PSYNAPSE

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A MESSAGE FROM THE EDITOR

Bryan Butler, Ph.D. Candidate
Newsletter Editor
Student Representative

Dear members of the Psychopharmacology Section,

It is my pleasure to present our fall 2022 newsletter! In this issue, our generous colleagues down south in the USA continue to contribute to our newsletter and our section chair shares his knowledge regarding the treatment of neurocognitive disorders. Personally, I am happy to share that I began my predoctoral residency at the McGill University Health Centre at the beginning of September. I am excited to be one step closer to being able to apply to a Master of Science in Clinical Psychopharmacology program!

A CALL FOR NEW SECTION EXECUTIVE MEMBERS

We are currently looking for new members of the section's executive committee! If you are interested in joining the section and helping to further the Canadian RxP movement, please contact our Section Chair Dr. Amir Sepehry (sepehryaa@gmail.com) for more information.

A CALL FOR CONTRIBUTIONS

We are always looking for contributions to the newsletter and welcome any ideas you may have. Here are some examples of what you might submit:

- Brief articles on psychopharmacology-related topics
- Short summaries of recently published research related to psychopharmacology
- Reviews of recently released books related to psychopharmacology
- Experiences of psychologists who have completed a post-doctoral M.Sc. in Clinical Psychopharmacology
- Advertisements for jobs—or anything else that might be of interest to section members!

Submissions will be reviewed by Bryan Butler and can be sent to: bryan.butler@mail.mcgill.ca

Previous newsletters can be accessed here: https://cpa.ca/sections/psychopharmacology/newsletters/

I hope that you are all keeping well and staying safe during these challenging times.

Kind regards,

Bryan

OLD AGE PSYCHOPHARMACOLOGY: A REVIEW OF RECENT DEVELOPMENT

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Psychopharmacology Section Chair
Canadian Psychological Association

Brianna Kunder, Psy.D. Student
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Old age psychopharmacology: a review of recent development

The idea of living a long life is appealing to many, though the idea of aging tends to be much less appealing. We all age, and to this date, no cure has been found to defy the odds of aging! Nowadays, scientific literature classifies aging into healthy aging, and not-so-healthy aging. The latter part is what I intend to focus on most, with emphasis on Major and Mild Neurocognitive Disorders (MND) (American Psychiatric Association, 2022), notably due to a neurodegenerative condition, Alzheimer's disease. Before discussing treatments and what is in the pipelines, I will present a brief review of the diagnostic approaches without expanding on each of them.

AD/MCI/SCD: diagnosis

The aggregate evidence to date suggests a continuous path between healthy aging to dementia (Mecocci, 2004; Moscoso et al., 2019), a global term referring to neurobehavioral and neurocognitive deficits with neuropathological underpinning markers. Hence, in our classification system and order of developmental trajectory, Subjective Cognitive Decline (SCD) (Jessen et al., 2020) comes first, followed by Mild Cognitive Impairment (MCI) (Albert et al., 2011), Alzheimer's disease (AD: Probable and Possible) (McKhann et al., 2011), and then dementia, are presented. Although it is arguable that MCI and AD are part of the MND (i.e., major neurocognitive disorder) and could lead to dementia, there are cases where MCI is reported to be reversible (Roberts et al., 2014), as several risk factors play a significant role. Hence, it can be highlighted that the assessment of cognitive deficits has become more nuanced, and several classification approaches have been proposed by the International Working Group (IWG) for clinical research criteria for the diagnosis of AD (Cummings et al., 2013) and the US National Institute on Ageing-Alzheimer's Association (NIA-AA) (Guo et al., 2013), even research diagnostic approaches based on the presence of different biomarkers have been proposed (Jack et al., 2018; Jack et al., 2016). By the same token, The American Psychological Association released a guideline for the evaluation of dementia and age-related cognitive change (American Psychological Association: APA Task Force for the Evaluation of Dementia and Age-Related Cognitive Change, 2021). To this end, the estimated disease trajectory from preclinical AD to dementia is about 15 to 24 years, depending on the starting point (Vermunt et al., 2019).

Irrespective of cognitive function decline (e.g., memory, attention, executive), it is suggested that these neurocognitive conditions accompany a myriad of neuropsychiatric symptoms (e.g., apathy, depression, irritability) that play a significant role in diagnostic approaches, treatment development, and planning (Cummings, 2021). Thus, experts aim for a transdiagnostic treatment approach that uses dimensional rather than a categorical diagnostic approach (Anderson & Schrift, 2022) by also considering the autonomy of the patients, their values, and capacity (Horwege et al., 2019).

