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The Idea of Amateur Sports as a Form of Therapy Among People with Depression and other Mental Disorders – Articles Review

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Abstract

Background: *Physical activity and its impact on people's physical and mental health is widely discussed over the last decades. Mental health concerns encompass psychiatric diseases and issues related to mental and social well-being, including adjustment difficulties, anxiety, depression, coping mechanisms, and behavioral problems. Physical activity can take different forms and fulfill various needs of the individuals that extend beyond the physical benefits. The idea of amateur sports as a form of therapy among people with depression and other mental disorders has the potential to be a valuable addition to psycho- and pharmacotherapy.*

Objectives: *This paper aims to gather the ideas and conclusions that could be found in existing literature and summarize them in the form of a review. This form provides an opportunity to acquire a clearer view of the topic as well as advocates for taking a more long-term view on the idea.*

Material and methods: *Literature review using databases such as: PubMed, PMC, Google Scholar, and Scopus for relevant documents.*

Results: *There are various kinds of activities, which can differ according to the preferences and limitations of the participants. To the current state of knowledge, popular team activities seem to be the most effective form of this kind of treatment. Findings in the literature agreeably encourage patients to engage in mind-body exercises to improve their mental health.*

Conclusions: *Although this approach is interesting, it suffers from the lack of big, structured trials that would define which disciplines are the most efficient in improving patients' mental state. Any form of activity is better than none but various limitations reduce the potential for generalization of findings and weaken the validity of the evidence. Further research in this field is needed to establish which kind of activities suit individuals best, considering their diagnosis and limitations.*

Key words: *sports, depression, therapeutics*

Introduction

This research constitutes a relatively new area which has emerged from the new approach to the relationship between sports and depression or other mental health problems. Typically, the link between these two is analyzed the other way, such as the depression caused by the sports injury [1, 2], concussion [3, 4], failure [5], or as an effect of athlete burnout [6, 7]. The overall goal of this work was to find and review articles that view amateur sports as a form of therapy and not the cause of the mental health issues.

According to the WHO [8], in 2019 approximately 970 million people were suffering from mental disorders. In other words – one in every eight people in the world lives with a clinically severe disruption in a person's cognitive abilities, emotional management, or behavior. Unipolar depression disorder alone was ranked third leading cause of disease burden worldwide in 2004, and it is expected to rise to first place by 2030 [9]. National Institute of Mental Health reports that AMI (Any Mental Illness) was most common among individuals aged 18–25 (36.2%), followed by adults aged 26–49 (29.4%), and 50 and older (13.9%), accordingly SMI (Serious Mental Illness) was most common among young adults aged 18–25 years (11.6%), followed by adults aged 26–49 years (7.6%), and 50 and over (3.0%) [10]. What draws our attention are the following data that could be found in the report – in both groups, the percentage of young adults aged 18–25 years receiving mental health treatment was lower in comparison to the older ones. The combination of highest prevalence and lowest support is worrisome and deserves extra attention, incidentally in line with the aim of our study – alternative therapeutics considering physical activity – which for the people in the early adulthood is not typically unadvised or prohibited due to the accompanying medical conditions.

An increasing number of studies have found that physical activity can improve people's life in various ways. Sports can improve behavioral symptoms in neurodevelopmental disorders, such as anxiety, depression, indifference, and sleep disorders [11]. Sport addresses important psychological topics related to growth on both a physical and emotional level, as well as self-worth, belongingness, and overcoming adversity [12]. If everyone followed current health

recommendations, 1 out of every 9 occurrences of depression could be avoided. Being physically active can provide significant mental health advantages, even if they fall below public health recommendations. Meeting the minimum suggested target provides additional benefits, but there is limited further advantage beyond that [13]. Even in patients with treatment-resistant depression (TRD) and non-remitting depression (NRD), physical activity intervention could be used as an adjuvant technique to pharmaceutical treatment [14]. Comparison of different intensities and forms of amateur sports is a valuable addition to existing literature. In elderly patients, major barriers to physical activity include handicap, physical weakness, kinesiophobia, and various diseases, followed by a lack of ability to arrange workouts [15]. Choosing appropriate activity is the first step in physical activity implementation to the patients routine.

