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● PREFACE

The preface of the sixth issue of the Scientific Bulletin of the Institute of Mental Health is devoted to the Proceedings of the X. Forum of the Institute of Mental Health - a publication that is the result of a year-long endeavour aimed at capturing the environment in which the Institute celebrates its 60th anniversary.

This anniversary comes at a time when at least one out of six adult residents of Serbia needs help to prevent the aggravation of existing mental health conditions. We are witnessing that modern society is changing rapidly, that individuals, families and the broader community are facing various profound challenges of the postmodern era in the context of the fourth industrial revolution and the relativization of the traditional value system. Although we often hear that mental health is a priority, there seems to be a lack of concrete action for patients and their families, that is, even when there is, it is infrequent, project-based, and often unsustainable. A lot is said, but we all know we need more and better. These are all the challenges of today, reflecting the atmosphere in which the Institute celebrates its sixtieth anniversary.

Proceedings of the 10th Forum of the Institute of Mental Health is an effort to respond to a range of theoretical and practical challenges of mental health protection and improvement with the combined forces of distinguished university faculty and clinical experts in the fields of psychiatry, child and adolescent psychiatry, neurology, psychology, special education, social work and public health. The collection of works covers a range of topics that share a common motive - understanding psychological problems for the benefit of people who seek help.

In 30 contributions by 53 authors and co-authors from the Institute of Mental Health, Clinic of Neurology of UKCS, Faculty of Medicine, Faculty of Philosophy and Faculty of Special Education and Rehabilitation of the



University of Belgrade, Faculty of Media and Communication of Singidunum University and University of Social Work, topics from five areas were covered: Child and Adolescent Psychiatry, Adult Psychiatry, Addictive Disorders, Neurology and Psychotherapy. Our wish was for the three clinics of the Institute of Mental Health, as well as the Department of Neurophysiology and the Cabinet of Psychotherapy, to present the past, the present and the future of their work, looking back at the years from its foundation to the present day and showing some future plans that we are working out together. We do not intend to depart from the traditional values that the Institute has held since its founding, but we do want each new commitment to help our Institute continue its role as one of the leading institutions in the field of mental health.

The editor of the Proceedings is prof. Nađa Marić (ISBN 978-86-82277-78-1). The articles show the work at the Institute through the prism of the past or through future challenges. The different perspectives of looking at specific issues reflect the most important aspects of the work - the need for a systematic, team-based approach and monitoring the impact of the mental health care services provided. Prof. dr Nadja Marić, Prof. dr Olivera Vuković i Prof. dr Milica Pejović Milovančević

Prof. Dr Nadja Marić, Prof. Dr Olivera Vuković and
Prof. Dr Milica Pejović Milovančević

OUR RESEARCH



THEORY OF MIND IN TYPICAL ADULTS: SEX-DIFFERENCES AND ITS ASSOCIATIONS WITH ANXIETY AND DEPRESSION SYMPTOMS

In January 2023, an article was published in the Archives of Clinical Neuropsychology by a team led by clinical assistant Sanja Andric Petrovic that looked at Theory of Mind (ToM) <https://pubmed.ncbi.nlm.nih.gov/36715310/>. Theory of Mind is the ability to understand the mental states of others, which enables us to observe situations from a different perspective. Social cognition involves skills and cognitive processes that help us understand the behaviour of others, recognise emotions in their faces and draw conclusions about their intentions.

Deficits in social cognition, particularly in ToM, are associated with significant social and interpersonal difficulties. However, there are conflicting results in the literature regarding the association of depressive and anxious symptoms with this phenomenon, especially with regard to gender differences. Given the high prevalence of depression and anxiety and their association with loss of functioning, the identi-

fication of causal factors is an important endeavour, which is why the authors of this study chose this topic.