Treatments

In terms of treatment, given the disease trajectory, and consistent with the literature, treatment can be organized into two categories with further subsections. The first category is prevention to maintain mental and physical health, and the second is treatment of symptoms/conditions. The latter can be divided into specifics, such as managing cognitive symptoms and managing comorbid neuropsychiatric or behavioral (i.e., comportment) symptoms.

Currently, prevention and the task of slowing cognitive decline starts earlier in life, notably in middle age, and that is initiated with healthy eating (e.g., adherence to a Mediterranean diet) (Hill et al., 2019), exercising (Cass, 2017; Law et al., 2020; Meng et al., 2020), and maintaining social activities (in other words, being mentally active) (Evans et al., 2019; Yoneda et al., 2021), all of which are in the absence of other medical conditions. You may ask, what about other types of diets such as a ketogenic diet or taking vitamin supplements (e.g., Omega 3, quercetin, bio-curcumin, rosmarinic acid)? Then, I could respond by saying that the current literature is mixed in terms of their efficacy, thus I would rather avoid discussing them until further robust evidence supports their utility.

In terms of medications, we can refer to a new prescription medication that is recently approved by the FDA (i.e., aducanumab, a disease modifying intravenous immunotherapy) for managing cognitive decline at a preclinical stage of AD that is specifically tailored to manage AD-related biomarkers, such as amyloid (Cummings et al., 2021a; Tolar et al., 2020). However, other medications are in the works for use at various stages of the disease (Cummings et al., 2021b). These medications are either specifically tailored toward disease modification or, although limited, dealing with symptoms (Cummings, 2022). It is suggested that over 120 agents and various phase trials are ongoing and assessing new therapies (Cummings et al., 2021b).

There are other medications on the market that you may be aware of that alter the central nervous system (CNS). These include cholinesterase inhibitors (AKA: acetylcholinesterase inhibitors) such as disintegrating pills/tablets or patches of donepezil (Aricept), rivastigmine (Exelon), galantamine (Reminyl, Razadyne, Razadyne ER), and N-methyl D-aspartate (NMDA) antagonist memantine that may be used at various stages of the disease. You will mostly see memantine being used at the moderate to severe stage of AD, and the other 3 cholinesterase inhibitors for MCI, or mild to severe AD. These medications can be prescribed as monotherapy or as polypharmacy. There are newer medications on the market, for example, combining memantine with donepezil (e.g., Namzaric) as an extended-release capsule. These agents are meant to either prevent excitotoxic actions resulting from overstimulation of NMDA-glutamate receptors in select brain areas, or to improve cholinergic transmission within the CNS. In sum, these are for delaying disease progression by influencing cognitive decline (i.e., memory decline, hypoarousal), and altering comorbid other symptoms. In other words, they provide short-term symptomatic benefits.

With respective comorbid neuropsychiatric symptoms, we must acknowledge the most prevalent symptoms emerging at various stages of the disease. These include anhedonia/apathy, depressed/euphoric mood, and the list can continue with delusions/hallucinations, impulsivity, obsessions/compulsions, catatonia, hyperarousal/irritability/anxiety, or agitation (Anderson & Schrift, 2022). Thus, symptom management may be via evidence-based monotherapy with psychotherapy (e.g., reminiscence therapy, client-centred and collaborative approach) (Tuokko & Smart, 2018; Wolinsky et al., 2018), in the absence of anosognosia and whether the patient can attend, or with pharmacotherapy, or in polytherapy/polypharmacy. For the management of mood-related symptoms, antidepressants, antipsychotics, or mood stabilizers are prescribed (Sepehry et al., 2012a; Sepehry et al., 2012b). For the management of anhedonia/apathy, stimulants, such as methylphenidate, or specific antidepressants are

used. The same medication classes are also used for other symptoms. For example, antipsychotics are used for delusions/hallucinations, disinhibition/impulsivity, or agitation, or antidepressants are used for obsessive/compulsive symptoms. Additionally, benzodiazepines are used for the management of agitation or catatonia (Anderson & Schrift, 2022; Bessey & Walaszek, 2019; Epperly et al., 2017; Szeto & Lewis, 2016). Yet, all the above can be tailored and used alongside preventive methods. Furthermore, other therapeutic modalities have been used for the treatment of comorbid behavioral and psychological symptoms of the AD spectrum, such as repeated Transcranial magnetic stimulation or other brain stimulation approaches (Chang et al., 2018; Luo et al., 2021; Yu et al., 2021), however, they are not within the scope of the current paper, hence they are omitted.

