



Chapter 8

Exploring the Role of Physical Exercise to Improve Cardiorespiratory Fitness and Muscular Strength Among Individuals With Severe Mental Disorder

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ABSTRACT

Severe mental disorders (SMD) are a major contributor to mortality and one of the five leading causes of disability worldwide. Therefore, it is important to establish strategies aimed at improving the physical health in individuals with these disorders, with the aim of reducing the incidence of chronic diseases and promoting health improvement. Cardiorespiratory fitness and muscle strength, which are often impaired in individuals with severe mental disorders, are complementary and independent variables that are

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related to mortality risk. For this reason, it is necessary to improve the assessment of these parameters to identify vulnerable situations that require early intervention through physical exercise. This chapter examines the importance of physical fitness as a health factor and presents evidence for different physical exercise interventions aimed at improving physical fitness in individuals with SMD.

INTRODUCTION

According to epidemiological data from the World Health Organization (WHO), one in four people will face mental health problems at some point. Currently, severe mental disorders (SMDs) such as schizophrenia, depression, anxiety, and bipolar disorder affect 450 million people worldwide, with an incidence rate of 25% (WHO, 2020). The prevalence of SMDs has steadily increased in recent years, with an increase of 18.4% between 2005 and 2015, a trend that is expected to continue in response to recent stressors such as the COVID-19 pandemic (Nemani et al., 2021). Mental disorders place a high economic cost on society of more than €180 billion per year, with 46% of the direct costs relating to health and social care and the remainder to lost productivity, work incapacity, and disability (Andlin-Sobocki & Rossler, 2005; Oliva-Moreno et al., 2009). In 2010, the global economic cost associated with SMDs was similar to that of heart disease and higher than cancer, chronic respiratory diseases, and diabetes. The total amount is expected to double by 2030 (Trautmann et al., 2016).

Severe mental disorders represent one of the five leading causes of disability and a major contributor to mortality worldwide (Walker et al., 2015). Compared with the general population, individuals with an SMD are two to three times more likely to die prematurely across all age and sex ranges (Correll et al., 2017), reducing their life expectancy by 10–20 years (Laursen et al., 2014; Walker et al., 2015). Although suicide contributes to approximately 17% of these premature deaths from non-natural causes, most of the years of life lost in this population are related to poor physical health arising from comorbid non-communicable and infectious diseases. Individuals with SMD have a higher prevalence of comorbid diseases such as low cardiorespiratory fitness (CRF; Vancampfort et al., 2017), metabolic syndrome (Vancampfort et al., 2015), type 2 diabetes mellitus (T2DM; Vancampfort et al., 2015), hypertension (Meng et al., 2012), and smoking (Fornaro et al., 2022). In addition, these comorbid diseases are compounded by other lifestyle-related risk factors, for instance, unhealthy diets (Teasdale et al., 2019), high sedentari-ness (Stubbs et al., 2016), and physical inactivity (Stubbs et al., 2016). All these factors contribute to individuals with an SMD having a 54% higher risk of cardiovascular disease, which ranks as the leading cause of death in this population (de Hert et al., 2009; Hjorthøj et al., 2017; Mitchell et al., 2013). From 1952 to the present, health policies have relied on a combination of pharmacological treatment and psychotherapeutic interventions to combat the symptoms of SMDs. However, antipsychotics are closely associated with a higher prevalence of hypertension, obesity, diabetes, cholesterol, dyslipidemia, and other factors that increase the risk of death from cardiovascular disease (De Hert et al., 2012; Morell et al., 2019; Newcomer, 2007). Despite such policies, trends in the prevalence of SMDs have not declined, generating a global problem at the economic, social, and family levels. A global health priority must be the development of strategies that improve the physical health of individuals with an SMD throughout their lifespan (Wykes et al., 2015). The present chapter summarises the most recent scientific evidence for the importance of cardiorespiratory fitness and muscular strength as a modifiable health factor in the promotion of recovery amongst individuals with an SMD.

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