Using social media and the snowball sampling method, the authors recruited 605 participants, mostly young adult women (mean age 27.9 ± 10.4 years, 73.5% women). Participants completed a questionnaire consisting of three parts: the first part collected socio-demographic data, the second part assessed symptoms of depression and anxiety (using the PHQ-9 and GAD-7 questionnaires), while the last part assessed ToM ability using the Reading the Mind in the Eyes test, which allowed participants to draw conclusions about the mental state of others based on 36 items/photos.

Most of the participants reported minimal or mild depressive symptoms (mean score of the PHQ-9 7.2 ± 5.3) and minimal or mild anxiety symptoms (mean score of the GAD-7 5.5 ± 4.7). A clinically significant score on the PHQ-9 was found in 26.1% of the sample, while a clinically significant score on GAD-7 was found in 18.2%.

Females had significantly higher scores than males on both the GAD-7 and PHQ-9 questionnaires. On the Reading the Mind in the Eyes test, women had a higher percentage of cor-

rect answers and a significantly better ability to identify certain complex mental states (uneasy, despondent, tentative, friendly, pensive, reflective, flirtatious and concerned).

Across the sample, no correlation was found between symptoms of depression and anxiety and ToM ability. However, a negative correlation was found between ToM ability and depressive symptoms in the subgroup that had moderate or severe depressive symptoms that required clinical treatment. This negative correlation was also found in participants with moderate/severe anxiety symptoms.

It is hypothesised that the poorer ToM scores in depressed individuals are due to a tendency to ruminate negatively about one's own thoughts and feelings, possibly interfering with appropriate connection with other people's mental states and emotions. Another explanation would be the tendency of depressed individuals to be cognitively rigid, which impairs the ability to recognise and interpret complex mental states.

The literature addressing the relationship between anxiety and Theory of Mind (ToM) focuses mainly on social anxiety. This relationship can be explained mainly by the tendency to attach intensity and greater importance to other people's

emotions - a process called hypermentalisation. The authors emphasise that anxiety in this study was not only related to social anxiety, so these results can be considered preliminary.

As for women's better performance on ToM tests, this is thought to be due to their almost universal responsibility in child rearing - the ability to decode other people's mental states quickly and accurately plays a crucial role in communicating with children in the preverbal stage of development. Interestingly, when analysing facial expressions, females spend more time looking at the eyes, while males spend more time looking at the nose and mouth - regions associated with less salient facial features.

The authors cite the lack of a control for general cognitive ability and the general limitations of online sampling methods as major limitations of the study. Nevertheless, it is one of the few studies to examine gender differences in ToM. It also has a large sample size on the Reading the Mind in the Eyes test, which is the gold standard for studying this phenomenon.

This study expands our understanding of an important area of social cognition that may be a valuable indicator of vulnerability to depressive and anxiety disorders.

● THE PROMISING PROJECT

Prof. Saša Filipović, and
Jovana Bjekić, Ph.D.,
Institute for Medical Research,
University of Belgrade

**TWINNIBS - TWINNING FOR
EXCELLENCE IN NON-INVASIVE
BRAIN STIMULATION IN
WESTERN BALKANS**



The TWINNIBS project is an international project funded by Horizon Europe. Assistant Professor Dr Ana Podgorac spoke to key researchers about the project for the Bulletin.

What made you decide to do transcranial magnetic stimulation (TMS)?

TMS is a technique that uses a magnetic field to affect brain activity in a non-invasive and painless way. Since the first reliable and safe TMS device was produced in 1985, the technique has sparked a small revolution in neuroscience - for the first time it has been possible to directly study the functions of the human brain in a way that was previously reserved for animal studies.

One of the most important features of TMS is its ability to induce changes in the activation of brain regions and their associated neural networks that last for several hours and even days after the stimulation has ended. This ability to induce lasting neuroplastic changes (so-called neuromodulation) was also crucial for the development of the therapeutic applications of TMS in psychiatry and neurology. In addition to magnetic stimulation, other non-invasive neuromodulation techniques have been developed, e.g., stimulation with a weak electric field or ultrasound stimulation. These techniques are also increasingly used in the treatment of various psychiatric and neurological disorders.

