

Effects of Physical Therapies in Treatment of Psychiatric Disorders

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How to cite this article:

Owoso Hannah, Sumit Rai, S P Subashini/Effects of Physical Therapies in Treatment of Psychiatric Disorders/Indian J Law Hum Behav 2022;8(2):57-63.

Abstract

In this study, we aimed to determine the effects of physical therapy in the treatment of psychiatric disorders. Psychosocial therapies are required to address the rising mental health burden. Within the multidisciplinary care of patients with mental health disorders, physiotherapists could play a key role in lowering stress and supporting rehabilitation. The goal of this systematic study was to look into the function of physiotherapists in today's mental health policies. Serious mental illness puts people at an increased risk of physical sickness. With greater levels of cardiovascular disease, metabolic disease, diabetes, and respiratory sickness, mortality rates are at least twice those of the general population. Although genetics may play a role in some patients' physical health issues, lifestyle and environmental variables such as smoking, obesity, a poor diet, and a lack of physical activity also play a significant influence.

Keywords: Temporomandibular disorders (TMD); Mental Health; Physical therapies; Health related quality of life (HRQOL); Manual Therapy.

INTRODUCTION

Mental diseases are a tremendous social and economic burden on healthcare systems around the world, posing the challenge of how to treat them effectively and long term. Practitioners and researchers continue to pay attention to physical activity (PA) and exercise (EX) in the prevention and treatment of various psychopathological disorders. Physical therapy can assist these people to improve

their psychological, physical, and mental health, as well as their quality of life. Aerobic and strength exercises, as well as yoga, help to alleviate mental symptoms while also enhancing overall health and quality of life. Recent research has confirmed that increasing muscular relaxation reduces anxiety and psychological suffering in the condition.

The present study was aimed to compare the disabilities and health status associated with temporomandibular disorders (TMD) to those associated with other musculoskeletal disorders, to describe the types of physical therapy provided to TMD patients, and to assess health-related quality of life (HRQOL) as a measure of clinical change following physical therapy treatment. A comprehensive database created by the Focus on Therapeutic Outcomes network was used to examine the outcomes of 56 patients (mean age 40 years, SD 13 years; 89 percent female). The results were compared descriptively to three groups of

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Received on 27-04-2022

Accepted on 28-05-2022



patients with distinct cervical pain syndromes using a generic HRQOL assessment the Medical Outcomes Study (MOS) 17 to examine the physical and mental components of disability related with TMD. Those with TMD exhibited limits in social function, emotional well-being, and energy level, similar to patients with cervical problems, according to the findings. Physical function (e.g., walking, carrying goods, or lifting) was significantly reduced in cervical problem patients, and bodily pain interfered with everyday job more. At the end of physical therapy, patients with TMD had large positive effect sizes (> 0.80) in the domains of social function and bodily pain, indicating clinical improvement. The findings show that the MOS-17 could be a good measure of clinical progress for TMD patients receiving physical treatment.¹

Manual therapy (MT) and exercise have long been used to treat musculoskeletal diseases like temporomandibular disorders in people (TMD). Early systematic reviews offered obsolete evidence regarding their usefulness. The goal of this study was to summarise evidence from randomised controlled trials comparing the effectiveness of MT and therapeutic exercise therapies to other active interventions or standard care for TMD therapy, as well as to assess the methodological quality of those trials. In addition to a human search, electronic data searches of six databases were conducted. Adults with TMD were included in randomised controlled trials that evaluated any sort of MT intervention (e.g., mobilisation, manipulation) or exercise therapy to a placebo, controlled comparison intervention, or standard care. Pain, range of motion, and oral function were the primary results of this comprehensive study. The results of forty eight studies that met the inclusion criteria were analysed. On specified study characteristics, data was extracted in duplicate. The overall quality of evidence for this systematic review was low. The trials in this study exhibited a high or uncertain risk of bias. As a result of the risk of bias assessments, the evidence was generally lowered. The majority of effect sizes were small to moderate, and there was no convincing evidence that exercises were superior to other conservative TMD treatments. However, MT, either alone or in combination with jaw or cervical exercises, showed encouraging results. The study's weaknesses were the quality of the evidence and the heterogeneity of the studies. There was no high quality evidence discovered, indicating that the usefulness of exercise and MT for TMD treatment is unknown.²

