this chronic demyelinating neurodegenerative disorder.

The aim of this study was to evaluate comorbidities in patients with MS in Croatia.

Subjects and methods: This was a prospective cross-sectional study carried out in an out-patient setting at a tertiary healthcare centre over 10 months, which included 101 consecutive patients with MS

(mean age 42.09 (range 19-77) years, 75 female, 26 male, EDSS score 3.1 (range 0.0-7.0)). The average duration of the disease was 13.5±7.487 (range 1-42) years. Thirty-six patients were treated with disease modifying therapies (DMTs). Information on comorbidities was obtained during the medical interview. Data was analysed using software package IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.

Results: 33% (n=34) patients did not have any comorbidities, and there is an equal number of patients (n=34, 33%) that just had one comorbidity. 17.6% (n=18) of patients had two comorbidities, and 15.7% (n=16) three or more comorbidities. The most frequent comorbidity was depression found in 25 (24.75%) patients (19 (18.8%) women, 6 (5.9%) men), followed by the hypertension in 12.87% (n=13). Hyperlipidemia and migraine were each found in 6.93% (n=7), and hypothyreosis and arrhythmia each in 3.96% (n=4). The number of the comorbidities was found to significantly increase with the duration of MS ($r=0.232$, $p=0.037$). Women were found to have significantly bigger numbers of comorbidities than men ($t=-2.59$, $df=74$, $p<0.05$). Older patients with MS were found to have significantly more comorbidities ($r=0.335$, $p<0.01$).

Conclusions: This study gives insight into the presence of comorbidities in Croatian patients with MS. Connection with comorbidities must be considered when managing patients with MS. Any other comorbidity in MS may also affect the condition of the patient in general, and also their quality of life, and requires a tailored approach in management.

Key words: Multiple sclerosis (MS) - comorbidities - Croatia - depression - vascular risk factors (VRFs) - migraine

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PSYCHIATRIC COMORBIDITIES IN PARKINSON'S DISEASE SEEN THROUGH THE PRISM OF GENOMICS AND EPIGENETICS

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Parkinson's disease (PD) is a neurodegenerative disorder clinically characterized by motor dysfunctions due to progressive loss of dopaminergic neurons and a broad spectrum of non-motor symptoms. Interestingly, non-motor symptoms like depression, anxiety and psychosis are often present several years before the occurrence of classic motor features seriously affecting patient quality of life. Their presence is often misleading, delaying the correct diagnosis of PD. Despite its high incidence, the pathophysiology and aetiology of neuropsychiatric symptoms associated with PD remains unclear. Currently, a lot of interest lays in research looking for genetic predictors of motor and non-motor symptoms in PD. The availability of next-generation sequencing technology for genome, epigenetic and transcriptional analysis opens the door to a new way of studying multifactorial diseases like PD and their comorbidities. In this review we will present new insights in the genomic and epigenetic background of psychiatric comorbidity in Parkinson's disease.

Key words: Parkinson's disease - neuropsychiatric symptoms - genomics - epigenetics

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IMMUNOSENESCENCE, INFLAMMAGING AND RESILIENCE: AN EVOLUTIONARY PERSPECTIVE OF ADAPTATION IN THE LIGHT OF COVID 19 PANDEMIC

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The evolution of immunology enabled the study of role of innate and adaptive immunity in systems biology network of immunosenescence and inflammaging. Due to global reduction in birth rates and reduced mortality, in year 2025 there will be about 1.2 billion of people over age of sixty, worldwide. The notion that the real age is not chronological, but the biological one led to the concept of „bioage“,

defining the biologic reactivity and resilience, including the immune competence of an individual. A competent immune network, systemic and mucosal is intrinsic to resilience and homeostasis of the human holobiont as the unit of evolution. In elderly, the immunosenescence could be associated with higher levels of proinflammatory mediators (such as IL-6), frailty and mortality. Pro-inflammatory state in elderly is denoted as inflammaging, characterized with low-grade (sterile) inflammation, as a physiologic response to life-long antigenic stimuli. When under control, inflammaging could be regarded as an efficient defense mechanism, opposed and regulated by anti-inflammatory pathways and molecules. Immunosenescence. The emerging concepts of „individual immunobiography“ and „trained immunity“ speak in favour that the immunological experience during the life would shape the ability of each individual to respond to various stimuli, strongly influencing the elements of innate and adaptive immunity, including macrophages and innate lymphoid cells. Older age is one of the main risk factors for the severe clinical picture and adverse outcome of COVID-19 infection., due to immunosenescence and chronic low-grade inflammation (inflammaging), both characterizing the immune reaction in elderly. The senescent immune system, along with the advanced process of inflammaging is prone to react with uncontrolled activation of innate immune response that leads to cytokine release syndrome, tissue damage and adverse outcome of infection. Further research is aimed to nutritional and pharmacologic (immunomodulatory) interventions to influence the process of bioaging and immunosenescence, and to modulate the reaction of elderly to infection, including the COVID-19.

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PAINFUL AND ITCHY DERMATOSES CARRY THE HIGHEST PSYCHOLOGICAL BURDEN FOR DERMATOVENEREOLOGICAL PATIENTS

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Background: Most dermatovenereological diseases are not life-threatening but nevertheless are highly prevalent disorders. Psychosocial aspects of skin diseases and physical symptoms strongly influence patient's quality of life (QoL) which results in the development of different coping mechanisms in patient's behaviour. Development of psychiatric comorbidity in patients with skin diseases is well known. On the other hand, little is known about psychological comorbidity associated with dermatovenereological diseases. Aims of this study were to investigate QoL and psychological burden among dermatovenereological patients.

Subjects and methods: Two hundred and ninety patients suffering from different dermatological and venereological diseases participated in the study, divided into three study groups: itchy/painful dermatoses, non-itchy/non-painful dermatoses and venereological diseases. Participants completed standardized psychological questionnaires: Dermatology Specific Quality of Life (DSQL), Beck Depression Inventory (BDI) and State and Trait Anxiety Inventory (STAI). Intensity of the disease and localisation of the lesions were also assessed.

Results: Physical aspect of QoL was mostly influenced by itchy/painful dermatoses but psychological aspect and everyday activities and choices were mostly affected by patients with non-itchy/non-painful dermatoses and venereological diseases. 4.1% of participants had serious depressive symptoms, 11.5% had high and very high anxiety symptoms as state and 15.6% as trait. However, participants with severe skin conditions were more depressed, while participants with always and sometimes exposed lesions were more anxious.

Conclusion: It is essential to recognise subgroups of dermatovenereological patients whose treatment approach should be interdisciplinary. Further studies are needed to detect psychosocial needs of patients with venereological diseases.

Key words: quality of life - anxiety - depression - skin diseases - venereological diseases

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EPIGENETIC, RESILIENCE AND COMORBIDITY: DOES FOUR-DIMENSIONAL ULTRASOUND (4-D US) HELPS IN ANSWERING THE QUESTION DO PSYCHIATRIC DISEASES ORIGINATE IN FETAL LIFE

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The mankind from its beginnings is interested what the future brings, so predicting the future through the history was one of the most mysterious and intriguing questions. The medical professionals always dreamed to predict the future of the individual patient instead of being only historians speaking about the course of disease of their patients, or statisticians making the conclusions based on the population based statistical data of health indicators.

Development of sophisticated and precise scientific methods and their application in everyday clinical practice with the aim to timely predict the development of severe medical conditions affecting adversely the quality of life is now a reality, while only several decades ago it was considered as unrealistic assignment. There is a possibility of "Fetal Origin of Adult Disease", among which are mental and neurodevelopmental disorders. Epigenetic changes may produce the damage of the DNA which may be transgenerational. Prenatal noxious stimuli can modulate neurodevelopment which may be impaired due to the interaction of genetic, epigenetic and environmental factors influencing proliferation, migration and establishment of neuronal circuits of neuronal progenitor cells, resulting in damaged cognitive and intellectual function, and increased risk of neurodevelopmental and psychiatric disorders later in life.

The situation with the prediction of fetal outcome or prediction of postnatal health based on prenatal assessment is much more complicated than postnatal, because of at least two reasons: intrauterine environment is unpredictable and the role of the placenta is still poorly understood. Ultrasound, genetic testing of amniotic fluid, preimplantation genetic testing, detection of fetal cells in maternal blood, or even testing of fetal blood after cordocentesis, enabled the diagnosis of many congenital conditions based on the whole exome sequencing, while the problem with fetal origin of mental health problems is more complicated and demanding.

The aim of the paper is to present the risk factors in pregnancy for development of mental health problems later in life, role of four-dimensional ultrasound (4D US) in the assessment of fetal behavior and cognitive functions and to speculate about fetal and neonatal resilience to overcome possible threats affecting mental health.

Key words: prenatal psychiatry - comorbidity - resilience - epigenetics

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ENDOMETRIOSIS, PAIN AND MENTAL HEALTH

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Background: Endometriosis is a chronic and progressive disease which can significantly affect a woman's personal, as well as intimate and professional aspects of life. The aim of this study was to assess health-related quality of life and mental health status in patients with endometriosis, investigating also their relationship with endometriosis-related comorbid symptoms and conditions, such as pain and infertility.

Subjects and methods: An observational cross-sectional study involved 79 women with endometriosis. All patients filled the Endometriosis Health Profile (EHP-5), the Depression Anxiety Stress Scales (DASS-21)

and the Visual Analogue Scale (VAS). Their medical data were retrieved from medical records. Data was analyzed using the SPSS 23.0 (IBM Corp., Armonk, NY).

Results: Of all the patients evaluated in our study, 44.3% presented depressive symptoms and 25.3% presented anxiety, while 31.7% reported stress symptoms. Moderate correlations were found between results on EHP-5 and depression ($r=0.515$), stress ($r=0.558$) and VAS score ($r=0.565$). Furthermore, weak positive relationship was observed between EHP-5 and anxiety ($r=0.295$) and infertility ($r=0.267$). Additionally, moderate correlation was found between depression and infertility ($r=0.519$), while there was weak association between VAS score and stress ($r=0.236$).

Conclusions: This study showed complex relationships between symptoms and conditions manifesting in patients with endometriosis. Due to diversity of symptoms, potentially including mental health issues, it is important to emphasize the need for combined personalized treatment for these patients, taking into account both physical and psychological aspect of the disease.

Key words: endometriosis - pain - mental health

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BIOMARKERS OF DEPRESSION ASSOCIATED WITH COMORBID SOMATIC DISEASES: A MINI-REVIEW

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Depression is heterogeneous clinical entity with different clinical symptoms, that imply diverse biological underpinning, different molecular substrates and pathways. Besides different psychiatric comorbidities, depression is frequently interrelated with somatic diseases. Multi-morbidities, i.e. somatic diseases associated with depression, reduce quality of life, worsen clinical picture and increase mortality. The most frequent somatic diseases co-occurring with depression are cardiovascular and metabolic diseases. Vulnerable individuals will develop depression, and the goal in modern research and in precision/personalized medicine is to determine vulnerability factors associated with development of depression and to find easy available biomarkers of depression, especially comorbid with somatic diseases. This mini-review aimed to describe the latest published data (from 2015-2012) considering biomarkers of depression related to somatic diseases. Biomarkers related to inflammatory processes, atherosclerosis, imbalance of the hypothalamic-pituitary-adrenal axis, autonomic nerve system, sympathetic and parasympathetic nervous system, heart rate variability and endothelial dysfunction could improve the understanding of the underlying biological mechanisms of the common pathways of depression comorbid with somatic diseases. These targeted biomarkers might be used to reduce the symptoms, improve the treatment of these interrelated diseases, and decrease the morbidity and mortality.

Key words: biomarkers - depression - comorbid somatic disorders - HPA axis - inflammatory response - endothelial dysfunction

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MICRORNAS AS CANDIDATES FOR BIPOLAR DISORDER BIOMARKERS

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Bipolar disorder (BD) is a common, recurring psychiatric illness with unknown pathogenesis. Much like other psychiatric diseases, BD suffers from the chronic lack of reliable biomarkers and innovative pharmacological interventions. Better characterization of clinical profiles, experimental medicine, genomic data mining, and the utilization of experimental models, including stem cell and genetically modified mice, are suggested

ways forward. Environment, including early childhood experiences, has been documented to modulate the risk for the development of psychiatric disorders via epigenetic mechanisms. Key epigenetic regulators, microRNAs (miRNAs, miRs), govern normal neuronal functioning and show altered expression in diverse brain pathologies. We observed significant alterations of exosomal miR-29c levels in prefrontal cortex (Brodmann area 9, BA9) of BD patients. We also demonstrated that exosomes extracted from the anterior cingulate cortex (BA24), a crucial area for modulating emotional expression and affect, have increased levels of miR-149 in BD patients compared to controls. Because miR-149 has been shown to inhibit glial proliferation, we hypothesized that increased miR-149 expression in BA24-derived exosomes may be consistent with the previously reported reduced glial cell numbers in BA24 of patients diagnosed with familial BD. qPCR analysis of laser-microdissected neuronal and glial cells from BA24 cortical samples of BD patients verified that the glial, but not neuronal, population exhibits significantly increased miR-149 expression. These findings support neuron-glia interaction as a possible target mechanism in BD, implicated by others in neuroimaging, postmortem, and in vivo studies of the pathological changes mediated by glial cells.

Key words: epigenetic regulation - psychoses - exosomes - human brain

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THE MANY FACES OF WILSON'S DISEASE

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Wilson's disease (WD) is a rare autosomal recessive hereditary disease caused by a defect in the copper metabolism. Clinical presentation depends on the predominant area of copper accumulation and can thereby primarily be neurological, gastrointestinal, psychiatric, osteo-articular, hematological and other, or the patient can present with a diverse mixture of symptoms. Due to this variable constellation of unspecific possible symptoms, this multisystem disturbance is nicknamed "the disease with many faces".

Left untreated, WD is almost without exception fatal, whereas with timely treatment, the prognosis is excellent. Taking into account the variety in clinical presentation, a high index of suspicion and subsequent early diagnosis is crucial, with the aim of prompt treatment. Furthermore, genetic testing is important not only in symptomatic individuals, but also in asymptomatic patients with a positive family history. Early therapeutic intervention in such cases halts disease progression, and significantly improves the overall survival and the quality of life. The aim of this article is to accentuate the role and importance of a multidisciplinary approach to the diagnostics and treatment of WD.

Key words: Wilson's disease - tremor - psychiatric presentation - hereditary disease - multidisciplinary approach

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SHAME AND COVID-19 PANDEMIC

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Optimal psychic response during the COVID-19 pandemic is the result of many different factors. One of the main factors is the psychodynamic understanding of essential emotions such as shame. Despite the immense effort by health workers to address stress- and trauma-related disorders in the course of the COVID-19 pandemic, a large proportion of the people affected by the disorder do not have information regarding the emotion of shame. Lack of mentalizing capacity implies disturbed shame dynamics. The therapeutic relationship and optimal alliance offer the frame for acceptance of shame as useful for psychological growth. Empathy should be a cure for dysfunctional shame, at the individual or social level. We believe that including a psychodynamic approach in the national public and mental health emergency system will empower national prevention strategies.

Key words: shame - COVID-19 pandemic - psychodynamic - mentalization, narcissism

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OVERVIEW OF SYMPTOMS OF ONGOING SYMPTOMATIC AND POST-COVID-19 PATIENTS WHO WERE REFERRED TO PULMONARY REHABILITATION - FIRST SINGLE-CENTRE EXPERIENCE IN CROATIA

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Background: Coronavirus-2 pandemic has changed the functioning of health systems worldwide. It is not yet fully known which symptoms of the disease are most commonly presented in patients referred for pulmonary rehabilitation. Our aim was to investigate the profile of patients referred for pulmonary rehabilitation; what symptoms they had during the acute phase of the disease and what symptoms were still present at the start of pulmonary rehabilitation.

Subjects and methods: Study included ongoing symptomatic and post-COVID patients who attended standard, in person pulmonary rehabilitation program. Patients had COVID-19 disease at least four weeks before attending pulmonary rehabilitation. Patients completed questionnaires of self-reported somatic deficits during acute and post-COVID-19 stage as well as questionnaires regarding their psychological symptoms. Pulmonary function test, expiratory and inspiratory muscle strength, hand grip strength and six-minute walk test was performed prior and after pulmonary rehabilitation.

