



A COMPREHENSIVE REVIEW ON MENTAL HEALTH ISSUES AND INTEGRATIVE APPROACHES TO MANAGE THEM IN OLDER ADULTS.

Geriatric Health

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ABSTRACT

In the past few years, the prevalence of mental health disorders is steadily increasing in older adults. It represents a significant public health challenge globally. The reasons for mental health decline in this population are multifactorial which necessitates the use of integrative strategies with multi-modal approaches. Using integrative approach like nutritional optimisation, digital health tools and collaborative care along with physical activity, social prescribing and mind-body practices can have a significant impact in improving the mental as well as physical health of older adults. This integrative approach is a safer and more individualised alternative rather than just relying on pharmacotherapy only. In anxiety and depression, artificial intelligence-driven interventions have proven to be quite useful, and a collaborative model can help in the prevention of relapse. To achieve the full potential of these interventional strategies, the healthcare system should invest more in workforce training and prioritise equitable access to integrative care models. It should also focus on spreading more awareness about these methods, so as to make it socially and culturally acceptable. Future research can focus on long-term trials with focus on patient-based treatments and implementation in diverse global contexts.

KEYWORDS

INTRODUCTION

The landscape of the global demography is currently undergoing transformation characterised by an increase in the population of older people. By 2030, it is estimated that 1 in 6 people in the world will be aged 60 years or over [1]. By 2050, the world's population of people aged 60 years and older will be approximately 2.1 billion. The number of persons aged 80 years or older is expected to triple between 2020 and 2050 to reach 426 million [1]. This high number represents critical public health challenges. Around 14% of the population aged 60 years and older are suffering from a mental health disorder along with a physical deformity, isolation and other long-term chronic complications [2]. Even though the prevalence rate of mental health disorders is very high in elderly people, it often remains misdiagnosed. The major contributor to this diagnostic gap is 'internalised ageism'. A societal and clinician bias where mental health degradation is often attributed to normal ageing, instead recognised as a treatable condition of ageing, instead of being considered as a treatable condition [3-4].

The clinical presentation of mental health illness is often different in the late stages of life. For instance, severe depression sometimes comes without sadness, as a person does not even realise that they are depressed and they become habituated to that due to long-term social isolation. Instead of feeling sad, they may experience lack of motivation, energy, or some physical problems like arthritis pain or worsening of headache [3]. Older adults with chronic anxiety and depression tend to develop prodromal markers for Alzheimer's and other neurocognitive disorders.

General management of late-life depression usually relies on pharmacotherapy. However, the elderly population faces unique problems like polypharmacy and altered pharmacokinetics due to multiple medicines. Furthermore, interaction between multiple medications increases their chances of falls, delirium and cognitive impairment [4-5]. It has led to a paradigm shift in integrative management. As it was observed, only pharmacological therapy is often insufficient to treat; several non-pharmacological methods have been studied, like yoga, meditation, tai chi, and mindfulness. It is an evidence-based practice that integrates traditional medicines with mind-body practices [6-7]. This review article focuses on the published literature regarding the efficacy of integrated strategies, ranging from Tai Chi to omega-3 supplementation to Artificial Intelligence (AI)-driven passive monitoring, in fostering psychological resilience and improving lifestyle in the final decade of life, thereby enhancing prosperity.

DISCUSSION

Mental health disorder in older adults requires a multifaceted, integrative approach that extends well beyond conventional pharmacotherapy. Recent studies support combining mind-body

interventions, nutritional optimisation, digital health technologies, collaborative care models, social prescribing and physical activity to improve psychological health and quality of life in older adults.

Mind-body Interventions

The culturally acceptable interventions for older adults are yoga, Tai Chi, Qigong and mindfulness meditation. These methods have emerged as safe, low-cost and feasible. This claim is supported by the systematic review and network meta-analysis published by Hazal Sarak Kucukosmanoglu et al. which suggest that mindbody exercises have reduced anxiety and depression significantly in older adults. Multiple mechanisms were involved in these interventions: reducing inflammatory markers, parasympathetic tone enhancement, a sense of self-efficacy and improving sleep quality [7].

