



**A Study on the Effects of Physical Activity on
Mental Health at Various Stages of Life**

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Abstract

World Health Organization estimated that around 150 million population of the world is in distress and suffers from psychological disorders. The urban lifestyle has increased communications but eliminated the space and nature of the life in cities, the major source of stress on human psyche. A lot of research is now being done in this context and it is found that physical exercises can increase brain functioning by helping people in the treatment of mental illnesses and prevail over depression and anxiety. Today psychologists are also changing their traditional clinical perspective and focusing on modern ways of treating their patients through physical activity programs. Mental health professionals are encouraging people to increase physical exercise in order to retain and enhance good mental health. Research findings suggest that a positive correlation exists among exercise and improved mental health including mood and self-esteem. Studies relating to clinical trials show that by including exercise with psychotherapy the psychological benefits associated are improved. Therefore, for healthy individuals exercise works as prevention from illness, whereas for those suffering from illness, exercise assists treatment. Any physical activity like playing sports, exercising, meditation etc. can have an important role even on the physical and mental health of people of all ages as it contributes to a healthy lifestyle. This article tries to examine the effect of physical activity that determines the positive effects on individual development and help receive social, psychological, and emotional benefits for people of all ages.

Keywords: Physical Activity, Mental Health, Exercise, Wellbeing

Introduction

Exercise is a tool of distraction, which allows you to find some peaceful time and omit the negative thought that leads to depression. Researchers have proved that exercise is helpful in boosting mental health at any stage of life. Physical activity directly affects the psychological and biological health responsible for well-being. Specifically, psychological and biological factors play a significant role in improved mental health. We feel good as many chemicals that improve our mood are released when we exercise.

Exercise has a positive impact on serotonin levels thus regulating good mental health. Endorphins, known as the body's natural "happy chemicals" are also released through exercise. Level of stress hormone "cortisol" goes down when we exercise. Furthermore, the neurotransmitter Norepinephrine responsible for improve mood also gets stimulated through physical activity.

Apart from the physiological benefits people can experience the benefits of nature as they get indulge in outdoor activities. When people exercise more, they develop good feeling about their bodies thereby increasing their confidence and improved self-esteem. When we exercise or play, all our attention get absorb in it, thereby distracting us from negative and stressful thoughts for the moment.

Moreover, it is proved that engaging in any type of physical activity during the day, helps better sleep at night which directly affects the mental health. Exercise can help in cope up mental or emotional difficulties in life by developing stronger resilience, rather than inclined to alcohol, drugs, or other negative behaviors that make symptoms worse.

Regular exercise makes our immune system strong, can reduce the impact of stress and symptoms of mental health conditions like depression and anxiety.

Review of Literature

Many studies have proved that exercising regularly can make a positive difference in patients suffering from depression. Exercise acts as a powerful fighter for depression for many reasons.

Several studies reported that physical activity counteract depressive symptoms in children, teenagers and older adults and is equally effectual as antidepressants. In a study, 156 men and women with depression were divided into 3 groups. The first group participated in an aerobic exercise program. The second group was given antidepressants (Zoloft) and third group were given medication and exercise together. After 4 months, the results revealed that depression had declined in all the groups and scores on rating scales of depression were nearly same. According to Harvard T.H Chan School of public health, exercise works favorably for treating mild to moderate depression as antidepressant do that to without any side-effects. Furthermore, when exercise and medicines are used simultaneously, recovery from depressive symptoms becomes faster. After 6 months follow ups it was seen that exercise had long lasting effect than antidepressants. Moreover, probability of relapses into depression was very less in those who continuously exercise. An hour walking or 15 minutes running a day, lessen the risk of depression by 26 %.

Exercise also supports in treating anxiety as it alleviates tension and stress and inflates physical and mental energy. It is more beneficial if you pay attention to something rather than zoning out. For example, rhythm of the breathing or the feeling of wind on the skin gives a mindful element which helps to focus on the body and it feels as you exercise. It not only aids in quick recovery of your physical condition rather helps you to break off from unvarying worries going in your head. During stress muscles of the face, neck and shoulders gets tense and you may experience severe headache, insomnia, stomachache, diarrhea or frequent urination. Constant exercise can reduce ADHD easily. Dopamine, serotonin and Norepinephrine level can be raised by physical activity which improves concentration, motivation, memory and mood disorder.

Research has proved that besides controlling anxiety and depression, regular physical activeness can help a person to get rid of drugs and alcohol. Substantial data confirm that exercise works as an alternative reward for the brain and body. According to the National Institute on Drug Abuse, substance use disorder patients are at risk to develop mood and anxiety disorders two times more as compared with the general population. Additionally, people with anxiety and mood disorders are more inclined towards drugs. The statistic remains same for adolescents as well as adults.