Results: Study included 63 patients (32 male, 31 female), with mean age of 52,9 years. During acute COVID-19, majority of patients complained of fatigue, cough, dyspnea, myalgia and headache. More than 85% of patients reported pulmonary deficits during ongoing symptomatic and post-COVID-19 stage. Emotional distress and anxiety levels were significantly elevated in acute stage, while depression, anger and the need for help was not significantly elevated. All reported symptoms were significantly reduced in post-COVID-19 stage. There was statistically significant difference in six-minute walk distance, inspiratory and expiratory muscle strength and hand grip strength between first and final testing.

Conclusions: Results of our study are similar with previous studies, the most common symptoms during acute phase were fatigue, cough and dyspnea and fatigue and respiratory problems during ongoing symptomatic and post-COVID stage. Emotional distress diminishes significantly in post-COVID stage. Further larger studies are needed to clarify which acute disease symptoms are predominant in patients referred to pulmonary rehabilitation and cause prolonged discomfort.

Key words: COVID-19 - post-acute COVID-19 syndrome - pulmonary rehabilitation

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DEMENTIA-LIKE SYNDROME - THE UNUSUAL SYMPTOM OF COVID-19: A CASE REPORT

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The current pandemic situation has had a significant impact on the mental health of the entire population and especially on the health of people who have been infected with Coronavirus disease (COVID-19). This paper presents the impact of a history of cured coronavirus infection on the mental health of an 81-year-old person who was healthy at the time of infection and did not use any medication. The mental symptoms in the presented patient started with the appearance of the pandemic itself and worsened when the patient became infected with the virus and did not stop even after the infection was cured. The symptoms had a fluctuating course and were manifested by changes in behavior, thinking, affectivity, and cognitive impairment.

Key words: coronavirus - mental health - pandemic - dementia

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SEXUAL DYSFUNCTION IN CROATIAN PATIENTS WITH OBESITY

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Background: Patients with obesity may have symptoms of sexual dysfunction (SD). Little is known about these symptoms in obese patients in Croatia and the aim of this study was to explore them.

Subjects and methods: This was a cross-sectional study carried out in tertiary healthcare centre at the Croatian Obesity Treatment Referral Center in University Hospital Center of Zagreb. 103 patients (72 female, 31 male, mean age 48.7±11.87 years, mean BMI 40.42) were included. SD symptoms were assessed using the internationally acclaimed questionnaire Arizona Sexual Experience Scale (ASEX), that was recently validated for Croatian language. Patients were also administered a questionnaire, prepared for this purpose, that enquired about their previous known chronic disorders. Statistical analyses included t-test, chi-squared test and bivariate Pearson's correlations.

Results: Average total response on the questionnaire was 12.4 (women 13.2, range 3-30; men 10.6, range from 5-19). A total score of 19 or more was present in 5 (4.8%, range from 19-30, average 22.4; 1 man, 4 women), at least one question with a score 5 or greater on any item was found in 36 (34.9%, 5 men, 31 women), while a score of 4 or more on three items was found in 20 patients (19.4%, 2 men, 18 women). Overall median response was 3 (range 1-6). Women were found to have more pronounced symptoms of SD ($p<0.05$). The overall results on ASEX were found to be in significant correlation with regard to depression ($r=0.22$, $p=0.03$), as well as anxiety ($r=0.2$, $p=0.04$). Significant correlations were also found with regard to age ($r=0.31$), mobility ($r=0.25$), and pain/uneasiness ($r=0.22$) ($p<0.05$).

Conclusions: This study brings valuable observations on the presence of SD symptoms in obese patients in Croatia. SD symptoms were found to be present in up to one-third of our patients, more pronounced in women, and in significant correlation with depression and anxiety. However, median response on ASEX suggests that overall SD symptoms in our group of patients are not that expressed.

Key words: obesity - sexual dysfunction - Arizona Sexual Experiences Scale - ASEX - Croatia

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REPRESENTATIONS OF CHRONIC ILLNESS IN PATIENTS AND THEIR PARTNERS

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Background: Representations of chronic illness have a strong influence on quality of life and coping. Illness-related beliefs and attitudes depend on the medical condition itself (including illness type and duration), as well as individual and relational variables. Couples affected by chronic illness develop shared illness representations, which support the patients' adaptation process. Our study was focused on illness representations in five patient groups, considering variables of illness duration and relationship satisfaction.

Method: the Illness Perception Questionnaire was administered to 154 subjects (79 male 75 female) and their partners in five illness groups (average illness duration 6,9 years). Marital satisfaction and similarity of illness representations as well as accuracy of estimates about the partner's illness representations were studied.

Results: The five patient groups significantly differed in their illness representations. In groups with longer illness duration, illness was perceived as chronic and more symptoms were experienced. Similarity of illness perceptions between subjects and their partners was highest for the asthma and lung cancer group, and spouses' scores differed most for the dimension of coherence. Marital satisfaction was related to similarity of illness perceptions, and more accurate estimates of the partners' perception.

Conclusions: Marital satisfaction has a remarkable influence on illness representation similarity and accuracy of the perception about the partner's illness representations. Patients and their partners are more likely to form similar illness representations if symptoms are clearly observable as in the case of asthma or lung cancer. The dimension of coherence has significant within-person variations, as illness usually has a deeply personal meaning to both the patients and their partners.

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DIFFERENCE OF SYMPTOMS NETWORKS IN EARLY AND LATE PHASE SCHIZOPHRENIA; A CROSS-SECTIONAL NETWORK ANALYSIS

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Objective: The functional remission or recovery of schizophrenia patients is a challenging task which relies on pharmacotherapy but also on the timing of psychotherapy and other therapeutic interventions. The study aimed to assess the difference in strength and structure of symptoms networks between early and late phase schizophrenia. Our secondary objective was to check whether the overall, positive, negative, and general symptoms severity change over the course of treatment and disorder.

Methods: This nested cross-sectional analysis combined the samples from two studies performed during 2014-2016 at University Psychiatric Hospital Vrapče, Zagreb, Croatia on the consecutive sample of men 30-60 years old diagnosed with schizophrenia, 85 of them in the early (≤ 5 years from diagnosis), and 143 in the late phase of the illness. The study was funded by the project: "Biomarkers in schizophrenia - integration of complementary methods in longitudinal follow up of FEP patients".

Results: Median (IQR) age of the participant in the early phase was 36 (32-45) years and in the late phase 44 (38-49) years. Patients in the early phase had significantly higher odds for being in the symptomatic remission compared to the patients in the late-phase schizophrenia (OR=2.11; 95% CI 1.09-4.09) and had 10% less pronounced negative symptoms. The global strength, density, and structure of the symptoms network were not significantly different between the two study groups.

Conclusions: Negative symptoms severity change with the course of illness and differ from the early to the late phase of schizophrenia. However, the overall network of psychotic symptoms is relatively stable, and overall strengths or density and the partial relationship between particular symptoms do not change significantly. The observed worsening of negative symptoms is probably at least partially caused by the lack of clear guidelines and effective treatment options aimed specifically toward negative symptoms.

Key words: schizophrenia - psychosis - PANSS - networks - symptoms

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INFLUENCE OF SERUM TESTOSTERONE LEVEL ON AGGRESSION IN WOMEN WITH SCHIZOPHRENIA

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Background: Unlike in female population, the effect of testosterone on aggression in men has been investigated countless times so far. A scarce number of studies have examined the effect of testosterone on aggression in women. The results obtained so far are inconsistent for some studies indicated a positive, whilst others showed a negative correlation. Since testosterone turned out to be an important factor related to aggression in men, the aim of our study was to investigate whether this correlation existed in aggressive female patients with schizophrenia.

Subjects and methods: The sample consisted of 120 women, aged from 18 to 45 years, diagnosed with schizophrenia by DSM-5 criteria. Those who were breastfeeding or suffered from specific hormonal or other physical disorders were excluded from the study. They were divided into two groups of 60 - those with aggressive behavior and those with nonaggressive behavior. Psychopathology was measured by several tests (Positive and Negative Syndrome Scale - PANSS, Overt Aggression Scale - OAS and PANSS Extended Subscale

for Aggression Assessment). Serum testosterone hormone assays were performed. Statistical data analysis was done by parametric statistical tests, Kolmogorov-Smirnov test, Student's t-test and simple linear regression. All data were presented as mean values and corresponding standard deviations (SD).

Results: Testosterone levels didn't differ significantly between aggressive and nonaggressive subjects. There were no significant differences between testosterone levels in suicidal aggressive subjects compared to nonsuicidal aggressive respondents ($t=0.616$; $p=0.540$). The largest number of subjects in both groups had referent testosterone levels.

Conclusions: Despite expecting a significant effect of testosterone levels on aggression in women with schizophrenia, conducted by previous studies, no correlation has been found. Suicidal behavior surprisingly didn't depend on the subjects' testosterone levels.

Key words: aggression - schizophrenia - testosterone - women

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ONSET OF SCHIZOPHRENIA PRIOR TO THE END OF BRAIN MATURATION ALTERS GREY MATTER VOLUME LOSS

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Background: Brain maturation is considered completed around the age of 25, when prefrontal cortex maturation has been achieved. The aim of our study was to investigate the alterations of grey matter (GM) in patients with the onset of schizophrenia before and after the completion of brain maturation.

Subjects and methods: The study group included 100 schizophrenia patients, while the control group comprised 50 healthy individuals. Brain magnetic resonance imaging was acquired on a 1.5 T scanner. Voxel-based morphometry (VBM) analyses were performed between groups.

Results: GM of the schizophrenic patients is reduced in many regions ($p<0.005$ FDR corrected). Most widespread reduction is detected in frontal cortex and cerebellum, the other regions being limbic cortex, insula, cuneus, precuneus, superior temporal gyrus and motor cortex. The decrease of grey matter volume (GMV) increases with the increase in number of psychotic episodes and is more pronounced in the patients with earlier onset of the disease.

Conclusions: The age of the onset of the disease is important for both total and relative loss of GMV. Earlier onset of schizophrenia, prior to full brain maturation results in significant reduction of GM in comparison with healthy subjects and patients with later, post full brain maturation onset of the disease.

Key words: schizophrenia - brain maturation - voxel-based morphometry

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ALPHA POWER IN VISUOSPATIAL WORKING MEMORY REVEALS POSSIBLE INHIBITORY DEFICIT IN SCHIZOPHRENIA

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Introduction: Visuospatial working memory (vsWM) comprises a set of processes for short-term visual information storage and manipulation that is known to be at the core of many higher-level cognitive

functions. Deficits observed in schizophrenia (SCZ) patients were more consistently found in vsWM than in other WM modalities. Specifically, it is believed that memory encoding and early maintenance are most affected. It was first hypothesized that this deficit is caused by an impairment of attentional processes. However, recent research has found that attention during encoding might actually be preserved in SCZ. Therefore, the mechanisms of reduced vsWM capacity in SCZ remain unclear. Our previous work indicated that the observed behavioral and electrophysiological indices of WM storage deficit are mostly attributable to the patients' inability to exclude taskirrelevant distractors. Since oscillatory alpha activity has been reported as being implicated in the suppression of irrelevant information, in the present follow-up analysis, we investigated whether the observed deficit is reflected in induced alpha oscillatory power.

Methods: 15 schizophrenia patients and 15 age-matched controls completed a visual working memory task with 3 conditions (maintain 2 or 4 items, or maintain 2 items/inhibit 2 distractors) while their EEG was recorded using a 128-channel EEG system. Data were first preprocessed and cleaned using EEGLAB functions and then decomposed into the time-frequency domain by performing Morlet-wavelet convolution. We defined 8 regions of interest (ROIs) covering the left and right frontal, central, parietal and occipital regions. A time-frequency window of interest was defined for statistical analysis, which started at 300ms after the memory set presentation up to 800ms and spanned the frequencies between 7 and 14 Hz. Finally, statistical analysis was performed on these ROIs using RStudio.

Conclusions: The results indicate that SCZ patients have a lesser decrease in induced alpha power during the early maintenance of a memory set. However, this was present equally in all conditions, which might point to a general inhibitory deficit reflected by alpha induced oscillatory activity. The fact that the observed group effect was more prominent in the right hemisphere is in line with previous research showing preferential activation of the right hemisphere during visuospatial attention.

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THE PHENOMENOLOGICAL ANALYSIS OF IMPAIRED AGE SELFCONSCIOUSNESS IN LATENT SCHIZOPHRENIA

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Introduction: The topic of research was phenomenon of impaired age self-consciousness in nonpsychotic latent schizophrenia patients defined. To explore features of impaired age self-identity and to determine syndromic affiliation of the syndrome in comparison with premorbid personality disorders traits.

Methods: The study sample comprised 141 patients with latent schizophrenia (pseudoneurotic (F21.3 - 64.5%, 91 patients), cenesthopathic (F20.8 - 25.5%, 36 patients) and pseudopsychopathic (F21.4, - 9.9%, 14 patients)) aged 16-31 (average 22.1 years old) in 2007-2019. A follow-up, experimental psychological and clinical study was conducted.

Results: The onset of impaired age self-identity was dominated by a radical drop of the subjective age in self-conscious mind of the patients accompanied by a tormented feeling of loss of self-dependence, role autonomy, helplessness, inability of decision making and to be answerable. Patients described this sudden condition as a loss of 'maturity feeling' and return to the juvenile perception of self. In a delusive and unclear manner, phrases such as 'I feel inferior to others as if a helpless child among adults', 'I feel as if my childhood is back' were uttered. Excessive worrying and enlivening of childhood memories were also included. This correlates to occurrence of humble and sometimes dependent/avoidant behavior, feeling of helplessness and fear with respect to caring for one self, rising subordination and suggestibility. Consequently, patients often became victims of fraud and prejudice.

Conclusions: On the level of self-consciousness, sudden age regression was marked by profound internal changes about oneself and in general, to the external world. This phenomenon of regress to earlier ontogenetic level of personal development reported as impaired age self-consciousness can thus be regarded as an obligate form of depersonalization.

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DIFFERENCES IN RESILIENCE, SELF-STIGMA AND MENTAL HEALTH RECOVERY BETWEEN PATIENTS WITH SCHIZOPHRENIA AND DEPRESSION

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Introduction: There is growing evidence that resilience is a key factor for prevention of mental disorder. Low resilience levels were found in individuals at clinical high risk to psychosis and schizophrenia. Higher level of resilience was associated with better functioning, less severe negative, anxiety and depressive symptoms. Low level of self stigma is associated with recovery from schizophrenia. Aim of this paper was to determine whether resilience and self-stigma are significant predictors of mental health recovery in patients diagnosed with schizophrenia and depression treated in a rehabilitation-oriented program.

Subjects and methods: 51 patients diagnosed with psychoses and 53 patients with depression treated in day hospital participated in this study. Internalized Stigma of Mental Illness Scale (ISMI), The Boston University Empowerment Scale (BUES), Perceived Devaluation and Discrimination (PDD) Scale, Mental Health Recovery Measure (MHRM) and Resilience questionnaire were used.

Results: Self-stigma positively correlates with PDD ($r=0.44$; $p=0.000$), and negatively with BUES ($r=-0.78$; $p=0.000$), resilience ($r=-0.51$; $p=0.000$) and with recovery ($r=-0.59$; $p=0.000$) in two groups. In addition, a higher PDD score indicates poorer levels of empowerment ($r=-0.42$; $p=0.000$), resilience ($r=-0.35$; $p=0.000$) and recovery ($r=-0.44$; $p=0.000$). Mental health empowerment, resilience and recovery all correlate significantly and positively with each other. Cross-group comparison results show the best results for patients with schizophrenia. Sociodemographic factors do not affect resilience, self-stigma nor recovery.

Conclusion: Self-stigma and resilience are connected with moderate correlation. Research supports the need for interventions that prevent self-stigma and increase resilience in the treatment of schizophrenia patients.

Key words: resilience - self-stigma - psychiatric illness - schizophrenia - rehabilitation - stress resistance

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UNDERSTANDING THE CULTURAL CONTEXT: VOICE-HEARING EXPERIENCES OF RUSSIAN-SPEAKING PATIENTS

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Introduction: The present project examines how schizophrenia manifests in the Russian cultural context. Specifically, we aim to assess whether patients diagnosed with schizophrenia in Russia present with symptoms that might differ in form and content compared to participants from countries studied by Luhrmann and colleagues. Many persons who meet DSM or ICD criteria for schizophrenia experience what clinicians call “voices”: auditory and semi-auditory experiences, often of an invisible person who speaks.

Methods: This research is currently taking place at the Clinical Psychiatric Hospital in Kazan, Russia. All participants ($n>20$) hear voices and are diagnosed with schizophrenia or schizoaffective disorder. We assessed the patients’ experiences primarily through a Russian translation of the structured clinical interview protocol developed by Luhrmann et. al. Additionally, participants listened to a 45-second audio-track of positive and negative voices meant to represent a wide range of possible experiences of voice-hearing by those with psychosis. In this track, the voices speak in Russian. Participants were asked what they remember after the track played, and what, if anything, of the track was like their own experience of voices. The primary aim of this audio track is to better understand what patients may be experiencing first-hand, as well as to determine whether the positive or negative voice gathers more attention.