Who are the promoters of the TWINNIBS project and what are the main goals of this initiative? Have there been similar projects in our country or in the world?

TWINNIBS represents the continuation and extension of the activities we have carried out in the framework of projects focused on the development and verification of the effects of new methods of non-invasive neuromodulation, supported by the Ministries of Science and Technological Development from 2011 to 2019, and by the Science Fund from 2020 to 2021.

The project is led by a team of researchers from the Institute of Medical Research at the University of Belgrade and is carried out in collaboration with the Danish Centre for Magnetic Resonance in Copenhagen, Ludwig Maximilian University and University Hospital in Munich, Trent University and the Centre for Social Innovation in Vienna. The main objective of the project is to increase capacity for research and application of non-invasive neuromodulation methods in Serbia and the region by sharing best practises with leading European experts, improving local capacity and increasing the visibility of non-invasive neuromodulation techniques among the professional community and potential users of psychiatric and other medical services. The aim is also to open up opportunities for staff training.

In your opinion, what are the most important successes of the TWINNIBS project?

Although the project is only in its first year of implementation, significant results have already been achieved. Indeed, TWINNIBS brings together over 40 participants who contribute their specific knowledge to the research activities. For example, the project brought together doctors, psychologists, engineers and researchers working on rehabilitation, data analysis and the impact of the development of innovative technologies on society as a whole. In addition, the project involves a large number of young researchers who will gain knowledge and skills to work successfully in this field. The project will also enable the acquisition of equipment - we expect that at the end of the project we will have a centre for non-invasive neuromodulation in Serbia, which will be the only centre of its kind in the region, working at the same level as similar centres in Europe and the world, and which will help the methods to

enter clinical practise according to the highest standards.

What obstacles and challenges would you highlight in your work so far?

In the beginning, when our research group started to use TMS and other neuromodulation techniques a few years ago, there were some misunderstandings, even fears, from colleagues in other groups and institutions about the nature of these methods. Over time, as we strictly adhered to internationally established standards for the safe use of these techniques and some education, this was no longer a problem.

One of the biggest challenges in the use of non-invasive neuromodulation methods is the personalisation of the treatment, i.e., determining the frequency, intensity and other aspects of stimulation that will give the best results for each individual patient. The research activities of the TWINNIBS projects are aimed precisely at this challenge.

Can mental health service users benefit from the project?

TMS is increasingly used in psychiatry for the treatment of various diseases and symptoms. First of all, TMS is already used worldwide to treat depression, especially depression that has not responded to other forms of therapy, such as antidepressants. For therapeutic purposes, TMS is applied over several weeks, leading to an improvement in mood and a reduction in the intensity of symptoms in a significant number of people treated. TMS is also used to treat anxiety disorders such as panic attacks, phobias and obsessive-compulsive disorder. TMS has been shown to reduce anxiety symptoms, especially when used in combination with other therapies. TMS is also used to treat post-traumatic stress disorder, where it reduces symptoms such as nightmares, avoidance behaviour and hypervigilance. The role of TMS in the treatment of Alzheimer's disease and other dementias is also being investigated. In addition to its use in psychiatry, TMS is slowly finding its place in the treatment of other disorders and pathological conditions, such as Parkinson's disease or recovery from a cerebrovascular insult.

GUEST OF THE BULLETIN

Aleksandar Dimitrijević PhD,
Germany

INVESTIGATING SILENCE

Aleksandar Dimitrijević, a clinical psychologist and psychoanalyst, has published twelve books, including „Silence and Silencing in Psychoanalysis: Cultural, Clinical, and Research Perspective“ (<https://www.taylorfrancis.com/books/edit/10.4324/9780429350900/silence-silencing-psychoanalysis-aleksandar-dimitrijevi%C4%87-michael-buchholz>). This book was shortlisted for the Gradiva Award 2021. Dimitrijević and Buchholz's co-authored manuscript (2020), which deals with silence, and is noteworthy in that it presents studies that use the method of conversational analysis alongside the clinical perspective in examining the phenomenon of silence. In the sixth issue of the Bulletin, Cl. Assist. Dr. Danilo Pešić conducted an interview with Dr. Dimitrijević.