To this end, it can be said that the science of dementia treatment, with an integrative and developmental approach, has not stopped, and although at times controversial or not as effective as we envisaged, clinicians, scientists, neuropsychopharmacologists are working diligently to find a cure. So, there is hope for the future of healthy aging!

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(see appendix for references)

CANADIAN OPTOMETRISTS, TPA, AND RxP

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First, the good news: The American prescriptive authority (RxP) initiative continues.
The bad news: It's going *slowly*. To date, only five state laws have been enacted since the first bill was introduced in Hawaii in 1985.[1]

A Path Forward?

By contrast, American optometrists secured the authority to prescribe therapeutic pharmaceutical agents (TPAs) during a 21-year period, between the date of their first state legislative victory in West Virginia, in 1976, and their fiftieth, in Massachusetts, in 1997 (Wolfberg, 1999). The comparison is particularly apt since optometry's original scope of practice, like psychology's, excluded prescribing medications.

The scope of practice for optometrists varies by province and territory across Canada, but generally, Canadian optometrists can prescribe a range of diagnostic pharmaceutical agents (DPAs) and TPAs (Canadian Association of Optometrists, 2020).
What can we learn from optometrists about how they attained their TPA authorizations? At the PEPTO (Psychologists Espousing Prescriptive Therapeutic Options) conference, the first national meeting of grassroots RxP advocates, we invited an optometrist to talk with us (PEPTO Agenda, unpublished document, February 13-14, 1999).

Dr. Vic Connors, a Trustee of the American Optometric Association, spoke about how he had traversed the United States *and Canada* to promote optometrists' expanded scope of practice. The potential benefit of US-Canadian collaboration on behalf of RxP was a big takeaway for me. But other lessons seem to have been lost on us as a group. If you're on the APA Division 55 listserv, you might have gotten a sense of this over time. A state RxP initiative begins, perhaps getting to the point where a bill is introduced, and prospects for passage might appear favorable, but all too often the effort ends in disappointment.
I think we're in a bit of a rut down here, but a different path is possible

[1] Technically, the U.S. Territory of Guam has an RxP law, and Indiana has a very narrow authorization, but to date no psychologist has prescribed in either jurisdiction.

Take an Optometrist to Lunch

A bit of extramural networking might be a game changer. Take an optometrist or two to lunch – and maybe a nurse practitioner – and ask them how they obtained their own expanded scope of practice. You might just find that they're more than willing to share their knowledge with you in the service of improving patient care across the country.

And then you can tell your American colleagues how it's done!

Robert K. Ax, Ph.D. is a Fellow of APA, a member of the Canadian Psychological Association, and the former president of APA's Division 18 (Psychologists in Public Service).

(see appendix for references)

"I THOUGHT I FOUND A LOVE BUT SHE WAS JUST A FLING. AND THEN I MET A GIRL, AND FELT A DIFFERENT THING."

Pat DeLeon, Ph.D., MPH, JD (former APA President)

Dawn of a New Interdisciplinary Era? Tracy Sbrocco: "More adults seeking mental health treatment receive psychopharmacologic agents than psychotherapy which are most often prescribed by primary care providers who possess little mental health expertise. Consequently, it has become increasingly important for the next generation of psychologists to understand psychopharmacology and to be able to implement their understanding of medication use and side effects into their diagnostic case conceptualization and ongoing treatment planning. At the Uniformed Services University (USU) of the Department of Defense (DOD) we recently revised our APA accredited clinical psychology program's psychopharmacology course in order to deliver a case-based course offered by faculty from our university's psychiatric mental health nurse practitioner (PMHNP) program, directed by Lt. Col. Regina Owen, USAF. These nurse practitioners are close allies to psychologists in helping patients, given they can provide assessment, diagnosis, and therapy for mental health conditions, and prescribe and monitor medications. Psychologists involvement in psychopharmacology exists on a continuum with a small, but growing number of psychologists functioning as prescribers, but far more functioning as collaborators and information providers with other health service providers in the medical decision making process.

"The course assisted students in gaining a comprehensive understanding of the basic mechanisms of action, clinical applications, common adverse side effects, and risks of the medications most frequently prescribed in the contemporary treatment of psychiatric disorders. The major classes of psychiatric disorders were covered across the weeks with examples given in practical, clinically relevant language that moved our psychology students through the maze of mental health medications in a meaningful manner and provided information that can be used to expand their assessments, their ability to collaborate with other professionals, and, most importantly, improve client outcomes. We were fortunate to have USU graduate Lt. Marcus Van Sickle, USN, a military prescribing psychologist, provide hands-on answers to student questions. And, our text was the impressive *Handbook of Clinical Psychopharmacology for Therapists*, co-edited by Bret Moore, who has been active within the Division.