Results: At present, data continues to be collected. Exploratory analyses of the interviews will investigate how these hallucinations manifest in the Russian cultural context, and these results will ultimately be compared against previously collected data. Some preliminary questions have emerged. The patients interviewed express less violence to self and others than do the patients in the US that Luhrmann interviewed. They also speak more spontaneously about interrupted sleep. More patients express concerns around alcohol.

Conclusions: Understanding the way in which this devastating disorder manifests in Russia, in addition to how it is generally conceptualized and treated provides valuable information that could significantly impact the conceptualization of schizophrenia around the world. Understanding the psychosocial aspects of this disorder from multiple perspectives allows the scientific community to have a detailed conversation about how different individuals are impacted by this disorder. Furthermore, it opens the door to international cooperation to work on treatments and support systems that are culturally relevant and appropriate, and provides opportunity to better understand how best to support these individuals.

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SCHYZOTIPY: FROM PERSONALITY ORGANIZATION TO TRANSITION TO SCHIZOPHRENIA

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The traditional medical model of schizophrenia assumes a categorical view of the syndrome. On the contrary, the dimensional approach to schizophrenia infers that schizophrenia is not a discrete illness entity, but that psychotic symptoms differ in quantitative ways from normal experiences and behaviours. Schizotypy comprise a set of inherited traits reflected in personality organization, which presents as qualitatively similar to schizophrenia. Schizotypy is in line with continuum hypothesis of schizophrenia where different combinations of genes and environmental risk factors result in a range of different phenotypic expressions lying on a continuum from normal through to clinical psychosis. We discuss evidences for the continuity of psychotic symptoms to normal experiences and theoretical and future research implications of such a continuum.

Key words: schyzotypy - schizophrenia - genetics - development - personality

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COMPARING BETWEEN THE INFLAMMATORY PROFILES OF MAJOR DEPRESSIVE DISORDER AND BIPOLAR DEPRESSION WITH AN EMPHASIS ON THE POSSIBLE ROLE OF CLINICAL SEVERITY AND PSYCHOTIC FEATURES

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Background: In the present study, it was aimed to compare between the inflammatory patterns of two different disorders that may present with depressive episodes of largely overlapping symptomatology, Major Depressive Disorder (MDD) and Bipolar Depression (BD), by using neutrophil to lymphocyte (NLR) and platelet to lymphocyte ratios (PLR) as markers for inflammation; and to investigate whether and how these parameters correlate with the clinical characteristics (depression severity, presence of psychotic features) within and between diagnoses.

Method: The study sample consisted of 359 participants, with 126 MDD, 83 BD inpatients and 150 healthy controls (HC), with similar age-sex distributions among the groups. The medical records of the participants were retrospectively screened to obtain NLR, PLR values.

Results: The depressive episodes in both disorders presented with significantly increased levels of NLR and PLR, compared to HC, with greater values being additionally associated with severe depression, but not necessarily with the presence of psychotic features. The inflammatory patterns were found to be largely similar between disorders, or at least, indistinguishable by means of the NLR and PLR.

Conclusion: Taken together, our results suggest that, both BD and MDD involve a presumably complex inflammatory process, resulting in an observable -albeit nonspecific- alteration in the distribution of

peripheric blood cells. Improving diagnostic accuracy, and more elaborate assessment of the clinical features may help in better understanding of the inflammatory mechanism involved in the pathophysiology of depressive states.

Key words: Major depressive disorder - Bipolar disorder; Inflammation; Immunology; Neutrophil-lymphocyte ratio; Platelet-lymphocyte ratio; Bio-marker

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DEPRESSION AND COGNITIVE DISORDERS IN POST-STROKE PATIENTS

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Introduction: To analyze the clinical features of depressive disorders and cognitive impairment in poststroke patients.

Materials and methods: We studied 40 patients with ischemic stroke located in the medical rehabilitation department. The study used the Brief Mental Status Scale (MMSE); Hospital Anxiety and Depression Scale (HADS).

Results: According to HADS at the time of hospitalization 26 people. did not experience depression (65%), but 10 of them were at the lower limit of the norm (25% of the total number of respondents); 10 pax (25%) experienced subclinical depression, and 4 (10%) had signs of severe depression. The ratio of "men: women" was ~ 1: 2, respectively. Among the women, 12 out of 20 had signs of depression, and two were clinically depressed.

The frequency of depression with damage to the left hemisphere was ~ 66.7% (the remaining 33.3% scored points corresponding to the lower limit of the norm); the frequency of depression with lesions of the right hemisphere was ~ 9.1% (taking into account patients who scored the number of points corresponding to the lower limit of the norm - 27.3%), which is significantly lower than with lesions of the left hemisphere.

According to MMSE results, only 20% of people had no cognitive impairment. Most of the subjects had moderate cognitive impairment - 70% of the subjects, and 10% - mild dementia. The main problems were associated with the performance of numerical manipulations, a violation of concentration and violation of mnesic functions.

Conclusions: Cognitive impairment, psycho-emotional impairment, and insomnia are common in stroke patients and require appropriate therapeutic measures.

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EARLY SCREENING FOR RISKS OF BIPOLAR DISORDER AT THE PRECLINICAL STAGE

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Introduction: Bipolar disorder (BD) is characterized by a high rate of prevalence in the general population varying from 0.6% to 5.84% (Yildiz 2015). BD is one of the leading causes of disability and mortality from suicide and comorbid diseases (Johnson et al. 2017). Individual symptoms of the disease in the form of cyclothymia-like mood fluctuations can be detected in adolescence and have potential for predicting risk for BD (Tijssen et al. 2010). The key issue here is untimely diagnosis of BD (Mosolov et al. 2014, Bardenshteyn et al. 2016). Early screening for risks of bipolar disorder at the preclinical stage.

Subjects and methods: The study involved 137 students aged from 18 to 20 years (mean age 18.93±0.09). The clinical-psychopathological method as well as the screening method of research were used: the Mini-International Neuropsychiatric Interview (M.I.N.I.), (Sheehan et al. 1998), the Hamilton Depression Rating Scale (HDRS 1960), the Mood Disorder Questionnaire (MDQ) (Hirschfeld 2000). The statistical data processing included descriptive statistical methods (p<0.05).

Results: Clinical diagnostics of the responders using ICD-10 (WHO, 1992, Chapter V [F00-F99]) excluded the diagnosis of bipolar disorder. The MDQ screening method revealed a statistically significant excess of the average values for hypomania throughout the sample ($M\pm m: 6.46\pm 0.44$; $p<0.05$). The total score of 64 interviewees (46.7%; 95% CI: 38.1-55.3) exceeded the threshold value (≥ 7). 68 responders (49.6%; 95% CI 41.0-55.3) showed one-stage manifestation of certain signs of mood rise. 72 interviewees (52.6%; 95% CI 43.9-58.3) reported absence of mood rise, associated with conflict behaviour, family problems etc.

According to the HDRS scale, 45 responders (32.85%; 95% CI: 24.14-40.95) showed signs of mild depression ($M\pm m: 6.51\pm 0.39$; $p<0.05$). Also, a group of responders (18.2%; 95% CI: 11.78-24.72) manifested exceeding indicators both for hypomania and depression.

Conclusions: According to the MDQ scale, 46.7% of the responders showed threshold values exceeding; with the one-stage manifestation of hypomania signs in 49.6% of the respondents. 32.85% of the responders showed signs of mild depression (the HAMD scale). 18.2% of the interviewees exceeded threshold values for both hypomania and depression. The discovered cyclothymia-like conditions at the preclinical stage have potential for predicting risk for their transformation to bipolar disorder which directs further outpatient clinical and dynamic observation.

Key words: bipolar disorder - early screening - hypomania

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COMORBIDITY IN BIPOLAR DISORDER- CASE REPORT

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Bipolar disorder (BD) is an affective disorder characterized by the exchange of periods of depression and mania. BD is commonly in comorbidity with mental and somatic diseases. This report presents a 59-year-old female patient in treatment for BD comorbid with Generalised anxiety disorder (GAD) and somatic diseases (psoriasis, diabetes mellitus type 2, hypothyroidism). The development of clinical signs of BD began in January 2016. when she was first hospitalized for depression symptoms. Later that year, she was hospitalized for the second time with acute mania symptoms. During this period, she had caused significant financial loss spending all of her family savings. Symptoms were reduced using the combination of psychotropic medications (mood stabilizer, antipsychotic, anxiolytic, hypnotic). During the second hospitalization elevated blood sugar and altered levels of thyroid hormones were noted and the patient was diagnosed with diabetes mellitus type 2 and hypothyroidism. Insulin therapy and thyroid hormones substitute were introduced. After discharge from the hospital the patient noticed skin changes and was diagnosed with psoriasis. A year later (2017) she was re-hospitalized for the actualization of BD and GAD symptoms, and the clinical condition was further aggravated by changes in her physical appearance caused by psoriasis. Since her last hospitalization, the patient is in regular outpatient psychiatric, endocrinological and dermatological treatment and regularly takes prescribed medication. She is in a stable mood, functional in all spheres of life and is in state of solid symptom remission. In order to achieve optimal treatment outcomes, it is important to recognize comorbidities on time and treat them through an individualized interdisciplinary approach.

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PERSON-ORIENTED APPROACH IN EXAMINING CHINESE-HUNGARIAN PERSONALITY AND AFFECTIVE DISORDER PROFILES

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Background: Our Chinese-Hungarian crosscultural research aimed to apply a person-oriented approach on examining patterns of cultural, personality and affective disorder variables.

Subjects and methods: Our sample consisted of 238 Chinese and 167 Hungarian university students under the age of 26 years old. 238 Chinese university students (112 males, 126 females; mean age: 19.55, SD: 1.60) and 167 Hungarian University students (65 males and 100 females; mean age: 20.47, SD: 1.83) participated in our research. All individuals were under 26 years old. No gender ($\chi^2(df=1)=2.32, p=0.127$) and no age differences between countries were observed. We analyzed in person-oriented approach the Zuckerman-Kuhlman-Aluja Personality Questionnaire, the universal values scale of Schwartz and three affective disorder questionnaires (Mood Disorder Questionnaire, Hypomania checklist, PVP Depression Scale).

Results: We applied model-based clustering that resulted in a model with five spherical, varying volume components. This meant that five clusters emerged, five typical patterns of the cultural, personality and affective variables. Significant cultural difference arose ($\chi^2(df=4)=79.489, p<0.000$) in cluster proportions. In three clusters, proportion of Chinese was significantly higher than proportion (Overcontrolled: 82.6%, Reserved: 71.1%, Ordinary: 60.5%) of Hungarian. In the two remaining clusters, majority were Hungarian (Positive Sensation Seeker: 90.0%, Aggressive-Impulsive: 80.4%). Moreover, different psychiatric vulnerability emerge in relation to different profiles. Profiles that are more typical to Hungarians, have high sensation seeking level, and show vulnerability to hypomania, mood disorder and impulsive depression. On the other hand, typical Chinese profiles are linked to vulnerability of non-impulsive depression.

Conclusions: In sum, culture and cultural values play an important role in the vulnerability of different affective disorders. These differences can be linked to different typical personality patterns.

Key words: personality - affective disorders - person-oriented approach - cluster analyses - cross-cultural

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LEVELS OF DEPRESSION, ANXIETY AND QUALITY OF LIFE OF MEDICAL STUDENTS

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Background: Medical education is amongst the educational processes with the highest stress load. This study was conducted to determine levels of depression, anxiety and quality of life of medical students in a university hospital.

Subjects and methods: Third year and sixth year medical students which accepted to be participate to the study and sign informed consent form are included in the study. Data was evaluated by descriptive statistics.

Results: Totally 81 students of which 41 are third year, and 40 are sixth year students are included to the study. 79% of participants are women and 100% are unmarried. Accordingly, Beck Depression Inventory, ratio of those who have (any level of) depression are 58.5% in third year students and 55% in sixth year students. Ratio of those who have moderate to severe anxiety is 34.1% in third year students and 25% in sixth year students. Differences between them are not statistically significant. Regarding subscales of life quality; sixth year students have higher scores on general health perception than third year students. Medical students have lower scores in; difficulty in physical role, difficulty in emotional role, energy, mental health, social functioning and perception on general health when compared to the average scores of general public.

Conclusions: In this study medical students are having a lower quality of life regarding most of the subscales when compared to normal population and both third year and sixth year students are found to be having high depression and anxiety levels. As medical training is a hard and long road to go, it is important to encourage medical students to get Psychiatric support when needed. This is important for them to maintain their mental health.

Key words: students - medical - behavioral symptoms - depression - anxiety

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INTIMATE PARTNER ATTACHMENT STYLE AND ANTENATAL DEPRESSION SYMPTOMS IN NULLIPARAS: RESULTS FROM THE ZRNO STUDY

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Background: The purpose of this study was to examine the relationship between the important indicators that define mental health functioning during the first pregnancy: the level of depression, anxiety and fear of childbirth in the context of nulliparas' intimate partner attachment style type and older generation's emotional support.

Subjects and methods: A group of 325 nulliparas in the third trimester of pregnancy were enrolled at the Childbirth preparation program of the University Medical Centre Ljubljana's Division of Gynaecology and Obstetrics. The following instruments were applied: Experiences in Close Relationships-Revised, The Edinburgh Depression Scale, two aspects of anxiety - Zung Anxiety Scale and a questionnaire regarding fear of childbirth. Attachment anxiety and avoidance scales were recoded into four categories of a prototypical attachment style: secure, fearful, preoccupied and dismissive. Two-way ANOVA and the chi-square test were used for the statistical analysis.

Results: All indicators of mental health functioning of our sample of nulliparas differed significantly regarding their partner attachment style. Nulliparas with a fearful, but also with a preoccupied type of attachment, showed less optimal mental health indicators compared to those with a secure/dismissive type of attachment. A significant interactive effect of partner attachment and emotional support from the older generation was found on the level of depression. Partner attachment styles and emotional support from the older generation were found to be statistically dependent.

Conclusions: In our sample a secure attachment seems to represent a protective buffer for the level of depression, even when a lower emotional support of the older generation was included. Screening and intervening on intimate attachment style as a protective factor for antenatal depression and different forms of anxiety is proposed.

Key words: anxiety - depression - partner-attachment style - older generation support - nulliparas

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PSYCHOSOMATICS IN EATING DISORDERS

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Background: To study the psychosomatic options and dynamics in patients with eating disorders. To conduct a comparative study of psychosomatic characteristics of surveyed patients with eating disorders, taking into account the duration and severity of protein-energy deficiency and levels of catecholamines excretion; to reveal features of mental working capacity, basic mental processes and EEG data at different

stages of eating disorders; to develop scientifically based effective methods and means for correcting pathological changes that have arisen as a result of prolonged protein-energy deficiency in eating disorders.

Methods: Catamnestic, statistical, clinico-psychopathological with somatic, psychological and laboratory examination, anthropometry, high-performance liquid chromatography, electroencephalography. Statistical analysis of collected data was processed using the program IBM SPSS Statistics 22, the confidence level p-value is ≤ 0.001 .

Results: The long-term consequences of prolonged fasting in 500 women with eating disorders (ED), who applied for help at the RUDN department and were examined in 1987-2013, were studied. The most common somatic complications of prolonged protein-energy deficiency were investigated. In addition to the clinical method and anthropometry, to measure the efficiency of weight gain after prolonged alimentary deficiencies and to treat anorexia nervosa patients the pathopsychological method of "Shabalina's complex decoding" and analysis of catecholamine excretion rates in urine of patients with anorexia at different stages of therapy were used. Improvement of mental performance and general condition of the examined after applying the developed treatment was observed. Scientifically based principles of therapy, allowing to avoid complications of long-term fasting and during weight gain were suggested.

Key words: eating disorders - catecholamine excretion - long-term consequences - treatment - mental performance

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PSYCHOSOMATIC ASPECTS OF AND TREATMENT OF GI PATHOLOGY

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The frequency of instances of diseases of the digestive system has increased in recent years. The pattern of diseases changes: the pathology of the upper gastrointestinal tract (gastroesophageal reflux disease, gastritis, duodenitis) is the most prevalent. Gastroesophageal reflux disease (GERD) is one of the most common, recurrent and comorbid gastroenterological diseases, with a prevalence of 30% in Western Europe and 10% in East Asia in the adult population.