Silence in psychoanalytic sessions is a frequent theme in popular TV series and films, often caricatured. However, the phenomenon of silence has received little attention in psychoanalytic literature. Is this the reason for exploring this topic?

The theme of silence is of utmost importance in psychoanalytic work. Interestingly, there has been virtually no

book on this subject in English or German. However, in other disciplines such as linguistics, philosophy, musicology and especially theology, the subject of silence and silences occupies a significant place. The first part of our monograph is devoted to these disciplines. Only then follows the central part with seven chapters on clinical presentations and applications.

Can silence in psychoanalytic sessions be the subject of empirical research?

Yes, there are various research perspectives, and our monograph presents empirical studies using the methodology of conversation analysis, which falls into the broader group of process research in psychoanalysis.

An important part of conversation is the way we remain silent, because this is also a form of communication. Researchers in conversation analysis begin by transcribing the conversation, using an internationally recognised list of transcription symbols to capture elements in the conversation that would otherwise be missed (e.g., changes in intonation, emphasis, audible breaths, micro-pauses, etc.).

Which name would you start with on the topic of conversation analysis in psychotherapeutic dialogue?

Heidi Levitt is the principal editor of Qualitative Psychology and the author of the first research chapter in our monograph. Levitt has conducted a series of methodologically rigorous studies on pauses in psychotherapy that last longer than three seconds. She has shown that these can be categorised on a spectrum from productive (emotional, expressive and reflective pauses) to neutral (mnemonic and associative pauses) to obstructive (disconnecting and interactional pauses). Together with her colleagues, she developed a questionnaire for categorising pauses (Pausing Inventory Categorisation- PICS). The questionnaire has high inter-observer reliability, is empirically sound and validated across cultures. PICS has been shown to be reliable in identifying pauses and their subtle differences, which is important for training. Research has shown that understanding the intrapsychic experience of silence can help therapists and researchers and that experiences of productive silence are important, with reflective pauses having a higher relative frequency in therapies leading to positive outcomes.

Can you tell us more about your co-author's work?

Michael Buchholz is a psychoanalyst and professor of social psychology at the International Psychoanalytic University Berlin, where he directed doctoral studies in the field. He has published some 20 books and almost 400 academic papers, mainly in recent years on quantitative and qualitative interdisciplinary research on conversations in psychotherapeutic sessions. Buchholz has studied pauses shorter than three seconds, which are most often observed after errors. A pause longer than 1.2 seconds is considered a significant pause length. His research shows that in the first part of a pause lasting up to 0.6 seconds, the speaker imagines how the mistake may have affected the listener. In the second part of a 0.6 second pause, the speaker starts a new sequence. If errors are perceived as irrelevant to the relationship, the duration of the pause is shorter. Errors and omissions by the therapist are associated with longer pauses, which can even lead to interruptions in psychotherapy. Our monograph also presents the use of conversation analysis in couples therapy, where both participants omit important elements in communication and perpetuate misunderstandings. This work represents the first empirical video recording of what is called „collusion“ in psychotherapeutic practise.

There is an ongoing debate about the relationship between psychoanalysis and science, as some authors see it exclusively as a hermeneutic discipline concerned with the phenomenon of meaning and understanding, rather than a discipline concerned with causality and explanation. What is your point of view?

Psychoanalysis cannot be reduced to science, but in addition to its interpretative, clinical and artistic aspects, it also has a scientific aspect: it has to ask questions and seek answers, rather than believing, like religions, that all the answers are already given. It is interesting that since the beginnings of psychoanalysis there has been a trend to reject research, even though research confirms the clinical effectiveness of the analytic method.

