

Mental Health Inquiry - New Zealand 2018

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Submission from Sport NZ: Physical Activity and Mental Wellbeing

Mental health has been identified as a priority of the current New Zealand government and this is a submission to the ongoing Inquiry being led by the former health and disability commissioner, Ron Paterson. The government is concurrently developing a broader “wellbeing agenda” to guide future public policy and investment.

There is an emerging evidence base for the role of physical activity in the prevention and management of several mental health disorders as well as the promotion of mental and physical wellbeing. A brief synopsis of the relevant peer-reviewed literature is presented below.

1. Physical activity can prevent mental illness across the lifespan

The most compelling evidence for the role of physical activity in the prevention of mental illness is for depression. People who are physically active have a 17% lower chance of developing depression. When considered across the lifespan, physical activity reduces the chance of experiencing depression by 10% in children (5-18 years), 22% in adults (18-64 years) and 21% in older adults (65+ years).¹

There is also emerging evidence that maintaining physical fitness by being physically active is a protective factor against psychosis during adulthood.² Similarly, participation in sport has been found to promote resilience to subsequent self-harm and suicidal thoughts by people exposed to adverse experiences during childhood.³

At this stage, there is limited evidence available on whether physical activity has a preventative effect on other mental health disorders across the lifespan such as anxiety disorders, schizophrenia, bipolar disorder and post-traumatic stress disorder.⁴ However, it is important to recognise that for many of these mental health disorders an absence of evidence for the protective role of physical activity does not necessarily indicate an absence of effect. Further research is indicated.

¹ Schuch F et al (2018), *Physical Activity and Incident Depression: A Meta-Analysis of Prospective Cohort Studies*. Am J Psychiatry.

² Kunutsor S et al (2017), *Cardiorespiratory fitness is associated with reduced risk of future psychosis: A long-term prospective cohort study*. Schizophr. Res.

³ Hughes K et al (2018), *Sources of resilience and their moderating relationships with harms from adverse childhood experiences*. Public Health Wales.

⁴ Physical Activity Guidelines Advisory Committee (2018), *Physical Activity Guidelines Advisory Committee Scientific Report*. U. S. Department of Health and Human Services

2. Physical activity can be an effective treatment option for several mental illnesses

Participation in physical activity has been found to be an effective component of treatment for people experiencing depression, anxiety, post-traumatic stress disorder, schizophrenia and mixed diagnoses of severe mental disorders. The findings of numerous systematic reviews indicate that physical activity can improve the symptoms of mental illness and quality of life of these people. It also appears that the quality of the physical activity experience is important in conferring and sustaining these benefits.⁵ Although most of these studies are in adult populations, there is emerging evidence of similar findings in children and adolescents.⁶

3. Physical activity can be a viable treatment option for people experiencing mental illness

Physical activity has been found to be a relatively well accepted form of treatment for people experiencing mental illness, particularly in young and vulnerable populations that are less inclined to access mental health care.⁷ In several countries, this evidence has informed the inclusion of physical activity in clinical treatment guidelines for the management of various mental illnesses (e.g. Royal Australian and New Zealand College of Psychiatrists, UK National Institute for Health and Care Excellence, Canadian Psychiatric Association). There are numerous examples of how these clinical guidelines have been effectively embedded in practice within residential, inpatient and community settings. The acceptability and success of these initiatives has been attributed to routine early intervention by multidisciplinary teams delivering supervised programs tailored to individuals using evidenced based behaviour-change strategies for lifestyle interventions.⁸

There is emerging evidence that mental health initiatives can also be supported through community based sports organisations.⁹ This may be pertinent for young people in New Zealand, who currently have one of the highest suicide rates in the world.¹⁰ However, the publicly visible efforts currently being made to directly address mental health through these avenues appear to be limited.¹¹

⁵ Czosnek L et al (2018), Translating evidence to practice: A meta-review of physical activity effectiveness research and implications for mental health decision-making. *Mental Health and Physical Activity Journal* (under review)

⁶ Bailey et al (2018), Treating depression with physical activity in adolescents and young adults: a systematic review and meta-analysis of randomised controlled trials. *Psychol Med*.

⁷ Firth J et al (2016), *Motivating factors and barriers towards exercise in severe mental illness: a systematic review and meta-analysis*. *Psychol Med*.

⁸ Lederman et al (2017), Embedding exercise interventions as routine mental health care: implementation strategies in residential, inpatient and community settings. *Australasian Psychiatry*.

⁹ Swann C et al (2018), Youth sport as a context for supporting mental health: Adolescent male perspectives. *Psych of Sport and Exercise*.

¹⁰ UNICEF Office of Research – Innocenti (2017), Building the Future Children and the Sustainable Development Goals in Rich Countries. UNICEF

¹¹ Little et al (2016), Addressing mental health through sport: a review of sporting organizations' websites. *Early Intervention in Psychiatry*.

