

Physical Activity, Exercise, and Mental Disorders of Older Adults

Aging is associated with an increased risk of psychiatric issues, including depression.¹ The global population of older adults aged ≥ 60 years is estimated to reach 1.4 billion by 2030 and further increase to 2.1 billion by 2050. Of this population, about 80% will live in low- and middle-income countries by 2050.² On the other hand, more than 20% of older adults aged ≥ 60 years were reported to have suffered from a mental disorder.² The burden of mental disorders is further exacerbated by a high prevalence of comorbid somatic disorders, causing a significantly reduced life expectancy of 15-20 years compared to the general population.²

The costs associated with mental health care, particularly those for medication-based treatments, have increased markedly in the past few decades.³ On the other hand, a significant barrier to mental disorder treatment exists for many dealing with depression, with only 51% of those in high-income countries and 20% in low- and lower-middle-income countries having access to necessary mental health care.⁴ It is estimated that the annual global costs of mental disorders will increase to \$6 trillion USD from \$2.5 trillion USD by 2030.⁵ In addition, the long-term effects of these medication-based treatments are questioned because some of these treatments do not lead to clinically meaningful improvement in mental health over the long term, and side effects such as increased blood glucose concentration and weight gain have been reported.

Physical Activity as an Alternative Therapy

Physical activity, defined as any movement of the body that consumes energy, and its organized counterpart, exercise, plays a key role in the prevention and management of numerous physical conditions, including cardiovascular diseases and obesity.⁶ In addition, there has been a large body of evidence that highlights these preventive and therapeutic effects of physical activity and exercise are extended to mental disorders.⁶

Effects of Physical Activity and Exercise on Preventing and Managing Mental Disorders Among Older Adults

A substantial body of evidence suggests that physical activity and exercise should be incorporated into mental health care.^{4,7} For example, several intervention studies have reported that physical activity reduced the chance and severity of depression and anxiety symptoms in older adults.⁷ The types of physical activity included in the intervention studies included Tai Chi, aerobic exercise, walking, Qigong, Chanwuyi, Otago exercise, and low-impact exercise.⁷ They may be an effective alternative to psychotherapy and drugs.⁴

The clinical guidelines in the United Kingdom, United States, and Australia recommend physical activity as a component of depression treatment.⁴ However, these guidelines lack clear and consistent advice regarding the appropriate dosage or type of exercise. The National Institute for Health and Care Excellence (NICE) in the United Kingdom recommends physical activity as a component of depression treatment, particularly for mild to moderate cases. National Institute for Health and Care Excellence guidelines specifically suggest structured, supervised group physical activity programs as effective interventions, recommending sessions of 45 minutes to 1 hour, 3 times per week, over a period of 10-14 weeks. The American Psychiatric Association suggests any level of aerobic exercise or resistance training. On the other hand, the Australian and New Zealand guidelines recommend a combination of strength training and intense aerobic activities, ideally engaging in at least 2-3 sessions per week.⁴ The World Health Organization (WHO) recommends that older adults aged ≥ 65 years



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should aim for 150-300 minutes of moderate-intensity or 75-150 minutes aerobic exercises weekly, with at least 3 days including multicomponent exercise. In the Irish Longitudinal Study on Ageing, with 4016 individuals from 2009 to 2018 (10 years of follow-up), a lower dose of moderate to vigorous physical activity than the recommended WHO guidelines was associated with a lower risk of depression symptoms in older adults with and without chronic disease.⁸ Such an effect has been reported by randomized controlled trials in older adults with a major depressive episode.⁹ Following the treatment with exercise, a significant reduction in depression scores was reported in these older adults.⁹

When an individual experiences a feared sensation related to anxiety, such as a rapid heartbeat during physical activity, it can enhance their tolerance and help them better manage the psychological response to similar sensations when they occur in the context of anxiety symptoms.⁹ Physical activity and exercise have minimal side effects and lack the stigma that some older adults associate with taking antidepressants or attending psychotherapy.⁹

Barriers and Challenges of Promoting Physical Activity and Exercise to Prevent and Manage Mental Disorders Among Older Adults

More than 25% of the adult population in the world (1.4 billion) do not meet the WHO-recommended physical activity levels. It is estimated that 3-22% of older adults are sufficiently active for health.¹⁰ One of the barriers includes poor physical health and fatigue in older adults. This is because older adults with a health condition experience restrictive symptoms and disabilities, including painful joints. In addition, fear of falling and a lack of motivation to be active have been reported.¹⁰ This could be due to a lack of social support, supervision, and access to appropriate exercise facilities. Some older adults who feel vulnerable are more likely to associate physical activity with a risk of injury.¹⁰ On the other hand, many health professionals report that exercise prescription is considered the responsibility of exercise professionals instead of their mental health profession. Therefore, a multidisciplinary approach is needed to increase the adoption and maintenance of physical activity and exercise within the health care system.

In conclusion, mental disorders are prevalent among older adults, being one of the substantial risk factors for major chronic diseases. Older adults with mental disorders are a vulnerable group with health disparities. Physical activity and exercise, as accessible and low-cost health and lifestyle behaviors, could attenuate risk factors for mental disorders. Therefore, mental health professionals should receive adequate training in the principles of physical activity prescription, while experts in exercise prescription should be trained

in mental health care to establish supportive and multidisciplinary mental health settings.

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