Finally, which research centres and researchers working on psychoanalysis would you highlight?

Among the research centres and names, the following stand out: University College London (Peter Fonagy), White Plains Institute in New York (Otto Kernberg and John Clarkin), University of Columbia (Jonathan Shedler and Beatrice Beebe), and so on.



DOCTORAL THESIS

Filip Milosavljević PhD.,

Research associate at the Faculty of Pharmacy, University of Belgrade



Filip Milosavljević holds a PhD in pharmaceutical sciences and works as a research associate in the team of Prof. Dr. Marin Jukić at the Faculty of Pharmacy in Belgrade. On October 21, 2022, he defended his dissertation entitled „Meta-analysis of data on differences in exposure to psychotropic drugs between slow and normal CYP2C19/CYP2D6 metabolizers“. For one of the papers from the above dissertation, Filip received the „Veselin Lučić“ award for the best scientific paper published at the University of Belgrade in 2021. This work was published in the prestigious journal „JAMA Psychiatry“ (<https://pubmed.ncbi.nlm.nih.gov/33237321/>). From September 2023 Filip will start his postdoctoral training in the research group of Prof. Dr. Stefan Leucht.

How did you get the idea to study pharmacogenomics in psychiatry?

At present, the development of new pharmacological options for psychiatric disorders is very slow, which means that we need to make the best use of available pharmacotherapeutic modalities, especially given the many drawbacks of existing psychotropic drugs. One way to fill the existing gap is the pharmacogenomics approach, i.e., the management of pharmacotherapy based on information about the genetic profile of each individual patient. To date, the most

reliable pharmacogenomic data exist for genes of the CYP450 family, particularly CYP2C19 and CYP2D6, which metabolise most psychotropic drugs. To introduce pharmacogenomics into clinical practise, it is first necessary to link CYP450 genes to pharmacokinetic changes, then to changes in clinical outcomes in patients, and finally to demonstrate the cost-effectiveness of this approach. My work concerns the first step in this process and creates an evidence-based foundation for further research steps.

What is the main research question in your doctoral thesis?

The aim was to accurately quantify the changes in blood concentrations of various drugs, mainly antidepressants and antipsychotics, caused by mutations in the CYP2C19 and CYP2D6 genes using the method of meta-analysis. Indeed, clinical studies conducted on this topic over the last 2 decades often had a limited number of patients in their cohorts and an even smaller number of poor metabolisers, which reduces the power of these studies. Meta-analysis solves this problem by pooling the results from a large number of patients, simulating a large multicentre clinical trial.

How did you collect the sample and what was the research design?

A systematic search of numerous internet databases of scientific papers identified 1532 potentially significant scientific papers on this topic, from which 94 papers were finally selected that met the criteria for inclusion in the meta-analysis. From these papers, we then extracted the raw data for a detailed statistical analysis, as required by such a rigorous methodological approach. In doing so, we followed the MOOSE and PRISMA guidelines for reporting the results of meta-analyses. The correct name of the methodological approach is *inverse variance meta-analysis with the ratio of means as the main output parameter*.

What are the main results you obtained?

Based on data from about 8400 patients, the main observations were that the blood concentration of aripiprazole increases by an average of 50% in patients with moderate or poor CYP2D6 metaboliser status, while the blood concentration of risperidone increases by an average of 40% in slow CYP2D6 metabolisers and 30% in moderate CYP2D6 metabolisers. Among antidepressants, the average increase in blood concentration of es-

citalopram was 260% in slow CYP2C19 metabolisers, while for venlafaxine, the CYP2D6 genotype did not significantly alter blood concentration. For drugs such as clozapine, quetiapine, amitriptyline, mirtazapine, nortriptyline, fluoxetine, fluvoxamine and paroxetine, there was insufficient data to draw a firm conclusion and a re-analysis with a larger number of clinical trials is needed.