In particular, Tai Chi has shown benefits that are not just limited to mood improvement it also improves balance and cognitive function which are major concerns in geriatric populations. Similar findings were observed in a meta-analysis conducted by Manuel Weber et al [8]. Similarly, Yoga has shown significant improvement in everyday functioning and resilience in older adults, suggesting that it plays a role in protection against neurocognitive decline [9]. An umbrella review of 25 systematic reviews published recently confirmed that mind-body exercise, particularly Qigong, significantly reduced depressive symptoms in older adults [10]. Mind-body interventions should be considered as a first-line adjuvant therapy in late-life depression. They are safe to use and have dual benefits of improving both physical and mental health.

Nutritional Psychiatry

Several nutrients have shown efficacy in supporting mental health in elderly. Antidepressant properties of omega-3 polyunsaturated fatty acids, particularly Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), were studied extensively. A meta-analysis reported that omega-3 supplementation at a dose of 1.5g/day showed modest but statistically significant improvement in depressive symptoms among elders [11]. While large-scale prevention trials in the non-depressed population showed no effects.

This heterogeneous finding likely reflects baseline inflammatory status, EPA: DHA ratios and illness severity. A meta-analysis study conducted in 2019 found that formulations containing > 60% EPA at doses < 1gm/day were most effective. However, DHA pre-dominant formulation did not show such benefits [12]. Along with omega-3, there are other micronutrient deficiencies, particularly vitamin D, vitamin B12, folate, magnesium, and zinc are also correlated with depressive symptoms. Correcting nutritional deficiencies through diet or supplementation can improve mood stability and neurotransmitter synthesis in geriatric mental health care [13].

Digital Health

Novel tools with capabilities of detecting and managing mental health conditions in older adults include smartphones or smartwatches, which help in continuous monitoring of behavioural changes such as social interaction, mobility, physical activity and sleep patterns can help in early detection and provide real-time intervention [14].

AI interventions, like chatbots and robotic companions, have shown improvement in depression and anxiety symptoms. A recently published meta-analysis shows that AI robots in elderly care homes have reduced loneliness and improved positive effects [16]. Other digital interventions like teletherapy and virtual reality have similarly improved symptoms of anxiety and depression [16]. Despite these advantages, challenges persist, like barriers to digital literacy and algorithmic bias.

Collaborative Care Models

A structured team-based approach including primary care providers, care managers and psychiatric consultants has shown significant effectiveness in treating late-life depression. The IMPACT trial suggested that collaborative care had doubled depression remission time in comparison to usual care. Collaborative care is cost-efficient and can also provide diversity in treatment [17].

Social Prescribing and Loneliness Intervention

Social isolation and loneliness are major risk factors for depression and cognitive impairment. In social prescribing, patients are connected to community resources like art groups, exercise classes and volunteering. A meta-analysis of 26 randomised control trials published recently, suggests that social prescribing has shown significant improvement in the quality of life of patients and reduced loneliness [18]. In particular; art-based interventions showed a huge impact [18]. An opportunity for peer support and skill building can be achieved by group-based intervention. A systematic review of qualitative studies by Emil Rapo et al. suggested three major components for successful social prescribing; including, assessment of patients before prescribing, individual support from the worker and matching patients with relevant activities [19].

Physical Activity and Exercise

Physical activity is one of the major parts of treatment in mental health care. A systematic review and meta-analysis of 65 randomised controlled trials including more than 5000 patients conducted by Kexin Huang et al. found that depression symptoms significantly decreased in patients who were doing exercise regularly, particularly with neuromotor exercise training showed highest response. Other forms of exercise, like aerobic exercise, resistance training and light walking, have also shown a positive impact on depression symptoms and improved cognitive functions [20]. An umbrella review of 12 meta-analyses published by Lucas Goldmann Bigarella et al., suggested similar findings that physical activity has a significant role in the reduction of depression symptoms [21]. Physical activity also has a medium effect in reducing symptoms of anxiety in older adults. This claim was supported by another systematic review and meta-analysis conducted by Zahra Goodarzi et al [22]. Therefore, if public health agencies and social groups promote age-friendly physical activity, it can help overcome both physical and mental health problems.