Materials and methods

For the purpose of writing this paper, we searched databases such as PubMed, PMC, Google Scholar, and Scopus for relevant documents. Abstracts were screened to assess the relevance. Full-text examination was performed for articles that met the inclusion criteria such as: English-only articles, human studies, published within the last 20 years prioritizing the most recent ones, with clear and accessible abstracts, publications that refer directly to the topic of the review, containing full text access, with excluded preprints. Keywords such as: sports, depression, therapeutics, amateur sport, mental disorder were used for the search. The information was then summarized and written as an overview.

Review of the literature

Exercise does not seem to be more valuable than psychological or pharmaceutical therapy [16] but within the next few years, this form of therapy is likely to become an important alternative to them. To analyze the effect of the intervention, we divided articles into categories: mainly group activities, mainly individual activities, physical activities without defining their form.

Group activities

Systematic review carried out by Eather et al. (2023) [17] summarized results from a heterogeneous group of articles, stating that adult sports activity is a factor of improved overall mental health, mood, higher life satisfaction, self--esteem, body satisfaction, subjective wellness, and more frequent laughter. Furthermore, regardless of physical activity level, studies showed that team--based sports involvement has a greater positive impact on adults' mental energy, physical self-perception, and general psychological health and well--being than individual activities and unstructured group physical activity. Authors also highlighted 'Mental Health through Sport' model which outlines the two main ways that sport may affect mental health: through exercising and through support and relationships. Sport category, intensity, quantity, circumstance (team vs. individual), location (indoor vs. outdoor), and level of competition (such as elite vs. amateur) are some of the possible moderators of this effect that are also mentioned. Authors emphasize taking into account how playing sports affects society both on and off the field. For example, being a part of a team or club may provide them with a feeling of identification and belonging, which may have a long-lasting impact on their mental health in addition to the immediate benefits of participating in the sport.

The Erasmus+ European Alliance for Sport and Mental Health (EASMH) is a project that has the objective to establish a European network that is capable of promoting the advantages of sport in the prevention, treatment, and rehabilitation of psychiatric disorders [18]. EASMH pilot actions were performed to utilize the potential of sports-based psychosocial therapy to benefit individuals with mental health disorders [19]. Eight pilot actions were carried out in four different countries: Italy ("Crazy for Rugby" and "Not only headshots"), United Kingdom ("Imagine Your Goals" and"Keep your Boots On"), Romania ("Get Fit!" and "Get Fit!"), Finland ("Multiple Sport Group" and "Rehabilitating Sports"). The project included sports such as:

- Rugby – with modified techniques and rules to adjust them to the participants' abilities and competencies in addition to their physical state,
- Outdoor football,

- Football,
- Walking football – slow-paced kind for the older participants,
- Gymnastics, Yoga, Pilates – training in the groups of 4,
- Floorball, Indoor walking, Outdoor/green walking, Gym, Frisbee golf – proposed as group activities.

Coaches reported that individuals with mental disorders face numerous barriers to participating in sport-based interventions, including medication side effects, obesity, low motivation, limited resources, and inadequate professional support. This report intends to promote the use of sport-based therapies in ordinary clinical practice [19]. The evaluation of the outcomes showed the overall favorable effects of sport on mental health [20]. The EASMH project team promotes exercise therapies as part of a comprehensive health care strategy for individuals with mental illnesses [21].

Integrative review by Andersen et al. (2018) [22] also suggests the supremacy of team sports in comparison with individual activities – selecting the right sport is vital for maximizing psychological and social advantages. Research suggests that team sports encourage higher physical activity due to their social atmosphere but at the same time caution should be maintained due to their competitive character (which is again hard to generalize because for certain target groups, the competitive element of team sport participation was of crucial importance in the promotion of social and mental health benefits).