What message would you give to young researchers?

I would advise anyone who is serious about pursuing science to put a lot of effort into choosing the right mentor for their doctoral studies. For a successful doctorate, the mentor must provide you with the conditions for an independent pursuit of science as well as for advancement in the rel-

evant scientific field. These conditions do not necessarily depend on the institution where the mentor works, but mostly depend on the mentor himself. I think this is especially important if you plan to pursue post-doctoral training abroad, when a mentor can help you establish a collaboration with a targeted research group where you plan to continue your scientific career.

● CRITICAL REVIEW OF LITERATURE

As part of our continuing education programme for residents at the Institute of Mental Health, a critical literature review session (CRL) was held in early February 2023. Dr Tea Trajkovski, a psychiatry resident, presented a randomised clinical trial (RCT) entitled: Coached Mobile App Platform for the Treatment of Depression and Anxiety Among Primary Care Patients; A Randomised Clinical Trial; Graham et al; and then analysed in detail the methodology and results of this innovative and interesting study.

The aim of the study was to investigate the effectiveness of the IntelliCare mobile platform, which includes several mobile apps supported by a coaching intervention, to treat depression and anxiety among primary care patients.

Several things contributed to the initial positive impression of the study: the current technological approach to treating depressed and anxious people in the general population, the publication of the work in a journal with a high impact factor (JAMA Psychiatry), and the positive results demonstrating the efficiency of this innovative method. Why should we not believe this when the results come

from a RCT study that is at the top of the pyramid of scientific study types and the gold standard for efficacy validation of any intervention.

However, a detailed analysis of the paper changes the original impression to some extent. It showed a high frequency of use of all applications by the study participants during the study, which the authors interpreted as ease and consistency in using these platforms. However, this is questioned as study participants received successive financial compensation for consistent application use. Also, the choice of the control group in this study, the waiting list control group (WLC), which was not initially subjected to any treatment, may have contributed to the overestimated impact of the IntelliCare mobile platform (critical reviews of this methodological approach only support this impression). Finally, very intensive „coaching“ was used, i.e. patients in the study group had intensive conversations and communicated via messages with the coaches, which significantly changes the perception of something specifically aimed at user-friendliness and saving human resources.

When human resources are constantly involved in treatment in parallel with the application, the value of the application itself is called into question, and it is difficult to guess whether IntelliCare as an independent intervention without psychotherapeutic support in the form of coaching would show an equally impressive effect on improving symptoms of depression and anxiety. The reason for such methodological compromises, which were solely designed to favour the efficiency of the application, could be identified as a conflict of interest on the part of the authors. As the authors are both owners and employees of the company producing the mobile platform, their motivation to highlight the positive results and efficiency of the application is very high and compromises objectivity.

In the coming period, our young colleagues will have the opportunity to further their scientific education and develop the skills of critical review of literature useful for their daily scientific work. The next CRL will be held on 26 April 2023 at the Institute of Mental Health, where another resident, Dr Maria Lero, will present and analyse a new research paper. All those interested are welcome to attend.

INTERNATIONAL NEWS

INTERNATIONAL NEWS – MENTAL HEALTH BEFORE AND DURING THE COVID-19 PANDEMIC: A META-ANALYSIS OF 134 COHORTS

A large number of studies conducted in the context of the Covid-19 pandemics suggested that it has led to widespread deterioration in population mental health, and bombastic media reports on the subject have flaunted terms like „tsunami“ or „parallel pandemic of mental disorders“. However, most existing literature reviews were based on cross sectional studies that used self-questionnaires to detect certain disturbances rather than clinical diagnostic interviews to determine psychiatric disorders, and comparisons with the pre-pandemic period were not made. Given that such methods are not intended for estimating prevalence of mental disorders (but mainly for their detection), the results of the aforementioned studies should be interpreted cautiously to avoid misconceptions and reasoning biases.