Researchers understand the importance of the association between exercise and mental health and therefore, the National Institutes of Health (NIH) carried out two researches in this context. In the first study, women in recovery were instructed to exercise more, the results revealed that those who increased their physical activity showed better coping strategies, increased positive attitude towards life, and enhanced motivation. In second research, 50 women in recovering from alcohol addiction were given Fitbits, to use for 3 months. The results of the study proved that women participant accepted that they incorporated exercise as a coping strategy for negative mood and urges to drink.

Although Physical Activity is not directly linked to self-concept, however sports helps in high self-esteem, self regulation, teamwork skills despite of individual differences, conflict resolution abilities, leadership skills and support consequently in building a positive self-image and strong character. An array of life skills like cognitive, emotional, interpersonal and social skills that encourage social development, self-regulating lifestyle and a pleasurable life are enhanced with participation in sports.

Findings

Effect of Physical activity on Children

A child who is physically active is considered as a healthy child. Physicians believe that a child's muscles and bones, get stronger due to regular physical involvement, be it play, exercise, dance etc., as it prevents excessive weight gain, and reduces the risk of many diseases like diabetes, obesity etc. On the other hand, physical activity also benefits a child's mental health.

Health professionals believe that children who are physically active have a better outlook towards life, are more confident, have high self-esteem and improved cognitive skills and are able to manage anxiety and depression better than physically inactive children.

Along with personality development Sports can also improve cognitive performance such as education in children. The combined effect of sport and education works as a protective factor for children and ensure their basic human rights especially of girls. This combination helps girls continue in school, delay forced marriage at an early age, and boost their academic success. In a

study by UNICEF on a Nepali girl, it was reported that if she focus on sports she can keep away the pressure of family for marrying.

In another study, researchers tried to find out whether an aerobic cyber cycling physical education curriculum can improve behavioral functioning among children with severe behavioral health disorders (BHD). Len Saunders, a physical health educator also agrees with the positive affect of exercise on child due to release of endorphins which positively correlates to happiness.

He was very much interested in the cyber cycling study for Children with BHD as they do not participate in aerobic exercise. Cyber cycling involves riding a motionless bike while looking at virtual reality scenery. He believes that even the visual stimulation of riding a bike acts as a strong motivator to exercise. In his study he made the children with behavioral disorders visually stimulated in a distinct way that motivated them to exercise. He concluded that cyber cycling improves the functioning of children with behavioral disorders in classroom. According to Saunders Children enjoyed it, thus Saunders in this research proved a direct correlation between exercise and improved health.

Bowling, said it is not easy to attract children with sensory and motor disorders and social anxiety towards exercise. The cyber cycling attracted them because it is easy for them to successfully engage in it at their current ability level, and they found the video games and virtual reality courses entertaining. She further added they're now testing their use in public special education classrooms, but the problem is to get these costly bikes into schools, so it is important area of research to develop less expensive methods of aerobic exercise that could be similarly effective. Bowling emphasized that children with behavioral problems benefited from exercise not just physically but mentally.

Research was carried out on children between the age group of 6 and 8, it was found that those children who exercised moderately or vigorously showed less depressive symptoms two years later. Also exercise improves mood and behavior in children and lowers chronic disease risks. In another research, students diagnosed with attention deficit hyperactivity disorder, autism, or anxiety disorders, were made to ride the bikes for 30 to 40 minutes twice a week in their physical education class. Results revealed that after seven weeks there was gradual increase

in time and intensity of exercise in children.

Hillman and colleagues studied the impact of physical activity on fitness, brain and cognitive functioning on 221 children in the age group 7 to 9 years. The children were randomly grouped into two different programs, one a physical activity group and the other a wait-list control group for 2 hours duration. After 9-month program, the group involved in physical activity demonstrated greater aerobic fitness than the control group in wait-list. The group assigned physical activity demonstrated greater attention and cognitive flexibility and more changes in brain activity measurements. All these studies analyzed the benefits of physical activity on children's mental well-being.

Effect of Physical activity on Teens

Researchers have been investigating the correlation between exercise and mental health for more than 100 years. According to research teens who exercise regularly showed declined depressive symptoms. Furthermore, physical inactivity can cause psychological disorders. Hence, teens who are inactive are at a higher risk of developing mental disorders. Besides protection from depressive symptoms, teen anxiety symptoms are also reduced through regular physical exercise. In a research on college students, it was found that physically active students reported high levels of excitement and enthusiasm as compared to less active students.

In another study, researchers found that regular vigorous exercise reduces the chances of developing depression or anxiety disorder by 25 percent. According to Craft et al., the focus should be on frequency of exercise rather than on intensity of exercise. In a study of youth in Germany, moderate to high depressive symptoms were reported by 33%. The results revealed that Youths who were active physically for 60 minutes a day had less chances of developing depressive symptoms. Participation in sports helps in less addiction to screen use like videogames, televisions, or computer for leisure time that reduced symptoms of anxiety and depression in adolescents.