"The last week of the course was an interprofessional, three hour case conference, entitled Psychopharmacology Interest Group or 'PIG' for fun, which included both psychology and psychiatric nursing graduate students led by nursing faculty member Jouhayna Bajjani-Gebara. Students were divided into small groups, they watched a simulated patient intake, and then responded using a chat format to questions regarding patient safety, decision to hospitalize (or not), additional information they would have liked to have, diagnosis, and suggestions for first time medication choices. The questions were answered in an interactive format and for the last segment of the PIG the responses were discussed. The conversations and learning imitated the processes engaged in during case conferences – or in each other's offices as we try to do what's best for our clients."

To my knowledge, this collaboration between the psychology and psychiatric mental health nursing program at USU is the only interdisciplinary psychopharmacology endeavor in the nation, not to mention their regular PIG presentations at our APA annual conferences – thanks to the Division's vision. Student comments: "I was so excited – this week a patient asked me about her medication and I could actually answer. The class was fun! I have listened to the lectures several times." At the close of the course, the faculty reminisced on how six years earlier then-psychology graduate student Fernanda De-Oliveria had laid the foundation for the "PIG." The federal government, in this case DOD, has once again positioned psychology to be on the frontline of our nation's evolving mental health education and treatment agenda.

Affirming Reflections – Global Perspectives: At our USU Health Policy seminar Zohray Talib, Co-Chair of the National Academies' Global Forum in Innovation on Health Professional Education and Professor at the California University of Science and Medicine, reported that 25% of the global population suffers from mental illness; two-thirds of people with mental health conditions do not receive the care they need; people with serious mental illness are twice as likely to develop cardiovascular disease and metabolic disease; one in five of the world's young people have a mental health condition; and, half of all mental health issues begin before age fourteen.

These observations are highly supportive of former APA President Alan Kazdin's decade-long effort urging psychology to develop "interventions that can reach large numbers of individuals and especially target those individuals least likely to receive services." Alan recently opined: "Precision medicine reflects advances that integrate improved methods of diagnosis, assessment, and treatment. The promise of better matching treatments with characteristics of individual patients has already seen gains in many areas of medicine. Advances have extended to psychotherapy with the similar goal of matching of patients to treatments for which they are especially well suited. While advances are made in precision interventions, it is critical not to lose sight of the pivotal role of nonprecision interventions as well…. The lack of available services for most people (in the world) and systematic disparities among those services underlie the importance of delivering services in ways that can reach many more people as well as can target special groups."

Affirming Reflections – Personal Perspectives: Anna Wegierek, the 13th Illinois Prescribing Psychologist, responding to Jin Lee's passionate RxP efforts: "I am so moved by your letter as I have lived through those changes and listen to them attentively. Your letter described what I saw in the psychology field for the past at least 25 years. I too, never gave up and am now a prescribing psychologist in the State of Illinois. I can relate to almost every word about statistics you have mentioned. I am the only Polish speaking prescribing psychologist in Illinois and probably in the entire country. So, continuing the statistics I have this feeling that I am not sufficient enough for all the Polish speaking patients that live here even when we think that there are a few other prescribers who speak Polish. I am saddened that this is not enough 'for us.' And I am not only thinking about Polish but this may also be a case for other nationalities/ethnicities that do not have holistic care that we can provide. Be well and know that you and others on this road have my support."

Beth Rom-Rymer: "Licensed Clinical Psychologists often work hand-in-hand with nurse practitioners as we endeavor to provide comprehensive, integrated treatment to our patients. In a groundbreaking study, *Just What the Nurse Practitioner Ordered: Population Health and Prescriptive Authority*, authors Diane Alexander and Molly Schnell, examined in 2014, while graduate student researchers at the Center for Health and Wellbeing at my alma mater Princeton University, the effect that nurse practitioner independent practice authority would have on population health. What they found was

remarkable. In states in which nurse practitioners had independent prescriptive authority, suicide rates plummeted by 12%. Published in the *Journal of Health Economics* in 2019, they found that this outcome was 'concentrated in areas that are underserved by physicians and among populations that have difficulty accessing physician-provided care.' Currently, the Illinois Association of Prescribing Psychologists (IAPP) is conducting a research study, led by Leila Ellis-Nelson, on the multidimensional effects of prescribing psychologists on patient care, patient health, and population health. We expect to see significant improvements in patient health and population health, especially among the underserved populations, with historically inadequate access to care."