Schizophrenia is one of the most incapacitating

mental illnesses. For men and women, it accounts for 1.1 percent of total disability adjusted life years and 2.8 percent and 2.6 percent of years lived with disability, respectively. Furthermore, it is the world's sixth biggest cause of disability adjusted life years in adults aged 15 to 44. It has a lifetime prevalence of 0.30 percent to 0.66 percent and an incidence of 10.2 to 22.0 per 100,000 person years, respectively. Schizophrenia includes both positive and negative symptomatology severe enough to induce social and occupational impairment, according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria. Delusions, hallucinations, and disorganised speech and behaviour are examples of positive symptoms that represent an excess or distortion of normal functions. Affective flattening, apathy, avolition, and social retreat are examples of negative symptoms that suggest a decline or loss of typical functions. Positive symptoms are thought to have mesolimbic dopaminergic hyperactivity as part of the underlying disease, while the aetiology of negative symptoms is unknown. As a result, negative symptoms remain a treatment resistant and devastating aspect of schizophrenia. Antipsychotic medications that inhibit dopamine D2 receptors are the principal treatment for persons with schizophrenia once they have been diagnosed. Antipsychotics of the first generation (such as chlorpromazine, fluphenazine, and haloperidol) are effective in the treatment of psychotic symptoms, but they frequently cause motor adverse effects. Second generation agents (e.g., amisulpride, aripiprazole, olanzapine, quetiapine, and risperidone) that have fewer motor adverse effects have been released for symptom control in the last 15 years. Although second generation antipsychotics are equally successful as first generation antipsychotics in treating positive symptoms, their promise of improved efficacy in treating negative and cognitive symptoms has yet to be fulfilled. Many persons with schizophrenia experience relapses and chronic symptoms, especially when they do not follow their treatment regimens. This situation highlights the importance of multimodal care, which includes psychosocial therapies, as an addition to antipsychotic drugs to help with symptom relief, adherence, functional results, and health related quality of life. Cognitive behavioural therapy, social skills training, family psycho-education, aggressive community treatment, and supported employment have all been shown to be effective in the treatment of people with schizophrenia in small studies. More research is needed to look at the aspects of therapy

modalities that function as well as the synergistic benefits of combining interventions. The relative efficiency of physical therapy interventions in multidisciplinary treatment for patients with schizophrenia has recently piqued researchers' curiosity. Physical therapy is intended to improve physical and mental health, as well as health-related quality of life, in the multidisciplinary care of people with schizophrenia, according to the International Organization of Physical Therapy in Mental Health (formerly the International Council of Physiotherapy in Psychiatry and Mental Health). An improved ability to manage disease symptoms seems to improve health related quality of life in patients with schizophrenia. A wide range of physical therapy interventions have the potential to improve physical and mental health as well as health related quality of life. Aerobic and strength exercises, relaxation training, and basic body awareness exercises are the most widely employed techniques in regular therapeutic practise. Persons with schizophrenia are more likely than the general population to be less physically active, putting them at a higher health demand than other sedentary people. In patients with schizophrenia, metabolic and risk for chronic medical disorders are linked to inactivity. They have the same physical cardiovascular disorders, for example, which have become serious concerns. People with schizophrenia are 1.5 to 2 times more likely to be overweight, have a 2-fold higher risk of diabetes and hypertension, and have a 5-fold higher prevalence of dyslipidemia than the general population. Increased premature mortality due to excess morbidity from cardiovascular illnesses is 2 to 3 times higher than in the general population. The mortality gap corresponds to a 13 to 30 year reduction in life expectancy when compared to the general population, and it is continually growing. In a recent comprehensive evaluation of physical exercise with or without diet counselling, researchers found that lifestyle treatments can help persons with schizophrenia lose weight and improve their obesity related cardiometabolic risk profile. Physical therapy methods have also been shown to have positive mental health impacts. Previous systematic reviews, for example, found that aerobic exercise lowers negative and positive symptomatology while also alleviating secondary symptoms like sadness, low self esteem, and social withdrawal. However, the findings of these systematic reviews were mostly based on data from uncontrolled trials, so they should be regarded with caution. More recently, a meta-analysis of aerobic exercise found that persons with schizophrenia