Evaluation of quality of life (based on the SF 36 questionnaire and Hamilton's scale of Depression and anxiety) is widespread and can aid in the choice of effective treatment for patients with combined pathology. We analyzed SF36 questionnaires of patients with GERD only and GERD in combination with thyroid pathology (hypothyroidism).

Patients were divided into two groups: the first group - patients with GERD (20 persons); the second group - patients with GERD and hypothyroidism (20 persons). The quality of life of patients from the second group was revealed to be low for such indicators as "physical and mental components of health", "social functioning".

The intensity of pain in both of the two groups significantly limits daily activities of patients. The physical component of health in patients with GERD is 48.82%, and in patients with comorbidity - 39.21% ($p \leq 0.05$). A significant difference in the mental health component was observed: in the first group - 39.7%, and in the second group - 30.18% ($p \leq 0.05$).

Patients with GERD suffer not only symptoms associated with erosive-ulcerative, catarrhal and/or functional disorders of the distal esophagus, but also neurotic disorders. Depression, memory impairment, attention disorders are more common.

Thyroid dysfunction manifests with the psychoendocrine syndrome (depressive and anxiety-phobic disorders), therefore the mental health component of the quality of life of patients with GERD and hypothyroidism decreases. Patients with combined pathology of GERD and thyroid dysfunction should be examined not only by a general practitioner, gastroenterologist, endocrinologist, cardiologist, but also by a psychotherapist because of pronounced somatogenic mental disorders. Treatment with antacids and drugs such as omeprazole, Cerucal, were less effective than when combined with psychotropic drugs: Sertraline 25-30 mg and hydroxyzine 12.5-25 mg per day.

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PATHOMORPHISM OF COMORBID PATHOLOGICAL DRIVES IN ED

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Introduction: The topic of research was the phenomenon of pathological drives in Eating Disorder patients. Objectives To explore the syndrome of pathological drives in Eating Disorders through a comparison over a period of 35 years.

Methods: The study sample was comprised of 281 patients with Eating Disorders AN (F50.0) and BN (F50.2) comorbid with latent schizophrenia (pseudoneurotic (F21.3), cenesthopathic (F20.8) and pseudopsychopathic (F21.4)) aged 14-30 (average 20.1 years old) for 1985-2019. A follow-up, experimental psychological and clinical study was conducted.

Results: A total of 140 women were examined over the period 1985-1990 and 141 over the period 2014-2019. The prevalence of pathological drives and comorbidity were examined. All examined patients presented with pathology of will and emotion during psychological examination (Obozoda volitional disorder scale, Barratt impulsiveness scale, and Hamilton depression and anxiety scales). Additionally, the scope of pathological drives increased in the 21st century with the advent of communication technologies (internet addiction, the exchange of pathological drives and advice about their implementation through the internet), the availability of information of the illness, methods of losing weight. The combination of ED with schizophrenia led to bizarre methods of weight loss, explicit tales of purging behavior, recklessness concerning purging, and persistence of symptoms.

Conclusions: The pathomorphism of comorbid pathological drives in ED during the 35 years of observation of these patients was revealed. It was caused by social, biological, psychopharmacology factors. In 1985-1990 restrictive type of AN were observed more frequently, in 2014-2019 - purging type of AN and BN. The phenomenon of pathological drives in ED in the 21st century expanded in their manifestations to include Internet addiction, nicotine addiction, suicidal tendencies, sexual perversion, substance abuse, alcohol addiction, non-substance abuse, body modification. Pathological drives replaced each other during the course of illness or existed concurrently, exacerbating clinical presentation. BN is comorbid to more pathological drives than AN and often there are change from Eating Disorders on some other pathological drives.

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THE INFLUENCE OF COMORBID ENDEMIC GOITER ON THE QUALITY OF LIFE OF PATIENTS WITH GASTROINTESTINAL PATHOLOGY

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The impairment of adaptive mechanisms of functional systems of the body plays an important role in the occurrence of gastrointestinal diseases. This impairment is caused by unfavorable ecological and radiation conditions, external stress factors, food containing carcinogens, macro - and microelements deficiency. Technogenic environmental pollution contributes to decrease in the level of iodine in the body and more severe course of thyroid pathology. Diseases of the digestive and endocrine systems and their combination will occupy one of the leading places among the existing pathologies according to the forecasts of WHO experts in the XXI century. Adaptation of the body to various environmental influences is the most important factor in the quality of life. The relevance of the study was determined by the high incidence of psychological disadaptation, borderline personality disorders and, as a consequence, decrease in the quality of life in patients with gastrointestinal pathology and hypothyroidism. The article presents the results of comparative analysis of the quality of life indications of patients with gastric ulcer and / or gastroesophageal reflux disease in combination with hypothyroidism. The Russian-language analogue of the international questionnaire SF36 was used to analyze the indications of patients' quality of life. The results of the study will allow to formulate the diagnosis exactly and organize adequate, comprehensive multidisciplinary treatment.

Key words: quality of life - gastric ulcer - gastroesophageal reflux disease - thyroid gland - questionnaire SF 36

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ADOLESCENT DRUG USE, RELATIONAL VARIABLES AND PERSONALITY FACTORS

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Objective: An ongoing issue in the study of adolescent drug use is the impact of family and the peer group on the problem of adolescent substance use. The present study has examined relative effects of these contexts as well as personality variables on drug use outcomes.

Method: A test battery measuring various psychological variables was administered to a representative sample of 1652 secondary school students (grades 9 and 11), 876 male (mean age=17.61, SD=0.99) and 789 female (mean age=16.73, SD=1.31). Data about relationship to parents and association with deviant peers were collected, personality dimensions such as Neuroticism and Sensation Seeking were measured. Regression and discriminant analyses were conducted, then a decision tree model was created.

Results: Sensation seeking arose as the most significant predictor of substance use. Father-adolescent relationship had the highest predictive value primarily in male sensation seekers. Peer effects were stronger in comparison to parental influences. In adolescent boys, contact with deviant friends and sensation seeking constituted two independent pathways to drug use.

Conclusions: Our study highlights the necessity to give consideration to sensation seeking in prevention initiatives during adolescence, as well as the need for education of parents about parenting techniques recommended during adolescence.

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AWARENESS OF RARE DISEASES IN CHILDREN WITH NEURODEVELOPMENTAL DISORDERS: REVIEW OF PRESENT GUIDELINES AND OPPORTUNITIES FOR IMPROVEMENT

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Introduction: Pediatric rare diseases (RD) have received increased attention in recent years due to greater public awareness, significantly improved understanding and new opportunities for treatment for some of them. According to international research rare diseases can be identified in 30 - 60% of children with neurodevelopmental disorders (ND): autism spectrum disorders (ASD) and disorders of intellectual development (ID). In this paper we discuss the gaps in clinical guidelines for the identification, evaluation and management of children with ND associated with RD.

Methods: Review of the Russian federal guidelines for ASD (2015; 2020) and ID (2019). Review of the Russian federal guidelines for 22q11.2 deletion syndrome (2015), 17p11.2 deletion syndrome (2015) and Smith-Lemli-Opitz syndrome (2015) that were randomly selected from RD with clinical features of ND.

Results: There are no references to RD for the management of ASD in both guidelines (2015; 2020) and only few mentions of some RD in guideline for ID. On the other side, descriptions of ND as RD manifestation are very poor and incomplete in guidelines for RD management. There are no appropriate recommendations for ND cure in these guides. The problem is that guidelines were developed by monodisciplinary working groups (ASD or ID by psychiatrists, del(22q11.2) by hematologists, del(17p11.2) by geneticists). As a result, in some cases patients with complex needs cannot receive appropriate health care.

Conclusions: Diagnosis of ND should be accepted as red flag indicator for searching of underlying RD that can be cured or treated in some cases. Awareness of health care professionals about association of ND and RD is important for early identification and appropriate health care. Multidisciplinary working groups could overcome the gap in guidelines for the management of ND and RD.

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THE GOOD COMPLIANCE IS AN OPPORTUNITY TO AVOID PATHOLOGICAL BRAIN AGING

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Preservation of health, increase in life expectancy determine the need to improve the effectiveness of medical recommendations, which, despite the success of pharmacology, are insufficient for reasons related to the low level of compliance with these recommendations by patients. The authors of the article believe that compliance is a kind of quantifiable and behaviorally realized reflection of therapeutic interaction, refracted through the prism of the patient's individual personality characteristics. Participants of the study-148 employees of medical institutions: 12 men, 136 women, their age ranged from 27 to 74 years. The research tool was the neuropsychological rapid method. 3 research subgroups were formed: 27-40 years (37 people), 41-50 years (60 people), 51 years and older (51 people). Comparison of the results of subtests of neuropsychological Express technique showed heterogeneous results in subgroups of the study. In addition, the dynamic characteristics of psychological processes were evaluated: depletion, inertia, impulsivity. A significant difference in the performance of the graphomotor test between the subjects of the age subgroup of 27-40 years and the subgroup of 41-50 years was statistically confirmed. For the qualitative performance of this simple test requires a sufficient level of development of all structural and functional components of brain functions and, in particular, the "front" function of programming and management and consistent organization of movements. In older people revealed a much greater number of errors, interruptions of the test than the representatives of the more "young" subgroup. Similar results were obtained when comparing the "young" and "old" subgroups. Despite the absence of signs of decompensation of concomitant pathology, representatives of the subgroups took a different amount of concomitant therapy. Using the scale of assessment of drug compliance, it was found that compliance is most reduced in the subgroup of 41-50 years. In this subgroup, a comprehensive decrease in compliance across the "behavioral", "emotional", and "cognitive" domains was detected in 87.8% of cases, while in the younger subgroup partial non-compliance was 32.4%, in the older subgroup - 74.5% An analysis of the states of cognitive functions in 52 representatives of the middle age subgroup with low compliance rates showed that, unlike other representatives of the same subgroup, their indices for a number of neuropsychological tests are close to the results of more adult participants in the study. Individuals demonstrating low compliance with quite favorable CNS resources are at risk for the formation of pathological aging.

Key words: compliance - aging - cognitive aging

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GENDER FEATURES OF THE COGNITIVE RESERVE

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Relevance: the high risk of cognitive impairment in people of older age groups determines the relevance of the study of factors contributing to the preservation of cognitive potential at a young age, which is necessary to develop a cognitive reserve model aimed at preventing the transformation of physiological aging into pathological. Purpose: to identify the importance of the "gender" factor for the formation of a cognitive reserve. Methodology and research methods: the research material was scientific publications on the topic of work. The general scientific method was applied: analysis of modern scientific literature on the research problem, generalization, comparison, systematization of theoretical data regarding the "gender" factor, which helps preserve the normative parameters of cognitive functions in the late period of life. The research material was scientific publications on the topic of the work. The General scientific method is applied: analysis of modern scientific literature on the problem of research, generalization, comparison, systematization of theoretical data in relation to factors that contribute to the preservation of normative parameters of cognitive functions in the later period of life. Results: the "gender" factor is one of the factors determining the parameters of the cognitive reserve at a late age. Scientific novelty: for the first time, a systematic review of scientific literary sources was conducted, devoted to the analysis of the contribution of the "gender" factor to the formation of an individual's cognitive reserve. the concept of cognitive reserve is usually used in relation to old age, but there is no doubt that it is the total result of various activities that a

person has performed throughout life. Factors that determine the cognitive reserve, acquired factors that are implemented during the life of the individual and biological factors, one of which is the "gender" factor. The "gender" factor has a certain effect on the risk of developing late dementia. The proven Polo-specific differences in the structure of the brain, the dynamics of cognitive functions, which are implemented differently in men and women in ontogenesis, suggest the need for different approaches to the formation and maintenance of the cognitive reserve in men and women.

Key words: cognitive reserve - cognitive aging - aging - intellectual longevity

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NEUROFUNCTIONAL FOUNDATIONS OF NARCISSISM AS A PREDICTOR OF THE DEVELOPMENT OF PERSONALITY DISORDERS

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The term "narcissism" was introduced by Z. Freud in 1914 and originally denoted the orientation of the libido cathexis to the personality itself. Subsequently, the conceptual framework of narcissism was constantly changing. At present, the range of meanings of this concept is extremely wide: on the one hand, it is regarded as a synonym for the term "autism" (Bleiler 1911), on the other hand, it denotes a property of the psyche that is close to the concept of "field independence". Accordingly, the spectrum of possibilities for using narcissism as a diagnostic unit in the clinic is extremely wide. Moreover, due to the lack of a clear definition, this possibility is not realized at all. As a solution to this problem, in our opinion, there is only one way - an interdisciplinary approach to the study of this phenomenon. Thus, the aim of our work is to justify the presence of a morphofunctional basis of narcissism, formed on the basis of its study using pathopsychological and neurophysiological methods. Materials and methods: as an object of study, 183 people were selected with the presence of Icarus syndrome (Murray 1936), which is part of many common personality disorders (dissocial, borderline, etc.) and whose obligate sign is pronounced narcissism. All these individuals were examined by both cognitive and personal pathopsychological techniques. In addition, a cross-correlation analysis of the electroencephalogram was performed in order to determine the functional activity of the brain and the connections of its individual regions. The results of the pathopsychological examination indicate a violation in the examined group of integration of emotional and cognitive processes in the personality structure. Data of a neurophysiological examination demonstrate the presence of a predominant disruption of the right parietal lobe of the brain in the selected group of individuals. Taking into consideration that this area is the main associative zone of the II functional side according to A.R. Luria, it forms the neurobase of narcissism.

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CHARLES BONNET SYNDROME PREVALENCE IN A YOUNGER OPHTHALMOLOGY OUTPATIENT POPULATION

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Background: In the literature, most of the studies on Charles Bonnet Syndrome (CBS) were performed on older populations. This study aims to determine the prevalence and epidemiology of CBS and the nature of the hallucinations of the younger group of patients from an ophthalmology outpatient clinic of a university hospital.

Subjects and methods: Twenty-eight patients were randomly chosen from the outpatient ophthalmology clinic of a university hospital, and those who agreed to participate in the study were included. First, the patients were asked if they had ever seen visions that other people cannot when they were fully awake. The patients who were experiencing this symptom were given sociodemographic questionnaire and Psychiatry Institute Visual Hallucination Questionnaire, and asked to explain their hallucinations in detail. To exclude a psychiatric disorder, the participants were made a psychiatric interview as well.

Results: The study included 19 female (67.9%) and 9 male (32.1%) participants. Five patients (17.9%) were diagnosed with CBS. Average age of the patients diagnosed with CBS was 39.4 (min.31-max.48). Three of the 5 patients (60%) with CBS noted negative emotions (fear, wince and bewilderment) about their hallucinations.

Conclusions: The prevalence of CBS (17.9%) we've found is compatible with the medical literature. CBS may also be accompanied by "relatively milder" ophthalmologic problems (myopia, astigmatism, etc.). The hallucinations which CBS patients experience could be quite distressing, and the individuals might have hard times to reveal their complaints because of the apprehension of stigmatization. To inquire this symptom during clinical examination may be the first step to help these individuals.

Key words: signs and symptoms - perceptual disturbances - hallucinations - Charles Bonnet Syndrome

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MENTAL DISORDERS AS INFLUENCING FACTORS FOR DISCORDANCES IN THE SIGNS AND SYMPTOMS OF DRY EYE DISEASE

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Dry eye disease (DED) is a multifactorial disease of the tear film and ocular surface representing one of the most common problems in ophthalmological practice. Characteristic symptoms of DED include gritty, sandy foreign body sensation as well as visual disturbances that have a negative impact on the patient's daily activities and social life. It is often assumed that the symptoms of dry eye are the main features of this disease, however, the symptoms do not always coincide with the signs and the results of diagnostic tests and the cause of this discordance in perception is still unclear. Numerous studies have been conducted in order to determine the cause of these discrepancies. Mental health disorders may be one of considerable contributing factors for dry eye symptoms and undiagnosed mental health conditions can be an influencing element for unexplained levels of DED symptoms. Depression, anxiety, stress, hypochondriasis, neuroticism, sleep and mood disorders may be associated with the exacerbation of symptoms to degrees that are not consistent with the objective signs related to tear dysfunction as well as changes in the anterior surface of the eye. Thus, a detailed medical history, thorough ophthalmological examination and referral to a psychologist or psychiatrist may be essential in the treatment of patients whose symptoms do not correlate with objective evidence of DED

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FEAR OF BLINDNESS IN PATIENTS UNDERGOING CATARACT SURGERY

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Background: Fear is a negative emotion induced by the threat of danger, pain and harm. Cataract surgery is one of the most performed surgeries in the world. The aim of this study was to investigate and analyze the predominant fears in patients undergoing cataract surgery.