Challenges and Future Directions

Even though there is sufficient evidence that an integrative approach helps improve mental health disorders, there are several barriers that are making it difficult to implement. In older adults, mental health disorders are often underdiagnosed or undertreated due to ageism, both social and clinically driven. The medical management is often complicated due to polypharmacy and altered pharmacokinetics. The digital interventions, which are promising, have problems like accessibility, usability, and data privacy breaches. Most of the trials were conducted in high-income western countries where cultural adaptation is easy. It is difficult to implement in low- and middle-income countries. Also, in most of the previously published studies, follow-up duration was shorter. Longer follow-up periods are required to evaluate long-term outcomes and relapse prevention.

Future research should prioritise head-to-head comparative effectiveness trials to inform clinical decision-making, like a randomised trial comparing Tai Chi vs Yoga vs nutritional approach to have a better understanding of these integrative methods. Long-term studies can assess relapse prevention. A guided policy and reimbursement can be done by cost analysis. Awareness can be spread

about digital interventions which can make them more culturally acceptable. By working on these clinical gaps, a scalable, equitable, and sustainable integrative mental health care system for older adults can be developed.

CONCLUSION

The prevalence of mental health disorders in the elderly is quite high. Although frequently underdiagnosed and undertreated, these conditions respond well to integrative strategies like nutritional optimisation, digital health tools and collaborative care. Physical activity, social prescribing and mind-body practices, can have a significant impact as well. This integrative approach is safer and more individualised alternative rather than just relying on pharmacotherapy only. To optimise these interventional strategies, the healthcare system should invest more in workforce training, spreading awareness and prioritising equitable access.