can engage in regular physical activity. Although there is currently inadequate data to support or reject the use of aerobic and strength workouts as a supplemental therapeutic, aerobic exercise has been shown to improve both physical and mental health and well-being in patients with schizophrenia. There are no systematic reviews of relaxation and fundamental body awareness techniques that we are aware of. As a result, the topic of whether aerobic and strength activities, relaxation training, and basic body awareness exercises are useful complements to schizophrenia multimodal treatment remains largely unsolved. The goal of this systematic review was to assess the methodological quality of randomised controlled trials (RCTs) investigating the effectiveness of these physical therapy interventions in the multidisciplinary care of schizophrenia and to summarise the evidence from these RCTs. Specific physical therapy interventions, such as aerobic and muscle strength exercises, progressive muscle relaxation, and yoga, were found to improve psychiatric symptoms, psychological distress, state anxiety, health related quality of life, and aerobic and muscular fitness in this systematic review. Future study on specific elements of physical therapy interventions, such as adapting therapies to the requirements of people with schizophrenia, could add to the evidence base for physical therapy's efficacy in people with schizophrenia.³

Regular physical activity is well acknowledged to enhance both physical and mental health, but what are the benefits for those with Autism Spectrum Disorders (ASD)? This meta-analysis looks at 16 behavioral studies that included a total of 133 children and adults with various forms of the syndrome who were given organized physical exercises either individually or in groups. To allow for a quantitative assessment, the impacts on social and motor impairments, two of the three core symptom clusters of ASD, were standardized. The results of the communication deficiencies were insufficient to classify them. All exercise programs resulted in significant improvements on the examined measures, but individual programs evoked much higher improvement than group interventions in the motor and, more surprisingly, social domains. Despite the small sample sizes, the combined results allow for the tentative conclusion that individual exercise therapies benefit children and adults with ASD the most in terms of motor performance and social skills. More study into the influence of individual and group therapies on communication difficulties, as well as studies into the extent to which exercise effects are dependent

on the severity of ASD symptoms, is needed.⁴

Bipolar disorder is a category of affective disorders in which a person has episodes of depression, which are marked by low mood and accompanying symptoms (e.g., lack of enjoyment and energy), and bouts of mania, which are marked by elevated or irritated mood, or both. Individuals may also suffer side effects such as increased energy and a decreased need for sleep. Bipolar disorder is linked to a high rate of physical morbidity, mortality, and suicide risk. Bipolar disorder patients die 10–20 years earlier on average than the normal population. There is significant evidence that the elevated rates of cardiovascular illness seen in this population are directly related to the excess mortality seen in people with bipolar disorder. The causes of cardiovascular illness in bipolar disorder patients are complicated and diverse, but they include genetic factors, cardio-metabolic adverse effects of antipsychotic therapy, and an unhealthy lifestyle. Sedentary behavior, higher smoking prevalence, and high rates of substance misuse are all potentially changeable hazardous lifestyle factors. To make matters worse, bipolar illness sufferers have restricted access to general somatic health care. Physical activity therapies have been shown to lessen the burden of cardiovascular disease in the general population as well as in other significant mental diseases (e.g. schizophrenia). Physical therapists are well equipped to lead physical activity programs in people with mental illnesses, and they are successful in improving cardiometabolic health and outcomes in people with schizophrenia. Although patients with bipolar disorder and other physical comorbidities (such as pain) have a higher risk of cardiovascular disease, little is known about physical therapy therapies for this population. With the growing knowledge that pharmacological therapies for bipolar illness have very moderate results, the necessity to provide alternatives/adjuncts to improve the physical health and well-being of this group is becoming more apparent. To the best of the authors' knowledge, there is currently no comprehensive review on physical treatment in patients with bipolar illnesses. The effectiveness of physical therapy interventions in the multidisciplinary care of bipolar disorder is a subject that remains unanswered. As a result, the goal of this systematic review was to assess the types and efficacy of physical therapy in the treatment of the bipolar disorder. According to the World Confederation for Physical Therapy (WCPT) Position Statement, physical therapy interventions could include aerobic and strength exercises, relaxation training,