In the February 2023 issue of the „British Medical Journal - BMJ“ (impact factor 96) a systematic review entitled „Comparison of mental health symptoms before and during

the covid-19 pandemic: evidence from a systematic review and meta-analysis of 134 cohorts“ was published whose authors participated in an international multidisciplinary collaborative project - DEPRESSD which has been carried out since the beginning of the pandemic, and whose primary goal was to synthesize results of mental health outcomes in cohorts before and during the Covid-19 pandemic. This meta-analysis included only follow-up studies that assessed certain mental health parameters or indicators of anxiety/depression in the same subjects ($\geq 90\%$ cases) and compared pandemic and pre-pandemic periods: data collected after January 2020 (pandemic) with those collected between January 1, 2018 and December 31, 2019. As of 11 April 2022, 94 411 unique titles and abstracts were reviewed, including 137 studies from 134 cohorts, whereby most of the studies were conducted in high income (77%) or upper middle income (20%) countries. Among general population studies no changes were found for general mental health (standard mean difference – change 0.11, 95% CI 0.00/0.22) or anxiety symptoms (0.05, -0.04/0.13), but depression symptoms worsened minimally (0.12, 0.01/0.24). Observing particular subgroups of participants, it was observed that all exam-

ined among women by minimal to small amount – general mental health (0.22, 0.08/0.35), anxiety symptoms (0.20, 0.12/0.29) and depression symptoms (0.22, 0.05/0.40). It was also observed that depression symptoms worsened by minimal to small amounts for older adults (0.22, 0.06/0.38), university students (0.14, 0.01/0.26) and people who self-identified as belonging to a sexual or gender minority group (0.19, 0.10/0.28), while general mental health (0.39, 0.21/0.56) and anxiety symptoms (0.25, 0.02/0.49) were shown to worsen for parents. As opposed to that, general mental health and depression symptoms were shown to improve for individuals with pre-existing mental health conditions (-0.22, -0.35/-0.09 and -0.05, -0.08/-0.03, respectively), but these findings were based on only two follow-up studies (n=457) and should be interpreted cautiously. In three studies with data from March to April 2020 and late 2020, symptoms were unchanged from pre-Covid-19 levels at both assessments or increased initially and then returned to pre-Covid-19 levels. The authors emphasized that substantial heterogeneity and risk of bias were present across all the analyses, which is why the presented results should be interpreted with caution.

Present research is the most comprehensive synthesis of the results of follow-up studies comparing general mental health, symptoms of anxiety and depression on the same participants (cohorts) before and during the Covid-19 pandemic. No negative changes in mental health were observed at the general population level for general mental health or anxiety symptoms, but only a minimal worsening of depression symptoms. The authors suggest that the worsening of general mental health, anxiety and depressive symptoms in women, although small (change in the standardized mean difference ranging from 0.20 to 0.22) is of concern, and should raise awareness of the disproportionately greater burden the pandemic has had on women's mental health. The paper discusses a number of potential reasons for their greater vulnerability compared to men, including the fact that most single parent families tend to be headed by women, and women earn less and are more likely to live in poverty than men, they are also overrepresented in healthcare jobs and provide most family and elder care.

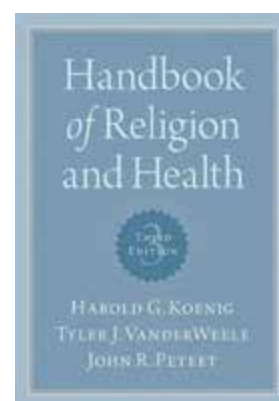
The authors will update the results of this systematic review as more evidence accrues, with study results posted online at - <https://www.depressd.ca/covid-19-mental-health>.