Subjects and methods: In this cross-sectional study 152 patients were examined. Self-designed questionnaires to examine emotions of the fear, anxiety, nervousness frequency gratitude was used and insecurity immediately before cataract surgery. We also examined what the greatest fear during the cataract surgery was. The fear of blindness was compared with other life fears such as cancer, memory loss, AIDS, stroke and heart attack. The presence of fear was compared in patients having had previous cataract surgery with those undergoing their first cataract surgery. Including criteria were adults with senile cataract. Excluding criteria was ocular co-morbidity, psychiatric disorders, inability to read, deafness and surgery under general anesthesia. Completed questionnaires were analyzed. Pearson's chi-squared test was used.

Results: Fear was the most frequent emotion before cataract surgery, present in 60.5% patients. Fear of blindness was the greatest fear during cataract surgery in 55.3% of patients. There was no statistically significant difference in fear in patients having undergone their first cataract surgery and patients before their second cataract surgery ($p < 0.05$).

Conclusion: Fear is the predominant emotion before cataract surgery which is in correlation to the leading life fear - fear of blindness. Good preoperative preparation and a trusting doctor-patient relationship are important for reducing the fear of the procedure.

Key words: fear - blindness - cataract

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LEVEL OF DEPRESSION, ANXIETY AND IMPAIRMENT OF SOCIAL RELATIONS WITH REGARD TO PAIN INTENSITY IN A NATURALISTIC SAMPLE OF PATIENTS AT THE OUTPATIENT CHRONIC PAIN CLINIC

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Background: A high rate of concurrent depression and anxiety has been identified among the patients of pain clinics. Evaluation of own pain can appear as a perception of being negatively impacted by pain-related suffering in social relations.

Subjects and methods: A questionnaire with 228 variables was applied to 109 randomly chosen patients at outpatient pain clinic of the Ljubljana University Clinical Centre. Following summative scores were treated as a set of dependent variables in MANOVA, as a set of predictors in discriminant analysis: level of depression (Zung), level of anxiety (Zung), evaluation of the nature of pain and perceptions of negatively impacted social relations. Actual pain has been self-evaluated on a visual-analogue pain scale from 0 to 10 and recorded in subgroups with a low, middle and high intensity of actual pain (criterion variable).

Results: The average age of the participants was $M=52.7$ years ($SD 13.9$), 70.9 % of them female. Participants with a high intensity of pain were found to have the highest level of depression, the highest level of anxiety and were negatively impacted in their social relations to the greatest extent. Only the first discriminant function was found to be significant ($p < 0.05$). The structure matrix showed a high correlation between anxiety level (0.88) and depression level (0.86), and a low correlation with the perception of negatively impacted social relations (0.57).

Conclusions: The results emphasize the connection between pain intensity, anxiety, depression and interpersonal relational issues in the context of patients with chronic pain at an outpatient pain clinic. Anxiety and mood were found to be the best predictors for the perception of pain intensity. The results are preliminary, but significantly support the multidisciplinary collaboration of treatment at a pain clinic with mental health professionals.

Key words: chronic pain - anxiety - depression - impact on social relations

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GENETIC AND EPIGENETIC FINDINGS ON MONOAMINE OXIDASE A GENE IN THE SEE-PTSD COHORT

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Introduction: Posttraumatic stress disorder (PTSD) is a syndrome that develops following exposure to traumatic events. There is substantial interindividual variability in the risk of PTSD, which is influenced by a genetic predisposition, specific characteristics of the stress, and epigenetic mechanisms. Association studies for PTSD showed that various neurotransmitter systems may confer susceptibility to PTSD. Monoaminergic transmission is central to wide-ranging behavioral and physiologic functions, including stress responses and mental health. In this paper we provide an overview of genetic and epigenetic findings on monoamine oxidase A gene in the SEE-PTSD cohort.

Subjects and methods: The study involved a total of 794 subjects from five sites in three SEE countries (Croatia, Bosnia and Herzegovina and Kosovo) whose population has experienced war trauma. The sample is gender-balanced. The subjects were assessed with standardized psychometric instruments (CAPS, CSRI, BSI and Folkman Lazarus Coping Scale), socio-demographic questionnaire and Life stressor list. We genotyped 385 patients with PTSD (234 with current PTSD and 151 with lifetime PTSD), and 355 healthy probands with no PTSD. Genotypes and alleles distribution of the monoamine oxidase A gene were compared between groups. Monoamine oxidase A methylation was analyzed via direct sequencing of sodium bisulfite-treated DNA extracted from blood cells in a total sample.

Results: We found nominally significant genetic associations in PTSD, but none of the associations remain significant when Bonferroni correction was strictly applied. The epigenetic analysis showed hypermethylation of 3 CpGs (CpG3 = 43,656,362; CpG12 = 43,656,514; CpG13 = 43,656,553, GRCh38.p2 Primary Assembly) in the MAOA gene exon1/intron1 region in male with current PTSD, as well as PTSD symptom severity significantly correlated with MAOA methylation.

Conclusion: Only nominally significant association was found for the monoamine oxidase A gene in relation to PTSD. The epigenetic findings suggest a role of MAOA hypermethylation as an epigenetic marker of PTSD.

Key words: posttraumatic stress disorder, MAOA gene, DNA methylation, epigenetics

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LOCAL CRYOTHERAPY, COMPARISON OF COLD AIR AND ICE MASSAGE ON PAIN AND HANDGRIP STRENGTH IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: The main benefits of cryotherapy in rheumatoid arthritis (RA) are in reducing inflammation and swelling and in relieving joint pain. This study aimed to compare the short-term effects of cold air therapy vs. ice massage, on pain and handgrip strength (HGS) in patients with RA.

Subjects and methods: The study is a non-randomized clinical trial. Patients were recruited if they had disease activity score (DAS28) ≥ 3.2 with at least 2 swollen joints on the dominant hand and were consecutively divided into two groups of 15 patients. There was no statistically significant difference in DAS28 score between groups. The first group received cold air therapy at $-30\text{ }^{\circ}\text{C}$ and the second ice massage of the hands. The pain (visual analogue scale, 0-10), and HGS (kg) were measured immediately prior and after cryotherapy, and 30 and 60 minutes after cryotherapy. Descriptive statistics, Independent Samples T-test, and Paired Samples T-test were used for statistical analysis.

Results: Pain intensities for cold air therapy were as follows: 5.33 (± 2.44), 3.13 (± 2.67), 2.87 (± 2.56), 2.80 (± 2.73), and for ice massage were: 5.20 (± 2.37), 2.87 (± 2.42), 2.60 (± 2.23), 2.67 (± 2.28). In both groups pain was significantly lower immediately after, 30 and 60 minutes after the treatment compared to the baseline ($p=0.001$). There was no significant difference in pain alleviation between the groups regarding the used method of cryotherapy on all three measured time points. Nonsignificant improvement in HGS occurred after both methods of cryotherapy. There was no significant correlation between pain intensity and HGS.

Conclusions: A single application of cold air therapy and ice massage equally provides immediate and significant pain alleviation in patients with active RA, which is maintained for one hour.

There is scientific evidence that HGS is influenced greatly by the disease activity. A single application of cryotherapy could not reduce disease activity explaining recorded nonsignificant effect on HGS.

Key words: rheumatoid arthritis - cryotherapy - pain - handgrip strength

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ANTI-TNF THERAPY AND THE RISK OF MALIGNANCIES AND INFECTIONS IN INFLAMMATORY RHEUMATIC DISEASES - OUR EXPERIENCE

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Background: Early diagnosis is the key to successful treatment of inflammatory rheumatic diseases and the use of conventional disease-modifying antirheumatic drugs (csDMARD) and biologic disease-modifying antirheumatic drugs (bDMARD) or biologics have substantially contributed to better disease control. Biological drugs have been approved for the treatment of rheumatoid arthritis (RA), juvenile arthritis (JIA), ankylosing spondylitis (AS) and psoriatic arthritis (PsA).

Subjects and methods: The study involved 79 adult patients with rheumatoid arthritis (RA) and ankylosing spondylitis (AS), psoriatic arthritis (PsA) or undifferentiated spondyloarthropathy (USpA) - the

last three clinical entities belong to a common group called spondyloarthropathies (SpA); receiving anti-TNF therapy at the department of Rheumatology and Rehabilitation, Clinical Hospital Center Zagreb. The duration of therapy was a minimum of 1 month, with the mean duration of 32,0±24,0 months. The infections recorded were infections that appeared during treatment or soon after the treatment was stopped.

Results: During the course of therapy 17 patients (21.5%) experienced an infection, with the total number of 21 infections. This resulted in an overall incidence rate (IR) of 9.9/100 patient-years. Of the patients with RA 76,5% developed an infection, which was significantly higher than for patients with SpA ($p < 0.001$). The IR/100 patient-years for all infections in RA patients was 23.7 compared to 2.8 in patients with SpA. Female gender was associated with a significantly higher infection rate (70.6%, $p = 0.005$). There were 8 infections that were considered serious, yielding an IR of 3.8/100 patient-years. There was only one malignancy case in our study.

Conclusion: Every fifth patient developed an infection during the course of anti-TNF therapy, and more than one third of all infections were serious. RA and female gender was associated with a significantly increased number of infections.

Key words: anti-tnf therapy - inflammatory rheumatic diseases - infections - malignancies

COMORBIDITIES IN ALCOHOL USE DISORDERS IN TUZLA CANTON AREA - BOSNIA AND HERZEGOVINA

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Introduction: Previous research has shown the simultaneous presence of health diseases and alcohol use disorder (AUD). This research emphasizes the importance of individual diseases, the simultaneous presence and connection of different diseases, which creates the conditions for more adequate treatment of patients with AUD.

Determine somatic, neurological and psychiatric diseases in patients with AUD in the Tuzla Canton (TK) in the period from 01.01.2011. to 31.12.2015.

Subjects and methods: A retrospective study on the systematic cause of 1,863 patients with AUD recorded in the TK health system.

Results: Among 1004 (53.9%) patients with AUD, somatic diseases were present; in men: arterial hypertension 573 (31.7%), alcoholic liver disease 269 (14.9%), diabetes mellitus 211 (11.7%); and in women: arterial hypertension 27 (49.1%), diabetes mellitus 27 (49.1%), elevated lipoproteins 3 (5.5%); alcoholic liver disease 1 (1.8%) and anemia 1 (1.8%). Among 1196 (64,2%) patients with AUD, neurological diseases were present; in men: cognitive impairment 627 (34.7%), post-stroke condition 418 (23.1%), polyneuropathy 269 (14.9%); and in women, post stroke condition 28 (50,9%). Psychiatric comorbidity was determined in 1619 (86.9%) patients with AUD; in men: depressive disorder 806 (44.6%), personality disorder 660 (36.5%), while nicotine addiction 27 (1.5%) and dementia 13 (0.7%) were least present; in women: personality disorder 33 (60.0%), neurotic disorder 27 (49.1%), depressive disorder 22 (40.0%). The largest number of patients with somatic (787 or 42.25%), neurological (939 or 50.40%) and psychiatric comorbidity (939 or 50.40%) belonged to the age group 55-64.9 years.

Conclusion: Slightly more than half of the patients with AUD were diagnosed with somatic diseases, almost two thirds were diagnosed with neurological diseases and with more than four fifths of patients were diagnosed with psychiatric diseases. Of the somatic diseases the most common ones were, arterial hypertension, diabetes mellitus, and alcoholic liver disease; from neurological diseases: cognitive impairment, post-stroke condition and polyneuropathy; and the most common of psychiatric illnesses were depressive disorder and personality disorder. The largest number of patients are in the ages of 55-64.9.

Key words: medical characteristics - alcohol use disorder - Bosnia and Herzegovina

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ALCOHOL ABUSE IN THE DENTAL PATIENT AND TEMPOROMANDIBULAR DISORDER CAUSED BY TRAUMA

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The aim of the paper was to describe the multidimensional character of alcoholism and its effects on oral health, with a review of the relation between the traumatogenic factor of temporomandibular disorders (TMDs) and bruxism development. The difference between moderate drinking and the development of alcohol addiction which leads to alcoholism-related medical, social, legal and economic issues is not always clear. Alcoholism is often hidden within the private and wider social framework of a patient. Oral diseases are easy to notice in recorded alcoholics as well as in, for example, smokers. TMDs consist of a disorder of masticatory muscles and/or a disorder of temporomandibular joint (TMJ). Since the traumatogenic factor of individuals under the influence of alcohol is clearly evident, it can potentially become an initializing factor of TMJ disorder's clinical signs and symptoms development. A modern approach to the etiopathogenesis is to include the multifactorial model, that is, combinations of potential factors with various individual importances. In everyday dental practice, co-morbidities of oral diseases and alcoholism are expected more often, as well as oral diseases with their etiopathogenesis partially related to alcohol use.

Key words: alcoholism - oral health - temporomandibular joint - trauma - bruxism

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ALCOHOL ABUSE AMONG WOMAN AND CHALLENGES; TREATMENT OF WOMAN'S SUFFERING AND CHAIN FOR HER STRENGTH

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Women's importance in family and society is undoubtful. Her support and effort are longlasting. Multi-tasking-oriented women went through liberalization and centuries taking all their roles, but also accumulating stress and experiencing obstacles on the way to serve everyone: as a woman, mother, lover, colleague, daughter, friend... When feeling anxious, depressed, unsuccessful, she rarely uses coping mechanisms as before; talking and crying. She shows willingness to use typically "male mechanisms" - drinking too much: Alcohol use and abuse in women is increasing.

Team of professionals dealing with alcohol and other addictions in our Daily Hospital is a female team treating both women and men. However, we noted particular needs from women. There was a need for specified individual and group therapy in order to build her self-confidence, self-respect and orientation to priorities due to violence in the past (both verbal and physical) - they felt neglected, frightened and humiliated. Work with soul, but also with body is important and care for biological, psychological, social and spiritual aspects of her personality is required.

There was also need for treatment of women who were supporters to alcoholic partners - experiencing a "burn-out" after repeated attempts to help them. Transdisciplinary integrative approach included close cooperation between a psychiatrist, clinical psychologist, trained med-nurses, social worker and occupational therapist with relations established with GPs and social services.

Awareness about needs for human rights protection for women led us to partnership with 'Ženska soba' ('Woman's room') which is a non-governmental organisation and this ongoing project is approved by the Ministry of Health. Main goal is not just psychological support but also continuing education and sensibilisation for professional staff. Our pioneer form of collaboration between governmental and non-

governmental institutions makes us proud because we are working on relevant problems (female alcoholism, depression, human rights and breaking the stigma) all together.

Some recommendations for treatment in the future are also discussed.

Key words: alcohol abuse - woman - need for gender specific treatments - unified support for mental health and strong woman - governmental and NGO initiatives

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RESILIENCE AND QUALITY OF LIFE OF PATIENTS WITH BREAST CANCER

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Introduction: Breast cancer is the most common malignancy in women. Modern research attempts to investigate the relationship between psychoemotional parameters and the length of survival of breast cancer patients. Understanding the factors which affect a higher level of resilience can have important clinical implications and can represent a guiding principle for designing psychological interventions that would accelerate recovery and improve the quality of life of cancer patients. To explore the relationship between resilience and quality of life of women with breast cancer.

Methods: The study was conducted at the Clinic of Oncology of the University Clinical Hospital Mostar, which included 60 subjects. Objective realization was achieved through using the socio-demographic questionnaire purposely made for this research, the quality of life questionnaire WHQOL-BREF and the psychological resilience questionnaire CD-RISC-25.

Results: Subjects treated with radiotherapy achieved statistically significantly higher scores on sub-scales of the quality of life: mental health, social relations, and the environment. No statistically significant correlations were found between the level of resilience and results in the domains of quality of life.

Conclusion: There is not a statistically significant association between resilience levels and quality of life in patients with breast cancer.

Key words: resilience - quality of life - breast cancer

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PHANTOM EARTHQUAKE SYNDROME - A PILOT STUDY AFTER ZAGREB AND BANOVINA 2020 EARTHQUAKE

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Impact of earthquake on mental health is well-documented globally. A number of earthquake survivors after Zagreb and Banovina earthquake in the year 2020 reported a phenomenon of phantom earthquake. Telephone pilot study on phantom earthquake symptoms was conducted with semi-structured interview in earthquake survivors. Phantom earthquake is manifested as a false sense of earthquake-motion, accompanied with vegetative and motor symptoms with psychological distress and behavioral change that interfere with expected daily functioning. We propose an operational model for the phantom earthquake syndrome and discuss possible underlying neurobiological mechanisms to be further investigated in studying of the phantom earthquake syndrome.