and/or fundamental body awareness exercises. Physical therapy might be utilized alone or in combination with other interventions, as long as physical therapy constituted the primary or active component.⁵

Physical exercise may play a role in the treatment of attention deficit hyperactivity disorder, according to a growing body of research (ADHD). ADHD core symptoms are said to be reduced, and executive functions are said to improve. We give a quick summary of the neurophysiological mechanisms that are thought to underpin exercise's positive benefits in this paper. In addition, we examine the most recent evidence from experimental trials on both acute and long term exercise therapies for ADHD. While the benefits of acute aerobic exercise are encouraging, there have been few well designed long-term intervention studies. Furthermore, while the effects of exercise on borderline personality disorder (BPD) have yet to be explored, we propose suggestions as to why exercise would be beneficial for this patient population at the end of this paper. The results of experimental investigations suggest that both acute and long term exercise therapies for ADHD patients may be beneficial. While the effects of moderate intensity acute aerobic exercise on ADHD symptoms and executive functions have been proven in children with ADHD, alternative exercise modalities and intensities, as well as adult effects, have not been adequately examined. Long-term intervention studies must be read with caution due to methodological flaws (e.g., a lack of an acceptable control condition). Nonetheless, the current findings encourage more well-designed randomized controlled studies exploring exercise as adjuvant or stand-alone therapy for ADHD. Contrary to a large number of studies on psychological therapies, the effects of exercise on BPD have yet to be investigated. One reason for this could be because BPD is strongly linked to altered body image and shame proneness, making physical activity challenging. However, given the partially identical symptoms, neuropathological correlations, and high comorbidity of ADHD and BPD, as well as the favorable effects seen in healthy and different clinical populations, we recommend that exercise be investigated as a potential therapy for BPD. Physical exercise also has several other advantages, including low costs, ease of implementation, lack of side effects, and a patient's active role, which may lead to increased compliance, non-invasiveness, and extra psychological and physiological benefits.⁶

Mental health issues are still a global problem that contributes significantly to the global burden of

disease. Depression is the most common psychiatric ailment, affecting an estimated 121 million individuals worldwide. It was ranked as the fourth biggest cause of disease burden in 2000, and it is expected to rise to the top of the list by 2020. Although antidepressant medicines are an effective and widely used treatment for depression in primary care, over half of those treated do not achieve complete symptom remission, and there is a risk of residual symptoms, relapse, and recurrence. A time lag at the beginning of therapeutic effects is regularly documented in individuals who do show improvements in depression symptoms with antidepressant therapy. Antidepressant medications are linked to negative side effects and an increased risk of cardiovascular disease, especially in people who already have a heart ailment or have other severe cardiovascular risk factors. Furthermore, antidepressant drug adherence is generally low, and patients frequently terminate anti-depressant therapy prematurely; it has been estimated that around 50% of psychiatric patients and 50% of primary care patients are non-adherent six months after starting treatment. Psychological treatments for depression are becoming more common for helping depressed adults reduce symptoms, with even brief psychosocial interventions showing promise for improving adherence to depression medication treatment in primary care settings, according to the UK National Institute for Health and Clinical Excellence (NICE) guidelines. However, attendance in psychological intervention sessions can be low because many depressed adults who could benefit from such treatments refuse to visit mental health clinics. After all, psychological therapies are stigmatized. As a result, there has been a growing interest in the usefulness of alternative depression therapies. Physical activity has been advocated as a supplemental treatment that may help to alleviate depression's lingering symptoms and avoid relapse. Many people have suggested that exercise could be used to treat depression, and a meta-analysis found that effect sizes in intervention trials varied from -0.80 to -1.1. Recent research found that providing tailored counsel and encouragement for physical exercise did not improve depression outcomes or antidepressant use in depressed adults when compared to usual care. Other studies have revealed that while exercise does not have an antidepressant impact in patients with significant depression, it does have short-term favorable effects on physical results, body composition, and memory. Others have maintained that the type of exercise is crucial, with desired (rather than prescribed) intensity