SPIRITUALITY, RELIGIOSITY AND MENTAL HEALTH - A NARRATIVE LITERATURE REVIEW

World Journal of Clinical Cases (WJCC) is a peer-reviewed journal published by Baishideng Publishing Group with five editors-in-chief from different regions of the world - Poland, Greece, Italy, China and South Korea. The journal promotes outstanding research in the field of clinical medicine and its IF is around 1.5. In September 2021, this journal published a review of the current scientific evidence on the relationships between spirituality, religiosity and mental health (Lucchetti et al, 2021 <https://pubmed.ncbi.nlm.nih.gov/34621814/>), written by authors from the Federal University of Juiz de Fora, Brazil, and Duke University, USA. Dr Koenig, Professor of Psychiatry and Behavioural Sciences at Duke University, is the editor of the „Handbook of Religion and Health“ published by Oxford University Press (2023; third edition ISBN-13 978-0190088859).

One of the motivations for the present review was the position statement on Spirituality and Religion (S/R) in Psychiatry issued by the World Psychiatric Association (2016), which calls for the inclusion of S/R in clinical encounters and training with the aim of providing a more holistic and comprehensive form of psychiatric care (Morreira-Almeida et al, 2016 <https://pubmed.ncbi.nlm.nih.gov/26833620/>). It emphasizes that psychiatrists and other mental health providers should seek to understand the patient's S/R and how it relates to the diagnosis, aetiology and treatment of their psychiatric



disorder, routinely include S/R in the case history (i.e. take a formal spiritual mental health history), work with chaplains and religious leaders, show respect and sensitivity to patients' S/R beliefs, and explore the positive and potentially negative aspects of S/R on mental health.

In the review paper by Lucchetti et al., key phenomena of S/R were first defined and the objectives set. Religion is about beliefs, practises and rituals that relate to the transcendent, while spirituality is seen as a broader concept that encompasses the personal search for answers to life's ultimate questions, the meaning of life and the relationship with the sacred or transcendent. Two main objectives were to provide an update on the current scientific evidence on the relationship between S/R and mental health, highlighting the most relevant studies, and to try to find mechanisms that explain this relationship. They then focused on the nine most common psychiatric disorders, reviewed over 100 research and review papers and came to the following conclusions:

- Depression - higher levels of S/R are generally associated with lower depressive symptomatology
- Anxiety - mixed results with both positive and negative associations

- Suicide - higher levels of S/R are generally associated with lower levels of suicidality
 - Substance use disorder - higher levels of S/R are generally associated with lower levels of substance use
 - Psychotic disorders - religious delusions are associated with poor prognosis, while non-psychotic religious beliefs are generally associated with better outcomes
 - Obsessive-compulsive disorder - few studies with mixed results - both positive and negative associations
 - Bipolar disorder - few studies, higher levels of S/R are generally associated with better outcomes
 - Post-traumatic stress disorder - S/R may serve as a buffer against post-traumatic stress and generally increases psychological growth
 - Eating disorders - few studies with mixed results - both positive and negative relationships.
- S/R interventions for mental health were also mentioned in this review. Some papers showed that religion-accommodative counselling was more effective than standard treatment for depression, or that spirituality-oriented psychotherapy approaches were more effective than others in treating psychiatric disorders such as depression, anxiety, stress and eating disorders. However, some results were not so positive, reporting, for example, weak evidence that spiritual interventions reduced depression, anxiety and hopelessness in cancer patients, or only partial effectiveness (S/R interventions effective for anxiety symptoms but not for depressive symptoms). In terms of mechanisms, despite several discussions on the possible pathways through which S/R affects mental and physical health, it remains unclear how S/R relates to biological factors that influence the development and course of mental disorders.
- The authors clearly pointed out that there are many gaps in the literature on spirituality, religiosity and psychiatry that need to be filled and that this is only a narrative review of the current scientific literature, not a systematic review. Therefore, the possibility of bias in the selection of papers analysed cannot be excluded. Despite the limitations mentioned above, the authors expressed their belief that this and similar work will lead to a more comprehensive, holistic approach to mental health care.

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