Key words: earthquake - distress - motion

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CARDIAC SYMPTOMS THROUGH THE LENS OF A PSYCHODYNAMICS APPROACH: A CASE REPORT OF MYOCARDIAL INFARCTION

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Despite having been in focus of psychodynamic perspectives for many decades, coronary symptoms are still a clinical challenge. We postulate a psychodynamic approach in a case of Mr. V who presented with non-ST-elevation myocardial infarction (MI) at University Hospital Centre Zagreb. Mr. V described a traumatic childhood with out-of-home foster placement with grandparents as caregivers. He often witnessed grandmothers cardiac problems. Due to academic misfortune, he started to work at a construction site from an early age, and during the interview described building his family house in depth. Recent admonition from his investor was understood as a trigger for cardiac symptoms. We analyze possible psychological etiological mechanisms observed in this patient for MI development.

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ANXIETY OF PATIENTS AT MAGNETIC RESONANCE IMAGING SCREENING

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Introduction: Anxiety is a state of feeling helpless and insecure, a state of anticipation and concern that something bad will happen. Fear of pain and the unknown, as well as fear of screening results can increase anxiety. Severe anxiety during magnetic resonance imaging (MRI) can cause patient's movement, leading to poorer imaging and reduction in the quality of the diagnostic test. To determine the anxiety of patients before and after magnetic resonance imaging and to investigate the relationship between the tested anxiety and the socio-demographic characteristics of the patients.

Methods: The study was conducted at the Department of Radiology of the University Clinical Hospital Mostar in the period from February 1st 2020 to March 31st 2020. The study included 100 subjects who were prescribed an MRI screening at the time of the study. A socio-demographic questionnaire specifically designed for this study was used to obtain data on subjects such as gender, age, place of residence, smoking, drinking alcohol, economic status, religiosity. The Anxiety Questionnaire as a State-Trait Anxiety Inventory (STAI) was used to examine anxiety.

Results: A statistically significantly higher degree of anxiety was determined after MRI screening ($p < 0.001$). Male subjects achieved a statistically significantly higher degree of anxiety before ($p = 0.019$) and after ($p = 0.034$) MRI screening. There were no statistically significant correlations between the age of the subjects and the results achieved on the anxiety tests before and after the MRI screening.

Conclusion: Subjects who were prescribed an MRI screening have a statistically significantly higher degree of anxiety after the screening. Male subjects had a statistically significantly higher degree of anxiety on MRI screening.

Key words: anxiety - magnetic resonance

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THE ROLE OF FAMILY PHYSICIANS IN THE PREVENTION AND EARLY DETECTION OF CANCER IN HERZEGOVINA-NERETVA AND WEST-HERZEGOVINA CANTON

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Background: This study aimed to investigate and analyze the role of family physicians (FPs) in counseling and encouraging early cancer prevention, their perception of value systems towards health and disease

(especially malignant diseases), knowledge and experience with the national and local cancer early detection program.

Subjects and methods: A cross-sectional observational study included 38 general practitioners (GPs)/FPs from nine municipalities in the Hercegovina-Neretva and West Herzegovina canton. Data were collected by using an Individual questionnaire for all GPs/FPs which was prepared according to the Questionnaire for family physicians on implementing the Cancer Control Program, which is used in Croatia.

Results: Statistical analysis showed that most FPs carried out activities on primary cancer prevention (educating patients about smoking, alcohol, diet, physical activity, cancer education, and screening). The majority of respondents stated that it was not profitable to do screening for lung cancer and stomach cancer. Most FPs (73.7%) recommended mammography to women individually, sporadically, according to individual risk assessment.

Conclusions: The scientific contribution and the results of this work can be applied in practice in local communities. Given its position in the health system, ongoing contact with the population that elected it, and its impact on the local community in which it operates, FP plays an important role in the prevention of disease. Integration of preventive activities into the daily work of the doctor plays the most important role in achieving excellent results. Family medicine is primarily focused on primary and secondary prevention, which is carried out through a continuous approach and long-term management of patients.

Key words: neoplasms - preventive medicine - physicians - family

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INFORMED PATIENT IS SATISFIED PATIENT - QUALITATIVE STUDY OF PATIENTS' EXPERIENCE AFTER TOTAL HIP ARTHROPLASTY

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Background: Total hip arthroplasty is “gold standard” in surgical treatment of hip osteoarthritis but we still lack quality information on patients' perspective. Preoperative narrative approach as instrument of patient-centered paradigm that provide detailed information tailored to the patients' needs, might give patient control over the whole process and better outcomes. The aim of this article is to explore the lived experience of patients from onset of disease to final treatment.

Subjects and methods: This is a qualitative study using direct content analysis. Data were collected through semi-structured interviews with 33 patients who undergone total hip arthroplasty in Special hospital for orthopedics in Biograd na Moru, Croatia, 6 to 9 months after surgery. Interviews were coded and organized to themes.

Results: Three main themes emerged and all themes were closely related to information available: 1) Pre-operation information (information about disease and coping with it, pain management, exercise for muscle and joint function maintenance), 2) Information about operation and technical information (waiting list transparency, type of implant, possible complications and risks), 3) After operation information (early rehabilitation, stationary rehabilitation, quality of life after operation).

Conclusion: Our findings reveal that patients experience lack of information prior to referral to our hospital. Involving patients in the process through good communication with doctor and providing extensive information on what to expect before and after surgery, and how surgery will affect quality of life, make them feel that they progress better. Identifying hidden barriers and enablers might help in patients' healing process. Our results indicate that preoperative narrative approach was a worthy time investment that contributed to patient general satisfaction.

Key words: patient-centered care - total hip arthroplasty - direct content analysis - narrative approach - patients' satisfaction

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DEPRESSION IN ELDERLY - JUST A SMALL PROBLEM OR SOMETHING MORE?

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Background: Depression is the most common mental disorder in old age with a major impact on quality of life, morbidity and mortality. In daily work, various tests are used in terms of screening to detect suspected depressive disorder. One of the most commonly used tests is the so-called Geriatric Depression Scale-15 (GDS-15). The aim of our study was to determine the incidence of depressive symptoms in patients hospitalized in the geriatric ward.

Subjects and methods: A retrospective analysis included a total of 473 subjects (170 men and 303 women), with an average age of 83.8 years (minimum 65 years, maximum 101 years). GDS-15 was tested in all subjects (a positive test implies a GDS-15 score of ≥ 6). The results obtained were then statistically processed.

Results: Of the total of 473 subjects, 105 (22.2%) were positively tested for depressive symptoms (34 men and 71 women). Most of these live in the usual domestic setting (79.4% men and 74.6% women). In women, the symptoms are mostly present (49 women -69.0%) in women living alone (widowed, divorced or unmarried). The male respondents were mostly men living in a partner community (22 men - 64.7%).

Conclusion: The results obtained confirm the high incidence of depressive symptoms in the patients hospitalized in the geriatric ward. Depression is not a normal part of ageing and must be considered as a serious medical problem. Therefore, routine screening is necessary to identify the depressive symptoms, to detect and diagnose depression to begin treatment for such patients on time in order to improve the quality of life of the elderly.

Key words: depression - Geriatric Depression Scale - elderly

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ANXIETY AND DEPRESSION AS COMORBIDITIES OF MULTIPLE SCLEROSIS

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Multiple Sclerosis (MS), a chronic inflammatory neurodegenerative disease, is accompanied by a number of comorbidities. Among the psychiatric ones, depression and anxiety occupy a special place. It is estimated that the prevalence of anxiety in the MS population is 22.1% versus 13% in the general population; whereas the prevalence of anxiety levels, as determined by various questionnaires, reaches even 34.2%. Systematic literature reviews (SPL) show considerable data variations due to differences in study design, sample size, diagnostic criteria and extremely high heterogeneity (I^2). Among the more conspicuous factors associated with anxiety disorder in MS are demographic factors (age and gender), nonsomatic depressive symptoms, higher levels of disability, immunotherapy treatments, MS type, and unemployment. Depression is the most common psychiatric comorbidity in MS and the lifetime risk of developing depression in MS patients is $>50\%$. According to some research, the prevalence of depression in MS vary between 4.98% and 58.9%, with an average of 23.7% ($I^2=97.3\%$). Brain versus spinal cord lesions, as well as temporal lobe, fasciculus arcuatus, superior frontal and superior parietal lobe lesions in addition to the cerebral atrophy have been shown to be the anatomical predictors of depressive disorder in MS. Hyperactivity of the hypothalamic-pituitary-adrenal axis (HPA) and the consequent dexamethasone-insuppressible

hypercortisolemia, in addition to cytokine storm (IL-6, TNF- α , TGF β 1, IFN γ /IL-4) present the endocrine and inflammatory basis for development of depression. Fatigue, insomnia, cognitive dysfunction, spasticity, neurogenic bladder, pain, and sexual dysfunction have shown to be additional precipitating factors in development of anxiety and depression in MS patients.

Key words: multiple sclerosis, depression, anxiety, comorbidities

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MENTAL HEALTH CARE PROFESSIONALS AND STRESS MANAGEMENT

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Introduction: Mental health and addiction prevention Introduction: Mental healthcare is one of the most stressful professions and staff are exposed to stress in their everyday work. Chronic stress or excessive strain at work can have serious mental health consequences that directly impact productivity. Repeated negative experiences in the workplace can lead to a sense of estrangement, which only heightens the negative impact on health and well-being. By taking care of professionals' mental health and wellbeing we increase the quality of care for patients also. To determine levels of stress and their underlying causes among staff in the Department of Mental Health and Addiction Prevention who directly care for 3.451 patients with mental health problems.

Methodology: Two self-administered, validated questionnaires were completed by staff members during May 2019.

Results: Staff members reported high levels of general stress in the past month, while levels of work stress were not as high, but increased statistically significantly over time due to work organization and financial factors according to the Work Stress Questionnaire. Employees who worked in the Department for more than 5 years found shift work more stressful than those with regular work hours. Men reported significantly more Risk and harm at work than women. Unrealistic expectations and communication difficulties with patients or family members are occasionally a source of greater stress. Some employees showed a very high level of perceived stress on all measured factors and indicators. These findings suggest that stress monitoring and mental health protection for the employee is essential.

Conclusion: Work can indeed be a risk factor for mental health, but it has also been proven that work can be a source of mental strength and contribute positively to overall mental health and well-being. With good leadership and a supportive work environment, work serves as a "health resource". It is important to proactively support the mental health of employees to ensure prevention in the workplace. Promoting mental health is a core element of a group's health, safety and well-being strategy and should be an integral part of work organization. In the development and implementation of stress prevention programs we need to talk openly about problems and challenges at all levels, and empower staff through continuous stress management training so that they can adequately manage sources of stress.

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THE RADIOLOGIST WORKLOAD INCREASE; WHERE IS THE LIMIT? MINI REVIEW AND CASE STUDY

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Introduction: Radiologist workload had increased significantly within the past three decades. In 2006-2007, the average annual workload per FTE radiologist was 14,900 procedures, an increase of 7% since 2002-2003 and 34.0% since 1991-1992. Annual RVUs per FTE radiologist were 10 200, an increase of 10% since 2002-2003 and 70.3% since 1991-1992.

Subjects and methods: The study included worksheets data of three radiology specialists in their first three years as specialists. Data were collected and analyzed retrospectively for the period frame January 1st to September 21st 2018. The total data of imaging procedures by one radiologist had been collected and then separated by different imaging procedures as followed.

Results: Average total number of imaging procedures per radiologist was 2785. Separately, there were: 850 bone X ray images, 550 chest X rays, 250 ultrasound examinations, 860 CTs and 256 MRIs. Daily average of analyzed imaging procedures per radiologist was as followed: 7.4 bone X ray images, 4.8 chest X rays, 2.2 ultrasounds, 7.5 CTs and 2.2 MRIs. Total working time per radiologist in the analyzed time period was 684 hours. Average time spent for analyzing per one imaging procedure was 14 minutes and 45 seconds spread in total 114 working days.

Conclusions: The conclusion is that current workload for a radiology specialist obviously represents a necessity to be thoroughly explored. This case study and previous literature results indicate that a well constructed large scale study represents a potential in resolving the previous studies limitations and providing relevant data, so correct measures and guidelines could be developed.

Key words: radiology - workload - relative value units

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SEXUAL DYSFUNCTION IN PATIENTS WITH EPILEPSY

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Background: Patients with epilepsy commonly report sexual dysfunction (SD) and reproductive difficulties. This study aimed to evaluate the relationship between epilepsy, antiepileptic drugs (AEDs) and SD, and its association with the quality of life and depressive symptoms.

Subjects and methods: This was a prospective study carried out in a tertiary healthcare centre. SD was evaluated using the internationally acclaimed questionnaire Arizona Sexual Experiences Scale (ASEX) that was successfully translated into Croatian and validated for this purpose. Depressive symptoms and quality of life were evaluated using the Hamilton Rating Scale for Depression (HAM-D17) and Quality of life in epilepsy-31 inventory (QOLIE-31).

Results: Of 108 patients (68 (63 %) women, 40 (37 %) men, mean age 39.54±15.91 (range 18-80) years) with epilepsy, 16 (14.8%) had focal, 38 (35.2%) generalized and 44 (40.7%) both types of epilepsy. Mean overall total score on the ASEX questionnaire was 11.94±5.61 (mean total score women 12.85±6.00, mean total score men 10.4±4.55), with 48 reporting that they had sexual activity in the past week. Nine (8.33%) patients (7 (6.48%) women, 2 (1.85%) men, mean age 47.66±19.33 (range 25-80) years) had a score 19 and above, 38 (35.18%) patients (27 (25%) women, 9 (8.33%) men, mean age 46.82±17.78 (range 19-80) years) individual score 5 and above on any one item, and 33 (30.55%) patients (26 (24.07%) women, 7 (6.48%) men, mean age 48.87±17.8 (range 19-80) years) had an individual score 4 and above on any three items. Significant correlations were found between SD and older age (p=0.001) and between more pronounced symptoms regarding SD on ASEX and female gender (p=0.000). There were no significant correlations between the type of epilepsy and SD, nor between the AEDs (old generation vs. modern) and SD. Significant correlations were found between the SD and more pronounced depressive symptoms (p=0.003) and between the SD and a lower quality of life (p=0.001).

Conclusions: Results of our study suggest SD is experienced by around one-third of patients in our group, which is similar to the previous percentage of SD reported in the community sample. Women were found to experience more pronounced symptoms of SD on ASEX. Symptoms of SD were found to be significantly correlated with older age, female gender, lower quality of life and depressive symptoms, while no significant correlations were found with the type of epilepsy and the AEDs.

Key words: epilepsy - sexual dysfunction (SD) - Arizona Sexual Experiences Scale (ASEX) - depression - quality of life (QoL)

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DEPRESSION AND QUALITY OF LIFE IN PATIENTS WITH EPILEPSY - SINGLE CENTRE EXPERIENCE

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Background: Patients with epilepsy commonly report depressive symptoms. The main aim of this study was to evaluate the relationship between epilepsy, antiepileptic drugs (AEDs) and depression. We also wanted to evaluate possible association between depressive symptoms in patients with epilepsy with the quality of life (QoL).

Material and methods: This was a prospective cross-sectional study carried out at the tertiary teaching hospital (University Hospital Centre Zagreb, Croatia) with Ethics committee approval. Questionnaires evaluating depressive symptoms and QoL were administered to consecutive patients treated in the Referral Centre of the Ministry of Health of the Republic of Croatia for Epilepsy. Depressive symptoms were evaluated using Hamilton Rating Scale for Depression (HAM-D17). Quality of life was assessed using Quality of life in epilepsy-31 inventory (QOLIE-31)

Results: 108 patients (63% women, 37% men; mean age 39.54±15.91 years, range 18-80 years) with epilepsy were included. 14.8% of patients had focal, 35.2% generalised and 40.7% both types of epilepsy. Majority of patients (65.74%) were on two and more AEDs and quarter was on monotherapy (25%); 42% were on newer, 19% on older and 39% on both AEDs. Mean total score on HAM-D17 was 9.94±8.18 (men - mean total score 10.16±8.85, women - mean total score 9.81±7.84). There were no significant differences on HAM-D17 regarding gender and age. We didn't find statistically significant differences regarding AEDs (older vs. newer AEDs, or both types AEDs) and results on HAM-D17, nor between the type of epilepsy and results on HAM-D17. We found strong negative correlation between the higher QoL and HAM-D17 (p=0.000).