exercise improving psychological, physiological, and social outcomes, as well as exercise participation rates, in depressed people. A recent Cochrane review summarised the outcomes of 32 randomized controlled trials in which exercise was compared to standard treatment, no treatment, or placebo treatment in individuals (aged 18 and up) suffering from depression. This evaluation concluded that exercise seemed to ameliorate depressive symptoms in adults with a diagnosis of depression when compared to no treatment or a control intervention, while it cautioned that the favorable benefits of exercise were smaller in methodologically rigorous trials. Physical exercise programs also produce clinically relevant benefits in the treatment of depression symptoms in depressed older persons (>60 years), according to a systematic review. Although the beneficial effects of exercise on depressive symptoms are becoming clearer, evaluations imply that there is currently inadequate high-quality data to assess the cost-benefit of exercise intervention in depression. Methodological flaws and small sample sizes impeded many intervention research with depressed populations. Furthermore, comparisons between trials are frequently challenging due to differences in depression evaluation or diagnosis, the severity of the disorder, delivery site and sample size, outcomes of interest, and nature of the intervention administered (type, frequency, and duration of the intervention). Despite some differences in research outcomes, recent reports and guidelines in the UK continue to support the effectiveness of exercise as a depression therapy strategy; NICE guidelines prescribe structured, supervised exercise programs three times a week (45 min to 1 h) for 10-14 weeks, structured exercise may be considered as a treatment option for patients with depression, according to the Scottish Intercollegiate Guidelines Network (SIGN) for non-pharmaceutical management of depression in adults; and exercise is specified as a treatment option for people with depression in a report for the National Service Framework for Mental Health. This is supported by studies that show patients appreciate physical activity as an effective treatment for depression, even though their perceptions of possible benefits and impediments to involvement differ from person to person. The link between exercise and better physical and mental health has been well established in both healthy populations and persons with long-term diseases, and active lifestyles are widely encouraged in all populations where physical activity is safe. Although there is a clear link between depression and low levels of

physical activity, this does not necessarily imply causation there are a variety of reasons why people who are depressed may lead a more sedentary lifestyle, not least recognizing the effects of depression on motivation to engage in healthy lifestyle behaviors. Although we know that physical activity has a good impact on mental health, the underlying mechanisms that underpin this association are yet unknown. Patients with depression have linked this to a variety of subjective benefits, including physiological routes and cognitive factors such as a sense of purpose and diversion from negative thinking. Researchers have attempted to explain this link and have come up with a variety of theories. The potential importance of the inflammatory response in understanding the link between exercise and mood has been highlighted. Physiological changes connected with exercise, such as endorphin and monoamine levels, as well as a decrease in the stress hormone cortisol levels, have also been shown to affect mood. Furthermore, a growing body of evidence on the involvement of neurogenesis in the etiology and treatment of depression suggests that exercise can affect neurotransmitter function and increase hippocampal growth, which is known to be lower in depressed people. Indeed, research has demonstrated that the neurogenic reaction to exercise is far stronger than the response to antidepressant medicines. While experts continue to look into the mechanisms underlying this link, the truth remains that physical activity is beneficial to both physical and mental health, making it essential for everyone. In the association between physical activity or exercise and mood, social contact, which is typically obtained from physical activity, may play a crucial role. Although early research with older persons revealed that exercise decreases depression symptoms equally to social contact, with exercise also having a broader effect than social contact alone by reducing somatic symptoms, social support is known to be vital for mental well-being. Others have found that physical activity can improve mood and quality of life (QoL) in older persons in the same way as social contact can, though this has yet to be evaluated in comparison to a "no contact" control group. Although few well designed studies have an association between physical exercise and QoL in depressed patients, there is a growing focus on the relationship between QoL and exercise. Depressed patients who completed a supervised exercise regimen as an adjuvant to regular antidepressant