Another study revealed that Children who actively participated in sports during school years showed lower level of depressive symptoms, less perceived stress, and reported better mental health later years. Looking forward to the study of co-author Catherine Sabiston, team

sports throws light on group goals, social support and sense of connection that provides ample amount of possibility to learn coping strategies which can have long-lasting effect on mental health. To conclude, sports have various benefits on the mental health of teens, it's worthwhile to spend extra time, effort and money, on teen athletics need.

Daily exercising has been strongly related to reduction in depression by 20-30% in adults ensuing reduction in developing dementia. Potential effect of exercise has been observed over antidepressants with few side effects.

In addition, athletic teens experience extra benefits of being more confident, can concentrate well on their work, are less tensed, enhanced stress coping ability, show improved cognitive function, have high life satisfaction, better thought process, sharper memory and decision making skills. Along with making us feel better, the endorphins also helps in concentration and mentally sharper for tasks at hand. In the long run, teens who get support to play sports develops a strong base for physical and mental well-being.

Effect of Physical activity on older people

Studies show evidence about strong positive association between increased levels of physical activity and superior health in older people. Worldwide, around 3.2 million people in the world die because of inactivity. Studies show that by doing physical activity on a daily basis various common diseases, like heart disease, diabetes etc. can be avoided. Overall immune function is improved when we exercise, which is essential for older people since their immune systems often gets weakened with age. Simple and easy activity such as walking can make a great difference and help prevent disease management.

The benefits of exercise on mental health are nearly endless. Exercise produces endorphins the "feel good" hormone that work as a stress reliever and makes you feel happy and satisfied which improves Mental Health. In addition, exercise helps in improved sleep, which is very much important for older people who frequently suffer from insomnia and disrupted sleep patterns. Exercise helps develops balance and coordination by giving muscular strength thereby decreasing the risk of falls. Recovery from falls take more time in older people, therefore anything that prevents them from it is exceptionally important.

When older aged people indulged in any type of physical activity they join some group, perhaps a walking group, or fitness club, laughing club or visiting a garden which in turn makes the physical activity a pleasurable social event. Social engagement maintains strong social ties which are central for aging adults to avoid feelings of isolation or depression. Physical activity also improves cognitive functioning and the risk of dementia is decreased in physically active individuals.

In the aging people exercise helps: prevents disease, improve mental health and well-being, strengthen social ties and improve brain functioning. All over the world, Governments are recognizing the benefits and importance of physical activity on mental health. This has led to the production of guidelines for physical activity nationally and globally. With increasing age, there is an increased risk of developing non-communicable chronic health conditions. Blair et al laid emphasis on the association between physical inactivity and poor cardiovascular fitness and the occurrence of other chronic health diseases. Five leading risk factors for death are smoking, high blood pressure, diabetes, obesity and physical inactivity. Besides if we take a brief look at these risk factors it wouldn't be wrong to say that physical inactivity addresses the root cause of high blood pressure and glucose levels as well as obesity.

The WHO has recommended guidelines for physical activity for older people aged 65 years and above, according to which moderate intensity physical activity of at least 150 min per week or 75 minutes vigorous intensity activity like aerobics is essential to gain good health in older adults. The health benefits can be raised by increasing the time and intensity. Those who suffer imbalance body coordination are recommended to do balance exercise for three or more days in order to prevent falls. Exercise for strengthening the muscle can also be integrated for 2 or more days. The endorphins released by exercise have positive effect even on psychological health of older people. Also it helps in fighting depression and anxiety in aged adults.

Conclusion and Suggestions

Based on the researches and available literature we can conclude that exercise is beneficial for people of all ages in some or the other way, if it's made a habit and priority. It is explicable that physical inactiveness is a major cause to mortality regardless of age; therefore to incorporate

exercise in daily life should be encouraged. The data connecting physical activity with enhanced mental health and wellbeing is now well established. Investment in physical activity acts as a devotion to mind, body, and soul.

Gradually as it becomes a habit, it can result in higher self-esteem and make an individual feel stronger and powerful. Many other advantages are linked like having positive self image, sense of achievement and better sleep. The growth of new brain cells also gets stimulated by exercising and helps prevent age-related problems.

The best way to enhance our mental well-being and protect our mental health is by incorporating physical activities. It has a profound impact on depression, anxiety, ADHD, and other psychological disorders and can be used in treatment along with medication and psychological therapy. There is compelling evidence for the therapeutic use of physical activity and exercise.

Clinicians can promote the use of physical activity as an important intervention as it relieves stress, sharpens memory, helps in better sleep and boosts overall mood. Moreover, there is validation regarding the positive effect of exposure to nature on reducing mental health inequalities. Studies signifies that even small amount of exercise can make a change. Exercise can be used as an influential tool to increase energy and relaxed throughout the day, regardless of your age. Regular exercise tends to give greater sense of well-being.

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