4. Physical activity promotes physical wellbeing in people experiencing mental illness

People who experience severe mental illness have a life expectancy that is 10-25 years shorter than the rest of the population and this disparity appears to be worsening over time.^{12,13} It is primarily due to the disproportionate burden of non-communicable diseases (NCDs) in people experiencing mental illness and the provision of inferior physical health care for these populations.¹⁴ Physical inactivity is a modifiable risk factor for the majority of these NCDs (e.g. diabetes, cardiovascular disease, cancer) and people experiencing mental illness are typically less physically active.¹⁵ Targeted physical activity and lifestyle interventions in these populations have effectively nullified the negative physical health outcomes typically associated with severe mental illness.⁸

5. Physical activity is associated with mental wellbeing in the general population

As outlined in the previous sections, most of the evidence for physical activity and mental health focusses on the prevention and treatment of mental ill-being. However, the World Health Organisation defines “health” as a “state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity”.¹⁶ The evidence for the role of physical activity in promoting mental wellbeing is emerging and it is thought that this may increase resilience to subsequent emotional perturbations. Although the causal links are yet to be established across different population groups, international evidence indicates that people who are active are more likely to be happy.¹⁷ However, there appears to be some variation according to country and domain of physical activity.¹⁸

In 2017, over 25,000 adults in New Zealand completed the Active NZ survey and the data was used to examine the association between recreational physical activity participation and mental wellbeing. This is the first study of its kind conducted in New Zealand. Physical activity was measured using survey items developed locally to specifically assess participation in sport, exercise and recreation. Mental wellbeing was measured using the WHO-5 instrument, which has been internationally validated and has an established “at risk” threshold that indicates further mental health assessment is required.

The results indicate that physically active people are 51% more likely to have a healthy mental wellbeing (Women = 59%, Men = 38%). This association was stronger for more vigorous physical activity in both females and males, but was also evident for people engaging in walking and gardening as a form of active recreation.

¹² Thornicroft G (2013), *Premature death among people with mental illness*. BMJ.

¹³ Oakley P et al (2018), *Increased mortality among people with schizophrenia and other non-affective psychotic disorders in the community: A systematic review and meta-analysis*. J Psych Research.

¹⁴ De Hert M et al (2011), *Physical illness in patients with severe mental disorders: Prevalence, impact of medications and disparities in health care*. World Psychiatry.

¹⁵ Bagnall C et al (2014), *The physical health of people with a serious mental illness and/or addiction: An evidence review*. Te Pou o te Whakaaro Nui.

¹⁶ World Health Organisation (1946), *Constitution of the World Health Organisation*. Archives of the United Nations.

¹⁷ Zhang V et al (2018), *A Systematic Review of the Relationship between physical activity and happiness*. Journal of Happiness Studies.

¹⁸ Richards et al (2015), *Don't worry, be happy: cross-sectional associations between physical activity and happiness in 15 European countries*. BMC Public Health.

Implications

In summary, the promotion of physical activity may be an effective approach to preventing and managing a broad spectrum of mild and severe mental illnesses across the life span. Well-designed physical activity initiatives are well accepted by people experiencing mental illness and sports clubs may be an under-utilised avenue for accessing some high-risk population groups. In addition, physical activity can promote the physical wellbeing of people experiencing mental illness and has been associated with better mental wellbeing in the general population.

In response to this growing evidence base, an international consensus statement was recently released on the role of sport, exercise and physical activity for people with mental illness.¹⁹ This statement was officially endorsed by Sport and Exercise Science New Zealand and identifies three key factors that policy makers must address to improve physical activity access for people experiencing mental illness. Firstly, the statement calls for a culture change within psychiatric service providers, which values the role of multidisciplinary teams and positive lifestyle changes as part of routine care. Secondly, it identifies the need to invest in adequate infrastructure for delivering lifestyle initiatives within all mental health care settings. Finally, the consensus statement advocates for improved formal training of mental health care professionals on the implementation of lifestyle initiatives. These three factors should be prioritised as key components of improving the mental and physical wellbeing of people experiencing mental illness in New Zealand in the immediate future.

Finally, it is evident that further research is needed to understand if physical activity has a protective role for several mental health disorders and to establish the causal links with mental wellbeing across the lifespan. Further exploration is also warranted of the critical components of physical activity initiatives that are effective for preventing or managing mental illness and promoting mental wellbeing. Ideally these studies would be conducted within New Zealand and/or similar settings to optimise the contextual relevance of the findings.

¹⁹ Rosenbaum et al (2018), *The Role of Sport, Exercise, and Physical Activity in Closing the Life Expectancy Gap for People With Mental Illness: An International Consensus Statement by Exercise and Sports Science Australia, American College of Sports Medicine, British Association of Sport and Exercise Science, and Sport and Exercise Science New Zealand. Translational Journal of the ACSM*