Critical Evolving Legislative Perspectives: This spring, Reginald Williams II, Vice President for International Health Policy and Practice Innovations of The Commonwealth Fund testified before the U.S. Senate Finance Committee on *Ensuring Access to Behavioral Health Care: Making Integrated Care a Reality*. Testimony highlights: There is a behavioral health crisis in the United States. By behavioral health, I mean the promotion of mental health, resilience, and wellbeing; the prevention, early identification, and treatment of mental illness and substance use; and the support of those who experience and/or are in recovery from these conditions, along with their families and communities. This is particularly acute for economically disadvantaged and underserved communities. It predates COVID-19 but was exacerbated by the social isolation, economic disruption, and upheaval of the U.S. health system that accompanied the pandemic.

Compared to other high-income countries, the U.S. is an outlier in access to behavioral health services. Our survey found that U.S. respondents with mental health needs were more likely than in other countries to face access barriers. Black and Hispanic Americans faced even greater access problems. The current crisis is particularly notable for its impact on our nation's youth. Late last year, the U.S. Surgeon General issued a crisis advisory for children's mental health. In 2020, less than half of adolescents with depression reported receiving any treatment, with Black and Indigenous people and youth of color having even worse access to care than white young people, teenagers, or adolescents. Medicaid is the single largest provider of behavioral health services, and yet half of all Medicaid members with serious mental illness, and nearly 70% of members with an opioid use disorder, report not receiving treatment.

Recommendations included: Increase access to behavioral health services by integrating mental health and substance use treatment and services with primary care. This includes supporting integration and care coordination with innovative payment approaches. Expand and diversify the behavioral health workforce, by engaging a wide variety of providers to meet people's unique needs. And, Leverage the potential of health technology to fill gaps and meet unfulfilled needs with telemedicine and digital health solutions.

Expanding the capacity of primary care providers to meet behavioral health needs provides an opportunity to increase access to early intervention and treatment and promote social connectiveness and suicide prevention. Trained and accredited peer support specialists leverage their lived experience of mental health or substance use conditions to support others in recovery. Engaging community health workers, who are representative of the populations they are seeking to reach, can be an important way to reduce disparities. Consideration of a new type of provider to fill workforce gaps, like general practice mental health workers, who are health professionals with a background in social support, basic psychology training, or nursing and work under supervision of a primary care provider, as is the case in the Netherlands.

Now is the time to be OPTIMISTIC about the potential of technology to address behavioral health needs. Technology-enabled solutions have resulted in unprecedented investment in digital health tools that can help solve the provider shortage through on-demand therapy, guided mediation, chat-bots and more. Telemedicine can be an effective way to improve mental health, especially through cognitive behavioral therapy. In closing, "I believe that, as a nation, we can do better. And by providing new opportunities to expand access to equitable, affordable care and treatment and address our behavioral health crisis, ultimately, we can be better."

Alex Siegel, Director of Professional Affairs, Association of State and Provincial Psychology Boards (ASPPB): "The Psychological Interjurisdictional Compact (PSYPACT), endorsed by APA, which allows for increased access of care and continuity of care for providing psychological services across state lines, continues to add new jurisdictions. Currently, there are 28 jurisdictions which have adopted and are currently part of the PSYPACT Commission (AL, AZ, AR, CO, DE, DC, GA, IL, KS, KY, ME, MD, MN, MO, OK, NV, NE, NH, NJ, NC, OH, PA, TN, TX, UT, VA, WI, and WV).

"There are five other states which have enacted PSYPACT but their laws are not yet effective. Indiana and Idaho both have effective dates of 7/1/22. Connecticut has a date of 10/1/22 and Washington has a date yet to be determined. South Carolina was signed by the Governor into law on 5/13/22 but needs to go before the PSYPACT Commission before it can become effective. So far, as of May 16, 2022, 33 jurisdictions have passed legislation adopting the psychology compact.

"In Rhode Island, the PSYPACT bill (RI H. 7501 & RI S. 2605) recently passed out of their Senate and now is in their House for consideration. In addition, there is legislation in Massachusetts (MA S. 2542), Michigan (MI H. 5489), the Commonwealth of Northern Mariana Islands (CNMI HB. 22-80) and New York (NY S. 9234)." "Zinging in the rain. Now I'm feeling no pain" (The Zing, Selena Gomez -- Hotel Transylvania).

Aloha,

Pat DeLeon, Ph.D., MPH, JD, former APA President

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OLD AGE PSYCHOPHARMACOLOGY

Amir A. Sepehry, Ph.D. (Section Chair)

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