prescription therapy showed improvements in global functioning, depressive, and general psychopathological symptoms, as well as increases in perceived QoL, but only in the "physical domain." QoL is being used as a key outcome measure in exercise therapies for patients with long term illnesses in current research. Indeed, it has been suggested that exercise promotion initiatives should now place a greater emphasis on the advantages of QoL rather than the physical health benefits that have traditionally dominated health promotion efforts. Patients with depressive disorders and/or depressive symptoms have been shown to have substantial and long-term declines in multiple domains of functioning and well-being that are comparable to or exceed those of patients with chronic medical illnesses, making QoL an important outcome criterion for interventions with depressed patients. Regular exercise has been proven to significantly enhance QoL in populations with major long term diseases such as cancer and chronic obstructive pulmonary disease in epidemiological studies. Exercise improves QoL in disease free people, however, there is less evidence. Although QoL has been recommended as a major or secondary endpoint in health research, a recent systematic analysis found that only a small number of exercise and depression trials have included QoL as an outcome. Exercise intervention studies have not consistently demonstrated the effects of exercise on QoL outcomes, owing to the small number of intervention studies in this area and methodological weaknesses within published studies. However, exercise dose is a significant predictor of change in mental and physical aspects of QoL in studies that do show positive effects. However, quantifying QoL remains difficult, especially in depressed populations where there may be a measurement overlap between QoL and psychopathology; depression has been shown to negatively impact all parts of a person's life, which can lead to major QoL deficits. As a result of the impact of depressive symptomatology on QoL scores, research findings may be invalidated. Overall, research suggests that exercise can help people with depression, and this is true even for people with major depressive illness, who have been shown to benefit more from physical activity than other psychiatric groups. Exercise may also have a favorable impact on QoL, albeit these effects are subjective, and measuring them might be challenging due to methodological problems. In practice, doctors may be cautious to advise depressed patients to make lifestyle

modifications because they may lack the motivation to exercise. This may be hampered even more by bad trial outcomes being widely reported in the media, which might exacerbate the difficulty of encouraging depressed patients to exercise. However, researchers have advocated that exercise be used as a "first-line therapy" in all patients, with prescriptions customized to the patient's current level of activity, preferred type, and intensity of activity. In this study, we discovered that physiotherapy therapies enhanced motor and mental skills in stroke patients with a history of depression and anxiety in this study. For such people, participating in a physiotherapy treatment program would be advantageous. Exercise therapy can lead to a minor increase in exercise activity, according to this comprehensive review, but there was no discernible improvement in mental health symptoms, BMI, or body weight.⁷

CONCLUSION

The overall studies in various capacities have displayed those physical therapies have been a major part of the treatment of mentally ill patients. However, being a part of the treatment there has been major improvements in the patients who have taken supportive therapies as a part of their regime. Be it Autism Spectrum Disorder, Depression, ADHD, in the variety of these psychiatric illnesses physical therapies have proved to be a major factor in improving and adding onto the overall health of the patients. Increased physical activities, hence have proved to be a major factor in the prognosis.

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