Conclusions: Results of this study evaluating depressive symptoms in patients with epilepsy demonstrate that our patients mainly experience mild depressive symptoms, with no significant differences on HAM-D17 regarding gender and age. Patients with epilepsy with less pronounced depressive symptoms were found to have higher QoL. We did not find statistically significant differences regarding the type of epilepsy and results on HAM-D17, nor between the AEDs (older vs. newer AEDs, or both types AEDs) and results on HAM-D17.

Key words: epilepsy - antiepileptic drugs - depression - quality of life

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OTHERS ARE TO BLAME (DISPLACEMENT IN PATIENTS WITH DRUG-RESISTANT EPILEPSY)

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Objective: To evaluate the defense mechanisms (DM) in patients with drug-resistant epilepsy and, to determine whether displacement is associated with seizures.

Subjects and methods: Following an examination, 50 patients were diagnosed in accordance with the 2005 proposal of the International League Against Epilepsy and the definition of drug-resistant epilepsy from 2010. The neuropsychological examination used the Defense Style Questionnaire (DSQ-40). We measured the intensity of individual DMs. Mature DMs: sublimation, humor, suppression and anticipation; neurotic DMs: undoing, pseudo-altruism, idealization and reactive formation; and immature DMs: projections, passive aggression, acting out, isolation, devaluation, autistic fantasies, denial, displacement, dissociation, splitting, rationalization and somatization. The values were compared with 50 subjects without epilepsy.

Results: Patients with drug-resistant epilepsy use immature defensive styles significantly more ($p=0.0010$). Displacement have a positive correlation with frequency of seizure ($p=0.0412$).

Conclusion: Blaming others is a characteristic of the behavior of patients with drug-resistant epilepsy, especially if they have seizures. As such, they may be less adaptable in a micro social environment.

Key words: drug-resistant epilepsy - defense mechanisms - displacement - social behavior

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COGNITIVE FUNCTIONALITY OF PATIENTS WITH DELIRIUM AFTER STROKE

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Background: Delirium is a syndrome that occurs in all age groups and in many clinical departments, and is most common in intensive care units. It is an emergency, in the overlapping fields of somatic medicine, neurology and psychiatry. Delirium occurs suddenly, dramatically, and requires a quick reaction, recognition and treatment. There are only a small number of studies that have reported delirium after a stroke. In our study, the goal was to determine the cognitive functionality of patients with delirium after a stroke.

Subjects and methods: This is a prospective study in which a group of 100 delirium patients in the acute phase of a stroke were evaluated for cognitive function. The control group consisted of the same number of patients with acute stroke who were not diagnosed with delirium. Neurological, neuropsychiatric and neuropsychological tests were performed in all patients at five different time periods. In these time periods, all patients were evaluated: Glasgow scale; Delirium assessment scale; The American National Institutes of Health Scale Assessment; Information-Memory-Concentration test; Scordementia; Mini Mental Test. The findings of computed tomography of the brain and magnetic resonance imaging of the brain were interpreted by a radiologist who was not familiar with the goals of this study.

Results: Cognitive functioning of delirious patients is statistically significantly worse after three and six months, and one year from stroke compared to those without delirium. There is no statistically significant difference in cognitive functioning between delirious patients in relation to gender, age, location and type of stroke and patients without delirium throughout one year from stroke. There is no significant difference in cognitive functioning between delirious patients during one year from stroke in relation to severity and type of delirium, and statistically significantly higher degree of cognitive dysfunction has those older than ≥ 65 years.

Conclusions: Delirium significantly reduces the cognitive functioning of patients after a stroke.

Key words: stroke - delirium - dementia

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OLEH HORNYKIEWICZ (1926-2020): SIXTY YEARS SINCE THE PIONEERING L-DOPA APPLICATION - ONE YEAR SINCE THE DEATH OF THE PIONEER

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Oleh Hornykiewicz was born on November 17, 1926 in Lamberg, Ukraine. After completing his studies in July 1951, he moved to the "Pharmacological Institute of the University of Vienna". In 1958, he started his research on centrally acting drugs at the same institute and came up with the idea of linking laboratory observations with animals with the basal ganglia of the human brain. Soon, Hornykiewicz initiated a new question: L-DOPA as a therapy for Parkinson's disease? Fortunately, after administration of this new drug, patients were able to perform motor activities which could not be prompted to any comparable degree by any known drug. In the following decades, initial fiction became an unavoidable fact. Dopamine, adapted and combined with carbidopa or benzerazide, has evolved into a drug that no longer recognizes the borders of countries and continents. Distinguished emeritus prof. Oleh Hornykiewicz died on May 26, 2020 at the age of 93 in Vienna, Austria. Unfortunately, despite everything he has done and deserved, the Nobel Prize was not received.

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THE IMPACT OF DISEASE ACTIVITY ON QUALITY OF LIFE, FATIGUE, FUNCTIONAL STATUS AND PHYSICAL ACTIVITY IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Inflammatory back pain and stiffness are the leading symptoms of ankylosing spondylitis (AS). AS progression leads to substantial functional impairment and can reduce quality of life (QoL). The aim of this study was to determine the impact of disease activity on QoL, fatigue, functional status and physical activity.

Subjects and methods: One hundred and fifty AS patients were included in the study, their body mass index (BMI) was calculated and they completed questionnaires regarding disease activity (The Bath Ankylosing Spondylitis Disease Activity Index, BASDAI) functional status (The Bath Ankylosing Spondylitis Functional Index, BASFI) spinal mobility (The Bath Ankylosing Spondylitis Metrology Index, BASMI), physical activity (the International Physical Activity Questionnaire, IPAQ), functional disability (The Health Assessment Questionnaire Disability Index, HAQ-DI), fatigue (The Functional Assessment of Chronic Illness Therapy - fatigue, FACIT-F) and QoL (The Short Form Survey -36, SF-36).

Results: Patients with inactive disease (BASDAI <4) had significantly better HAQ scores ($p=0.001$), SF-36 mental component scores - MCS (65.68 ± 19.54 inactive vs. 46.89 ± 21.78 active disease, $p=0.001$), SF-36 physical component scores - PCS (median score 56.25 inactive vs. 30.00 active disease, $p=0.001$) and FACIT-F scores (38.49 ± 10.62 inactive vs. 26.21 ± 10.81 active disease, $p=0.001$). There was no significant difference in patient's physical activity or BMI regarding disease activity ($p=0.564$ and $p=0.162$ respectively). Also, there was no significant difference in BASDAI, BASMI or BASFI scores regarding different BMI categories ($p=0.818$, $p=0.474$, $p=0.436$, respectively).

Conclusion: AS activity increased fatigue, impaired functional ability and QoL, especially the physical component. Although more than half (61.4%) of our patients were categorized as pre-obese or obese according to BMI, this was not related to disease activity, spinal mobility or daily functioning scores. Reported physical activity level had no effect on disease activity. Disease activity influences the course of AS and QoL assessment should be implemented into regular AS evaluation in order to improve treatment outcome.

Key words: ankylosing spondylitis - quality of life - fatigue - physical activity - body mass index

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DOES SLEEP APNEA AFFECT THE OUTCOME OF STROKE PATIENTS?

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Background: Sleep apnea is described as an isolated risk factor for stroke or recurrent stroke which could be cause of death. In our study, the aim was to determine whether sleep apnea affects the outcome of stroke patients.

Subjects and methods: This is a prospective study in which a group of 110 patients in the acute phase of a stroke was evaluated sleep apnea. Acute stroke has been diagnosed either by computed tomography and magnetic resonance imaging of the brain. There was no significant difference in patient's age with or without sleep apnea neither in men nor women. Neurological, neuropsychiatric, pulmonary test were performed in all patients at five different time periods. In these time periods, all patients were evaluated: Glasgow scale, The American National Institutes of Health Scale Assessment, Mini Mental Test, The Sleep and snoring Questionnaire Test, The Berlin Questionnaire Test, The Epworth Sleepiness Scale, The Stanford Sleepiness Scale and The general sleep questionnaire.

Results: One year after the onset of stroke, 91 (82.7%) of 110 patients with apnea survived. The survival rate of patients with sleep apnea is significantly lower than without sleep apnea ($p=0.01$). In men with apnea, the survival rate was significantly lower in patients without apnea ($p=0.004$). The largest number of survivors of apnea had diabetes mellitus, followed by survival of patients with heart disease, body mass index > 29 kg/m² and hypertension, with hyperlipoproteinemia and smoking. The highest number of survivors without apnea was body mass index > 29 kg/m², followed by survival of patients with hyperlipoproteinemia, heart disease, hypertension, smoking, and diabetes mellitus.

Conclusion: Patients with sleep apnea have a significant correlation in survival rates compared with sexually and age-matched subjects, associated with concomitant risk factors such as hypertension, body mass index, and smoking.

Key words: outcome - stroke - sleep apnea

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TRANSDISCIPLINARY APPROACH IN TYPE I NEUROFIBROMATOSIS - A CASE REPORT AND REVIEW OF PSYCHIATRIC DISORDERS

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Background: Neurofibromatosis type 1 (NF1) is an autosomal dominant a multisystem genetic disorder that primarily involves the skin and the nervous system. The incidence of the disease is 1:3000-4000 live-born children, equally in both sexes. The diagnosis of NF1 is determined individually with any two of the following clinical features: café-au-lait spots, intertriginous freckling, Lisch nodules, neurofibromas, optic glioma, distinctive bone lesions and first-degree family relative with NF1. NF1 is a disease most commonly diagnosed and treated by neuropsychiatrists.

Results: Cognitive and behavioral disorders affect between 50-80% of all children with NF1. Children with NF1 show impairments in attention, visual perception, language, executive function, academic skills, and behavior. This requires a multidisciplinary approach to the treatment as seen in the case we present. Furthermore, NF1 is often associated with psychiatric disorders, which are more frequent in this disease than in general population, according to some studies even up to 33% patients. Psychiatric disorders are more frequent in NF1 than in the general population, particularly in children. They include dysthymia, depressive mood, anxiety, and personality disorders. Bipolar mood disorders or schizophrenia are rather rare. The majority of studies have focused on physical health and neurocognitive function in NF1, whereas psychiatric disorders associated with this disease remain unclear and poorly documented.

Conclusions: We present a case of an eight-year-old boy with behavioural and learning disabilities referred for psychological and psychiatric evaluation as well as an overview of NF-related psychiatric illnesses described in the literature.

Key words: neurofibromatosis- mental disorders - cognitive difficulties - ADHD - autism

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VISUAL EVOKED POTENTIALS IN EVALUATING SUDDEN VISUAL LOSS IN ADOLESCENTS: A PSYCHOSOMATIC PERSPECTIVE

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Dissociative disorder is a psychiatric illness characterised by signs and symptoms that cannot be associated with medical pathology. It is estimated that 25% of all patients have some form of dissociative disorder. In our paper we described 12 patients with sudden loss of visual acuity as a main symptom. Visual evoked potential testing proved that there was no organic disease involving visual pathway. After extensive examination they have been diagnosed as dissociative disorders. Their symptoms improved after psychiatric treatment. It is important for clinician to keep this diagnosis in mind and to recognize patients that might be suffering from this disorder. Making proper diagnosis correctly and on time is vital for successful treatment.

Key words: dissociative disorders - conversion disorder - visual loss - visual evoked potentials - psychosomatic

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COMORBIDITY OF DISSOCIATIVE MOTOR DISORDER WITH ORGANIC IMPAIRMENT - CASE REPORT

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Dissociative disorder is a partial or a complete loss of the normal integration between the sense of identity, memories of the past, sensory impression and control of voluntary movements. Diagnosis should be stated only after excluding active psychoactive substance use, neurological disorders and disorders associated with somatic conditions. We are describing a patient who had comorbidity of organic impairment while diagnosing dissociative disorder. A 36-year-old male was admitted to the Clinic for Psychiatry, University Hospital Centre (UHC) Split, Croatia, because of difficulty in walking and involuntary movements due to constant muscle contractions throughout whole body, with predominantly intense in diaphragm and upper extremities. Motoric symptoms began several months after a cerebellar tumor surgery in 2006. Despite organic impairment due to tumor incision, after extensive somatic diagnostic processing, the organic cause of his condition has not been detected. The patient was treated with psychotherapy, psychopharmacotherapy and physical therapy. After 22 days of intensive hospital treatment, the patient was discharged in improved, both, mental and physical condition

Key words: dissociative disorder - spasm - psychotherapy - psychopharmacotherapy - pilocytic astrocytoma

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HOW TO SQUARE A CIRCLE?

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Psychodynamic group psychotherapy in Daily Hospital for non-psychotic disorders was held through Hangouts program during CoViD-19 pandemic lockdown. In our pilot study we compared patients' impressions and their satisfaction with online program vs. usual, in-person setting program. We analyzed the impressions of group therapists as well. Our conclusion is that according to our patients' impressions and satisfaction, online psychodynamic group psychotherapy is good enough option in extreme situations such as infectious disease pandemic, although it cannot completely replace all the aspects of usual "live" setting.

Key words: online group therapy - group setting - CoViD-19 pandemic - daily hospital

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THE RELATIONSHIP BETWEEN PERFECTIONISM AND ANGER IN ADOLESCENTS

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Background: As a contribution to the dimensional classification of mental disorders, which in the next edition of the American Psychiatric Association (APA) could dominate over the categorical, and in general, due to the impact of anger on the behavior of individuals in our society, it seems important to examine and analyze dimensions that represent risk factors for occurrence and development of anger disorders. **Aim:** To examine gender differences in the expression of the adaptive and maladaptive dimensions of perfectionism and anger (state and trait, as well as the anger expression and control) and to examine whether the dimensions of perfectionism are statistically significant predictors of anger.

Subjects and methods: This study included a total of 600 primary and secondary school students (305 girls and 295 boys), 12 to 18 years old. Data were collected using a Socio-demographic Features Questionnaire for general information onto the Adaptive/Maladaptive Perfectionism Scale (AMPS), Child-Adolescent Perfectionism Scale (CAPS), and State-Trait Anger Expression Inventory-2 Child and Adolescent (STAXI-2 C/A).

Results: Statistically significant gender differences were found in the expression of the adaptive and maladaptive dimensions of perfectionism and anger. For aspects of anger, girls have been found to control their anger more often than boys. Multiple regression analysis indicates the important contribution of the dimensions of perfectionism in the explanation of anger in adolescents.

Conclusion: Given the results obtained, our research represents a contribution to the definition of a dimensional diagnostic system to prevent comorbidity of mental disorders and provide more clinically relevant information about each individual. The instrument which is used to measure anger in this study (STAXI-2 C/A; Brunner & Spielberger 2009) was for the first time applied in Bosnia and Herzegovina. The results of this research are a contribution to its validation.

Key words: perfectionism - anger - adolescents

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PSYCHOGENIC STUTTERING - CASE REPORT

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Stuttering is a speech disorder characterized by the involuntary repetition, extension or cessation of sound. Psychogenic stuttering is a conversion symptom whose cause is emotional in its nature. Conversive disorder is a change in physical functioning that seems to suggest a physical disorder but is in fact an expression of a particular psychic conflict. The appearance of stuttering in adulthood can be the result of psychological trauma.

In this report a 50-year-old female patient who has been in psychiatric treatment (pharmacotherapy and psychotherapy) for the last eight years will be presented. She has been treated for recurrent depressive disorder, posttraumatic stress disorder and histrionic personality disorder and has been in inpatient treatment several times.

The patient lost consciousness a year ago, suffering a concussion. The aforementioned occurred after ingestion of a larger quantity of prescribed psychotropic medication which she took in an attempt to subside polymorphic locomotor issues. She has since started to stutter and has lost hearing in her left ear.

Differential diagnosis between psychogenic and neurological stuttering is complex and demanding and requires individualized and multidisciplinary treatment of the patient.

Key words: psychogenic stuttering - conversive disorder - histrionic personality disorder

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GAMBLING FROM SEVEN PERSPECTIVES

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In recent decades, it has been recognized that certain behaviors resemble addictions to alcohol and other psychoactive substances (PAS). Based on the results of research for such behaviors, many authors have found that it is justified to consider them addictions not related to PAS or "behavioral" addictions and that in the classifications of mental disorders should be in the same group with addictions related to PAS. Compulsive activities that may include gambling, Internet use, playing video games, sex, eating, and shopping based on epidemiological and neurobiological characteristics have similarities to PAS addictions. Recognition of clinical and neurobiological similarities between the described behaviors and behaviors related to PAS use resulted in the inclusion of gambling disorders in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), and online gaming disorders are classified as conditions for further research. In the 11th revision of the International Classification of Diseases, gambling and gaming disorders are involved in behavioral addictions. Authors presented problem of gambling through seven perspectives.