REFERENCES

- World Health Organization. Mental health of older adults [Internet]. Geneva: World Health Organization; 2023 Oct 19 [cited 2026 Aug 7]. Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- World Health Organization. Mental health of older adults [Internet]. Geneva: World Health Organization; 2026.. Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- Robinson L, Smith M, Segal J. Depression in older adults: signs, symptoms, and treatment [Internet]. HelpGuide.org; 2026 May 26. Available from: <https://www.helpguide.org/mental-health/depression/depression-in-older-adults>
- Dhalwani NN, Fahami R, Sathanapally H, Seidu S, Davies MJ, Khunti K. Association between polypharmacy and falls in older adults: a longitudinal study from England. *BMJ Open*. 2017 Oct 16;7(10):e016358. doi: 10.1136/bmjopen-2017-016358
- Ming Y, Zecevic A. Medications & polypharmacy influence on recurrent falls in community: a systematic review. *Can Geriatr J*. 2018 Mar 23;21(1):14-25. doi: 10.5770/cgj.21.268
- Dong Y, Zhang X, Zhao R, Cao L, Kuang X, Yao J. The effects of mind-body exercise on anxiety and depression in older adults: a systematic review and network meta-analysis. *Front Psychiatry*. 2024;15:1305295. doi: 10.3389/fpsy.2024.1305295
- Kucukosmanoglu HS, Cramer H, Tavakoli R, Moosburner A, Bilic MI. Mind-body medicine in the treatment of depression: a narrative review of efficacy, safety and mechanisms. *Curr Psychiatry Rep*. 2024 Dec;26(12):729-40. doi: 10.1007/s11920-024-01548-7
- Weber M, Schnorr T, Morat M, Morat T, Donath L. Effects of Mind-Body Interventions Involving Meditative Movements on Quality of Life, Depressive Symptoms, Fear of Falling and Sleep Quality in Older Adults: A Systematic Review with Meta-Analysis. *Int J Environ Res Public Health*. 2020 Sep 9;17(18):6556. doi: 10.3390/ijerph17186556
- Geiger PJ, Boggero JA, Brake CA, Caldera CA, Combs HL, Peters JR, et al. Mindfulness-Based Interventions for Older Adults: A Review of the Effects on Physical and Emotional Well-being. *Mindfulness* (N Y). 2016 Apr;7(2):296-307. doi: 10.1007/s12671-015-0444-1
- Li F, Li Q, Huang J, Li X, Lu Z. Effects of mind-body exercises on depressive symptoms in older adults: a comprehensive umbrella review of the evidence. *Front Psychol*. 2026 May 6;17:1806563. doi: 10.3389/fpsyg.2026.1806563
- Serefko A, Jach ME, Pietraszuk M, Świąder M, Świąder K, Szopa A. Omega-3 Polyunsaturated Fatty Acids in Depression. *Int J Mol Sci*. 2024 Aug 9;25(16):8675. doi: 10.3390/ijms25168675
- Suh SW, Lim E, Burm SY, Lee H, Bae JB, Han JW, et al. The influence of n-3 polyunsaturated fatty acids on cognitive function in individuals without dementia: a systematic review and dose-response meta-analysis. *BMC Med*. 2024 Mar 12;22(1):109. doi: 10.1186/s12916-024-03296-0
- Piau C, Campo E, Rumeau P, Vellas B, Nourhashemi F. Aging in place: digital technology to support older adults with cognitive impairment. *Maturitas*. 2014 Mar;77(3):221-230. doi: 10.1016/j.maturitas.2013.11.003
- Shen SY, Qi W, Zeng J, Li S, Liu X, Zhu X, et al. Passive Sensing for Mental Health Monitoring Using Machine Learning With Wearables and Smartphones: Scoping Review. *J Med Internet Res*. 2025 Aug 14;27:e77066. doi: 10.2196/77066
- Zhang Y, Wang Y, Li X, Liu Y, Chen J, Zhao M, et al. Artificial Intelligence-Driven Passive Sensing for Mental Health and Cognitive Monitoring in Aging Populations: A Systematic Review. *J Med Internet Res*. 2025 Sep 18;27:e81042. doi: 10.2196/81042
- Humayun A, Madawana AM, Hassan A, Mahmud A, Kamaruddin N, Noor SH, et al. Artificial intelligence as a predictive tool for mental health status: Insights from a systematic review and meta-analysis. *PLoS One*. 2025 Sep 26;20(9):e0332207. doi: 10.1371/journal.pone.0332207
- Hunkeler EM, Katon W, Tang L, Williams JW Jr, Kroenke K, Lin EH, et al. Long term outcomes from the IMPACT randomised trial for depressed elderly patients in primary care. *BMJ*. 2006 Feb 4;332(7536):259-263. doi: 10.1136/bmj.38683.710255.BE
- Wang Y, Xu Y, Gao L, Bai X. Impact of social prescribing on quality of life and loneliness in geriatric populations: A comprehensive meta-analysis of RCTs with implications for nursing practice. *Geriatr Nurs*. 2026 May 21;71:104098. doi: 10.1016/j.gerinurse.2026.104098
- Rapo E, Johansson E, Jonsson F, Hörnsten Å, Lundgren AS, Nilsson I. Critical components of social prescribing programmes with a focus on older adults - a systematic review. *Scand J Prim Health Care*. 2023;41(3):326-342. doi: 10.1080/02813432.2023.2237078
- Huang K, Zhang G, Gains H, He R, Jiao Y, Jia Y, et al. Effectiveness of Exercise-Based Interventions on Depressive Symptoms in Older Adults: A Systematic Review and Network Meta-Analysis. *J Am Med Dir Assoc*. 2025 Sep;26(9):105583. doi: 10.1016/j.jamda.2025.105583
- Bigarella LG, Ballotin VR, Mazurkiewicz LF, Ballardín AC, Rech DL, Bigarella RL, Seliestre LDS. Exercise for depression and depressive symptoms in older adults: an umbrella review of systematic reviews and Meta-analyses. *Aging Ment Health*. 2022;26(8):1503-1513. doi: 10.1080/13607863.2021.1951660
- Goodarzi Z, Levy AM, Whitmore C, Chan T, Mojani J, Niculescu I, et al. A systematic review and meta-analysis on physical activity for the treatment of anxiety in older adults. *Am J Geriatr Psychiatry*. 2025 Feb 13;33(2):S1041-6102(25)00011-0. doi: 10.1016/j.jagp.2025.02.011