Individual activities

Zhu et al. (2020) [23] analyzed the relationship between exercise and mental health of students. There was a correlation between low-intensity exercise and mental health across college students. Low-intensity exercise was regarded as at least 20 minutes per day of activities like walking or shadowboxing. This cross-sectional study performed in China suggests that low-intensity exercise can benefit both physical and mental health and indicates that school departments should encourage kids to participate in physical activity.

Another research from China [24] suggested that in order to enhance mental wellness adults should dedicate more days per week to walking and other forms of physical activity. According to this study, people who walked more regularly over the week reported feeling better mentally and the number of walking days was the strongest predictor of mental health.

A scoping review by Oswald et al. (2020) [25] analyzed different running genres to see if there were any changes in mental health impacts between high and low intensity levels. Compared to non-runners, there was consistent evidence of a beneficial link between mental health and habitual or long-term recreational running. Runners reported lower levels of depressive symptoms, less stress, more psychological wellness, and a better mood than inactive controls. In contrast to normal running levels, there was evidence correlating high or intense running to indicators of running ill-health. Obsessive runners showed greatly increased anxiety. Authors also determined acute treadmill, track, outdoor, and social running sessions to be beneficial for mental health with little variations between high and low intensities. More systematic approaches (for 2 to 20 weeks) of running also considerably enhanced mental health results compared to non-runners. Unfortunately, the impact of long-term therapies on negative mental health outcomes remains uncertain.

Undefined activity

Ozug et al. (2017) [26] studied the impact of sports and exercise on the depression levels of elementary school students in Turkey. Sports participants had significantly lower rates of depression compared to non-participants. Students who engaged in sports experience physical, spiritual, and mental comfort, leading to better problem-solving skills, lower stress, and more self-confidence.

On the other hand, Łuczak et al. (2024) [27] summarized effects of physical activity on mental health in older individuals. They came to the same conclusion, considering physical activity as a vital factor of physical and mental wellness, at the same time pointing out that elderly people are at higher risk for problems with mental health such as depression, anxiety, and dementia.

Results

The mentioned articles confirm previous findings in the literature as clinicians should consider encouraging patients to engage in mind-body exercises to improve their mood [28]. Schuch et al. (2016) [29] in their meta-analysis note that the advantages of exercise may have been understated in earlier meta--analyses because of publication bias. Dunn et al. (2005) [30] have shown that exercise decreases depression symptoms and may be beneficial in the treatment of mild to moderate major depressive disorder (MDD). This rigorously controlled trial demonstrates that exercise alone is beneficial in the treatment of mild to moderate MDD, and the amount of activity required is consistent with public health recommendations. Lower levels of exercise are ineffective and similar to placebo control. Additionally, referring to Blumenthal et al. (2007) [31], exercise appears to be as effective as antidepressant medicine in treating MDD patients, and both are superior to placebos.

Conclusions

Exercise has been shown to be an effective treatment for depression [29]. Different results can be obtained from different types of physical activity [32, 33]. Every form of exercise was related to a reduced load on mental health [34–36]. Given numerous studies of the good effects of regular physical exercise on mental health, there is still a lack of precise evidence on the optimum physical activity intervention for improving mental health [24]. It has now been proposed that popular team sports are the most efficient form [34] what is in accordance with the other studies where this kind of activity was the most frequent one and usually the only one analyzed [37] in both younger and older group of participants. Any form of activity is better than none, having in mind that taking it to an overcompetitive level or pushing oneself beyond one's limits might influence mental health in an unfavorable way (as seen in disorders like "excessive exercise" and "overtraining syndrome") [38]. So far studies find group activities to be more efficient due to the social interactions, especially in older groups of patients. The absence of inactive comparison groups, missing

trials on different age and race groups, lack of distinction between sex and above all – small sample sizes of the tested groups reduce the strength of evidence and limit the generalizability of findings. This paper advocates for a regional, cooperative approach in implementing forms of physical activity for people with certain mental disorders – watching over young adults as well as elderly people. Further research in this field is needed to establish what kind of activities suit individuals best, considering their diagnosis and limitations.

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