Key words: gambling - behavioral addictions - seven perspectives

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PSYCHIATRY, ETHICS AND POLITICS

ETHICS, PSYCHIATRY, POLITICS - HOMO MORALIS

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In this paper we see the personality of man through his comprehension as a moral entity. An entity that emerges, thinks morally and/or behaves morally, inseparable from the society in which he lives as a moral being, and by its moral thinking and/or behaviour further defines the morals of the whole society.

Accordingly, we present (post)modern society as a society of tolerance of value ambiguity. In that kind of society we perceive medical situation as moral situation and define the role of medical ethics in the field of biomedicine. In that kind of society politics is perceived as one of the social spheres where different varieties of systems of values of individuals or groups are publicly embraced, touched, or terribly unhappily pursued... all in the name of understanding man and his world.

In order to prevent the victory of Thanatos, who prevails in the contemporary concept of politics and in postmodern global society, we suggest implementing applied bioethics as a form of metapolitics as an answer. We explain the idea of bioethics and suggest bioethical education as the operationalisation of metapolitics through bioethics as orientation knowledge, in both medicine and politics.

Key words: medical ethics, integrative bioethics, metapolitics, bioethical education

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PSYCHIATRY AND SOCIETY - MOVE TOWARDS THE TRANSDICIPLINARITY IN ETHICS AND POLITICS

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A main aim of this paper is to critically turn to the cruciality, and inevitability of the transdisciplinary approach in the context of the contemporary psychopathological stances of the individuals. In this paper, transdisciplinarity will be observed as a kind of necessity in the broadly differentiated disciplinarity of the modern societies. A given disciplinarity of the particular exacts sciences, in its self-sufficiency and the distance (*paralaxis*) from the other particular disciplines is forfeiting from sight a consciousness (and the self-consciousness) regarding the necessity of the focusing to the research object universality. Authors will propose thesis that transdisciplinarity is the shift towards the consciousness regarding the research object as the fundamental segment of the science. Following the given context, contemporary disciplinary borders should be set a side and approach a certain phenomena un-hierarchically, through all the available scientific methods. In the frame of such placed predispositions of science, contemporary issue of more and more frequently presence of the neurotic must inevitably include psychiatric and psychological knowledge as the base, but certainly the sociological and philosophical knowledge as well, in the context of understanding etiology, socio-genesis and psychogenesis of the certain issue in the most adequate way. Only when the excluding hierarchisation of the disciplines, in the context of understanding the neurotical disorders, is set a side, a true impacts of the science can come to the fore. A given certainly includes analysis of the sociocultural context, psychosocial development of the individual, ethical social norming, development of the ones spirit and self of its own beingness, as well as the various development issues of the physiological structures of the human brain. In the given context, in this paper we will discuss a transdisciplinary synthesis of the psychotherapeutical approaches along with the original sociological-philosophical variants of the socio-therapy.

Key words: transdisciplinarity - dialogue - psychiatry and society - neurotic disorders - pluriperspectivity

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THE POWER OF TRANSFORMATION AND THE LEADERSHIP SUPPORTING IT - INCLUDING MENTAL HEALTH PERSPECTIVE

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World in which we live in, has been changing so unpredictably in the recent years that has become more than ever volatile, uncertain, complex and ambiguous (VUCA) world. Especially in this post Covid-19 era in which extreme change has becomes our constant, economies around the world are suffering and today's organizations and institutions are broken. We can agree that our current approach is not working. Leadership in general and leaders of global mental health institutions in particular are failing on their goals and we have desperate need for better leaders and leadership strategies in the future. In this article, authors are going to take a dive on the leadership perspective, transformation of organizations and institutions and try to narrow the gap and support leaders to become the best version of themselves. We are going to present our perspective on what is the future bringing us in terms of leadership and leaders, as well as what would be the desired team dynamic within organizations or institutions.

Key words: VUCA world - change - transformation - leaders and leadership

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FACT TEAMS: ARE THEY APPLICABLE IN CENTRAL EU COUNTRY

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Slovenia has entered the implementation phase of the mental health reform accepted in 2018. First evaluation results are to be presented in service number, users number, needs evaluation and education for community care. The main obstacles to implementation are to be presented and possible solutions discussed with congress participants.

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IMPLEMENTATION OF UNA (UKRAINE-NORWAY-ARMENIA) PARTNERSHIP IDEAS IN UKRAINE

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Objectives: To analyze the collaborative initiative between the Norwegian University of Science and Technology, the Institute of Psychiatry of the Taras Shevchenko National University of Kyiv (Ukraine) and Yerevan State Medical University in Armenia dividing all the results into 3 groups: Scientific, Educational and Informational, for the future perspectives and plans of the Mental health in Ukraine.

Methods: Joint carrying out various activities: Research Courses for Early Career Mental Health Specialists and Students; Collection of statistical information and comparison between countries; Collection of information on the financing of mental health services in different countries and comparisons between countries; Writing articles and publishing them; Participation in international conferences; Preparation of an international symposium.

Results: 3 research courses were conducted for early mental health professionals and students. These courses were aimed at providing high-quality intensive training in the relevant research elements, including: developing a research project, launching it in a clinical environment, research methods,

including the most important principles of statistics, writing scientific papers and presenting scientific papers. Altogether, there were eighty participants on the courses from Ukraine, Georgia, Armenia, Norway, Kazakhstan, Japan, Kyrgyzstan and Sweden. During the project, several meetings were held (in Trondheim, Warsaw and Kyiv), studying and comparing mental health data of Ukraine, Norway, Armenia and Georgia. Each year (2017, 2018, and 2019), information about the collaboration was published in the WPA, Child and Adolescent Psychiatry Section's Official Journal. The implementation of the educational ideas of the UNA Partnership in Ukraine took place in changing mental health and psychiatry pre-service curriculum in Kiev Medical University, Donetsk National Medical University and Shupyk National Medical Academy of Postgraduate Education.

Conclusion: It is anticipated that this cooperation would serve as a rationale for the coming reorientation of state mental health care system.

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PUBLIC PERCEPTION OF THE JUDICIARY FROM THE PERSPECTIVE OF PUBLIC AND GLOBAL MENTAL HEALTH

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According to the European Commission's 2020 Rule of Law Report, in regard to Croatia, the level of perceived judicial independence remains among the lowest in the European Union. The author analyses the causes of such a perception of the Croatian judicial system, especially the length of criminal proceedings in high profile cases, and tries to evaluate it by comparing available statistical information concerning the judiciary in Croatia with that of other EU countries. The author also takes into account and describes the effect which contemporary issues like news coverage by increasingly partisan media have on public perception of the Croatian judicial system, and polarization of public opinion on key social and legal matters.

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USE OF COERCIVE MEASURES IN PSYCHIATRY - THE EXPERIENCE OF NURSES AND TECHNICIANS

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Background: The use of coercive measures is the result of a variety of factors that include understanding aggressive behaviour, educating staff to perform de-escalation and risk assessment, the number of staff, organization of treatment, and staff's attitudes. In order for medical staff to apply an individual approach to each person who demonstrates aggressive behaviour, it is necessary to analyze all the factors that influence the use of coercive measures. The aim of this study was to investigate how coercive measures are applied in psychiatric institutions in the Republic of Croatia so that guidelines for reducing coercive measures could be suggested.

Subjects and methods: A multicenter study was conducted during February and March 2016 at 16 Croatian Psychiatric Clinics, Hospitals and Departments. In the study were involved 238 subjects. A questionnaire was created for the purpose of the survey and was contained five units: sociodemographic data, work organization and department structure, education, use of coercive measures, and documentation.

Results: The results indicate weaknesses related to the number and education of staff, space planning and indications for the use of coercive measures, which can result in violations of the rights of persons with mental disorders and increased risk of injury to both patients and staff. Significant results show that more than 58% of examinee were injured in the use of coercive measures, 78% of examinee believes that spatial conditions do not meet or partially meet safety standards, 69% of examinee did not participate in

education, 72% of examinee stated that an imminent danger was the most common reason for using coercive measures.

Conclusions: In order to prevent the use of coercive measures in psychiatry and to prevent negative consequences, it is necessary to conduct continuous education of health professionals regarding the use of deescalation, recognition of triggers and early signs of aggression, increase the number of staff and to improve spatial conditions.

Key words: coercive measures, nurses, education

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EVALUATION OF A DESTIGMATISATION PROGRAM FOR ADOLESCENTS

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Background: Medical students started a destigmatisation program called Project In reflection that deals with prevention in the field of mental health. The main purpose is to de-stigmatize and raise mental health awareness among adolescents. The program was evaluated on how it decreases stigmatisation. The interventions were the projects workshops for adolescents, and we compared their attitudes towards mental disorders at different intervals in time to assess the short and long term effectiveness.

Methodology: Workshops of the project In reflection were performed in 6 different high schools in Slovenia over the course of 6 months. Each workshop had approx. 30 high schoolers aged between 14-19, altogether 539 adolescents. The workshop lasted 2 school hours during which 2 medical students used a peer to peer method of education. A questionnaire (Wolff G.) was given to the participants before and after the workshop, and one year later, without a booster session in between. Standard paired T-test was used, with a value of $p < 0.05$.

Results: A total of 486 out of 539 high schoolers responded (90% response rate) before and 425 after the workshop (79%). Comparison before and right after the workshop yielded a significant improvement of adolescents attitude (less stigmatising) towards people with mental disorders. 288 adolescents who participated in the workshops and answered the questionnaire 1 year later (53%). Comparison before the workshop and 1 year later showed an improvement - towards less stigmatizing attitude. Comparison between the workshop assessment after the intervention and a year later showed also an improvement. Conclusion: The destigmatisation program 'Project In reflection' with its workshops for adolescents gave results that indicate the persistence of the positive change in less stigmatising attitude. The change was not only short term, but also long term, without an intervention in between.

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ETHICAL ISSUES IN THE DOMAIN OF DISABILITY - INCLUSION AND EDUCATION OF DISABLED PUPILS IN THE REGULAR SCHOOL SYSTEM

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The birth of a disabled child presents many challenges to family members and is transmitted generationally from parent to child and vice versa. Definitions of terms such as 'healthy', 'normal', 'disabled', 'special' and 'difficulty' are not, in its entirety, clear, objective or universal over time and within different systems of protection and action. The physical and mental characteristics of an individual are assessed against a criterion of normality and health. Data on children and families affected by hardship indicate that such a lifestyle does not rule out a satisfactory life. Many of the problems attributed to the

existence of the problem actually arise from the inadequate social classifications on which changes public health professionals should work on. Experts play a key role in supporting a disabled child and their family members in making decisions about their child, which includes empowering families to be equal partners in the decision making processes based on informed choices. This paper deals with the classification and definition of disability, the experiences of children with disabilities and their parents in relation to schooling in the regular school system. The paper presents the cases of schooling of children with mental disabilities in the regular school system.

Key words: disability, education, ethical issues, mental difficulties

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JUSTIFICATION OF A PERSONIFIED PSYCHOCORRECTIONAL APPROACH FOR PUPILS OF SOCIAL PROTECTION INSTITUTIONS

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The purpose of the study is to evaluate the variety of adaptational (social and psychological, physiological) reactions of the body within the whole structure of adaptational resources in children and adolescents with different family status at their first admission to a social protection institution. The primary group consisted of 181 children at the age of ≥ 3 to ≤ 17 years from SPIs (orphans, social orphans and children from needy families). The control group included children and adolescents ($n=237$), who studied in a secondary school. The study was conducted according to the protocol as agreed with an independent Ethics Committee of the Federal State Budgetary Educational Institution of Higher Education "Smolensk State Medical University" of the Ministry of Healthcare of Russia. Used: semi-structured interview to identify signs of a post-traumatic stress in children; coping strategy technique for school children; Deviant Behavior Questionnaire in minors; Buss - Durkee Hostility Inventory; Questionnaire "Adolescents about parents" To estimate unspecific adaptational blood reactions by the lymphocyte levels, laboratory methods of Lyubov Kh. Garkavi et al. were used. Age-specific study of mental disorders was conducted based on the mental development periods identified by D.B. Elkonin.

Pupils of social protection institutions are dominated by a high frequency of non-psychotic mental disorders (80%). Compared to students in secondary schools, pupils of social protection institutions are dominated by scores on the criterion DSM-IV "immediate response" to a stressful situation; statistically more often non-specific adaptive blood reactions predominate (stress reactions, training reactions, and increased activation reactions); more often have somatoform vegetative dysfunction, characterized by disorders of the upper gastrointestinal tract. In orphaned adolescents (true and social), compared with adolescents living in families, mild addictive, aggressive, and delinquent forms were statistically more often deviant behavior and statistically significant prevalence of a reduced level of socially-conditioned behavior. In orphaned teenagers, coping strategies of "avoidance" prevail, which in the future, without elaboration, can lead to the formation of addictive behavior, suicidal states, and psychosomatic disorders. Adolescents from families who are brought up in social institutions are dominated by affectively aggressive coping strategies with a possible subsequent risk of maladaptation of aggressive and delinquent types.

The results obtained indicate the need for a differentiated approach to the development of personalized psychocorrectional measures depending on the affiliation to a subgroup (orphans and children/adolescents brought up in families) when compiling comprehensive medical and social rehabilitation programs.

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EPIGENETIC IMPRINT OF “COMPASSIONATE SOCIETY” TRIGGERED BY VULNERABILITY AND MENTAL ILLNESSES

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Epigenetics investigates a connection between our genes and our environment. It has been hypothesized that certain conditions we experience can influence our gene expression and can probably be passed onto our children, i.e., transgenerational transfer of trauma being one of them. We postulate that the notion of compassion has also been passed on from one generation to another. Our ancestors discovered that groups have a higher chance for survival than individuals. Thus, psychological traits that help form social cohesion, like compassion, are proven beneficial and passed onto the next generation.

However, our perception of compassion has changed through time. In the beginning, it was expressed as a feeling of sympathy for the vulnerable, for example for the elderly, for the sick, pregnant women and children. These groups were innately perceived as deserving compassion. As our social awareness grew, the list of vulnerable groups grew as well, including members of different races, sexual or gender orientations, etc. Over time, a shift in the way we feel compassion has occurred.

Nowadays it almost seems like only those belonging to a vulnerable group are justified to feel suffering or oppression. At the same time, the suffering of those who do not belong to these exclusive vulnerable groups is marginalized. Mental illnesses like anxiety or depression are trivialized if the person in question is perceived as being privileged (in any sense), while at the same time they are elevated as warning signs if the person suffering is vulnerable. If one truly needs attention, help, or both, the easiest way is to declare oneself vulnerable. If this trend continues, we postulate that a lack of compassion in our modern society will have an impact on future ones. Through transgenerational epigenetic inheritance, this can create future societies whose sense of compassion will be shaped only by the definition/perception of those who are currently perceived as vulnerable.

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MEDIA IN SERVICE TO HEALTH

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The media is certainly in the service of health, where it is accompanied by its information, tips, statistics, discoveries, innovations. It is a well-known saying that health is the greatest good. It is good to be healthy and nurture your health. This article shows the media in the service of health and well-being. The World Health Organization stresses that the media should work with health services to promote health. This introduction itself emphasizes that the media in our daily lives are becoming more and more accessible, virtually immediate, and they are important sources of information on the topic of health. Electronic and print media want to advise people of different ages and professions on healthy living. This article further discusses the importance of media in the world. The media certainly has a role to play: informing, educating, educating and entertaining, but they must be ethical. The World Health Organization (WHO) provides a definition of health, where it says that health is a state of complete physical, mental and social well-being, not simply an absence of illness or infirmity. The article goes on to talk about the importance of health in our lives. Certainly the media is in the service of health, therefore, they affect a large number of readers, listeners and viewers. The mass media bring numerous and quick information every day. The media is the most important source of information when it comes to health and a healthy lifestyle. They transmit information from the sender (doctor, specialist, institution), to people who are the recipients of this information. Health information is an important source of care and treatment for people. The article below discusses the collaboration between the media and health care institutions, which is important for improving human health. At the end of the article, communication between doctors and the media is analyzed, which contributes to

better information about health and the health system. The emphasis is that media professionals publish health and health information truthfully and verifiably. The end of the article discusses the connection between media and health, through useful information and advice. The source and accuracy of the information is important, and one should look at who it is that is informing and advising us about health in order to check the expertise and truthfulness of health and health information.

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GUIDELINES FOR AUTHORS

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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.

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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.

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- In the text give the author last name and publication year within parentheses (e.g. Jakovljevic 2008, Sartorius 2009).
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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
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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*

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