

THE ROLE OF PHYSICAL FITNESS IN MENTAL HEALTH AND STRESS REDUCTION OF CORTISOL LEVELS

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ABSTRACT

Physical activity is positively associated with certain mental health traits with nonclinical investigations, with the most significant effects of physical exercise having been on self-concept and body image. An attempt to review the current understanding of the physiological and psychological mechanisms by which exercise improves mental health is presented in this review article. Regular physical activity improves the functioning of the hypothalamus-pituitary-adrenal axis. Depression and anxiety appear to be influenced by physical exercise, but to a smaller extent in the population than in clinical patients. The physical fitness measures are closely allied with disease prevention and health promotion; thus, it is common and appropriate to measure components of physical fitness before preventive and rehabilitative programs. It involves physical activity that provides various significant health benefits and is significant for human mechanical stress, and repeated exposure to gravitational forces created by frequent physical exercise increases a variety of characteristics, including physical strength, endurance, bone mineral density, and neuromuscular fitness, all of which contribute to a functional and independent existence. Exercise, defined as planned, systematic, and repetitive physical activity, enhances athletic performance by improving body composition, fitness, and motor abilities. The function of physical activity in preventing a wide range of chronic illnesses and premature mortality has been extensively examined and studied. The effect of adequate evidence links medical conditions such as cardiovascular disease and individual lifestyle behaviours, particularly exercise; numerous hypotheses attempt to explain the connection between physical fitness and mental health with human wellness and wellbeing. Physical activity was shown to help with sleep and improve various psychiatric disorders related to human stress through the most important physical exercises; in general, it is associated with a better mood and improved quality of life. Physical fitness has a central role in maintaining a person's quality of life.

KEYWORDS: *Physical Fitness, Physical Activity, Mental Exercises Reduce Stress, Daily Physical Activity, Strength, Flexibility.*

Introduction

Physical fitness is crucial for overall well-being, improving physical health by strengthening bones, muscles, the heart, and lungs, while managing weight and reducing risks of chronic diseases like diabetes and cancer. It also significantly boosts mental health, enhancing mood, reducing stress, improving sleep, and sharpening cognitive function, leading to more energy and a better quality of life. In an effort to face the challenges of an increasingly widespread unhealthy lifestyle in society, sports activities have proven themselves as an effective solution to improve physical fitness and overall health. The positive effects of exercising extend beyond physical well-being, influencing

neurotransmitter regulation, emotional balance, cognitive function, and social support. Exercise has been implicated in lowering depressive and anxious symptoms in children and adolescents as well to effectively encourage participation in physical activities within the community; several strategies have proven successful. Early education and awareness campaigns in schools and educational institutions are pivotal in instilling the importance of physical activities from a young age; whether through cardiovascular exercise, strength training, or mindful practices like yoga, incorporating regular physical activity into your routine can significantly contribute to stress reduction and promote a healthier, more resilient

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lifestyle. The importance of exercise from an early age, providing facilities that support community participation, and utilizing technology to facilitate access. By exercising regularly and improving the mood of a human being, it can improve the balance between body weight and metabolic rate, increase muscle strength and flexibility, and improve heart and respiratory system function. Physical activity and exercise have been shown to improve depressive symptoms and overall mood in people of all ages.

What Is Physical Fitness?

Physical fitness is the ability of your body to function properly and efficiently so that you can be healthy enough to perform all the activities of your daily living. In simpler words, with the least effort, you perform your daily activities efficiently.

Benefits Of Regular Physical Activity

The health benefits of regular exercise and physical activity are hard to ignore. Physical activity or exercise can improve your health and reduce the risk of developing several diseases like type 2 diabetes, cancer, and cardiovascular disease. Healthcare professionals are also at an increased risk of physical inactivity during leisure time, with research suggesting that whilst some healthcare professionals are physically active during work duties, the amount of physical activity and exercise conducted during leisure time is relatively short and below physical activity guidelines for a substantial proportion of healthcare professionals. Emerging studies suggest that exercise and physical activity interventions can be effective at improving psychological stress and sleep quality in healthcare professionals. Evidence for the effects of such interventions in improving symptoms of mental wellbeing and vitality, depression severity, burnout, traumatic stress, and fatigue was inconsistent across studies. Additionally, attendance at exercise interventions appeared to vary in relation to setting and intervention design. Physical activity and exercise can have immediate and long-term health benefits and, most importantly, regular activity can improve your quality of life. Everyone benefits from exercise, no matter their age, sex, or physical ability.

- Exercise controls weight.
- Exercise combats health conditions and diseases.
- Exercise improves mood.
- Exercise boosts energy.
- Exercise promotes better sleep.
- Exercise helps in the management of body weight.

What Is Mental Health?

Mental health refers to your overall emotional, psychological, and social well-being, influencing how you think, feel, handle stress, relate to others, and make choices, and is crucial for realizing your potential, coping with life's challenges, working productively, and contributing to your community, as defined by the World Health Organization.

Mental Exercises Reduce Stress (Meditation)

Mental stress can speed the heart and raise the blood pressure. Meditation can actually reverse the physiological signs of stress; you can repeat your mantra silently or say it aloud. It's the act of repetition that counts; there is an increasing amount of evidence documenting the beneficial impacts of physical activity on mental health, with studies examining the effects of both brief bouts of exercise and more extended periods of activity. Systematic evaluations have indicated better outcomes for mental diseases with physical activity. Numerous psychological effects, such as self-esteem, cognitive function, mood, depression, and quality of life, have been studied. To reduce stress with exercise, focus on activities you enjoy like brisk walking, yoga, dancing, or swimming, as physical activity lowers stress hormones and releases endorphins, not the content of the phrase. Even the word "one" will do nicely; some meditators prefer to stare at a fixed object instead of repeating a mantra. Small doses of stress help people meet deadlines, be prepared for presentations, be productive, and arrive on time for important events. However, long-term stress can become harmful. Traditional gender roles and societal pressures influence an individual's perception regarding personal mental health issues and the importance of seeking professional help. For men, society implements strong-headed characteristics such as emotional resilience, hard-headedness, motivation, and stoicism. The stigma placed on mental health makes many men believe showing signs of vulnerability could be considered weak. Men experience immense amounts of internalized stigma from societal expectations; in either case, the goal is to focus your attention on a neutral object, thus blocking out ordinary thoughts and sensations.

Exercise And How It Can Manage Stress And Relief

Physical exercise regimes for physiological healthcare and exercise do your body good; subjective and objective stress decreased following exercise compared to the control, though exercise did not appear to reduce symptoms of anxiety in

studies which measured this outcome. In terms of interventions designed to increase levels of physical activity, fewer interventions met study inclusion criteria, but significant improvements in psychological stress and sleep were observed, although no changes in burnout, depression, anxiety, and trauma were observed. More research is needed on differences in outcomes between structured exercise and physical activity programs. But you're too busy and stressed to fit it into your daily plan. There's good news when it comes to exercise and stress, and almost any form of exercise, from aerobics to yoga, can act as a stress reliever. Regular aerobic exercise will bring remarkable changes to your body, your metabolism, your heart, and your spirits. It has a unique capacity to exhilarate and relax, to provide stimulation and calm, to counter depression and dissipate stress. If you're not an athlete or you're out of shape, you can still use exercise to help manage your stress. What's most important is making physical activity part of your lifestyle every week. Don't think of exercise as one more thing on your to-do list. Find an activity you enjoy and make it part of your weekly and daily plan. This can increase feelings of happiness and reduce feelings of pain; it is often called a runner's high. Any aerobic activity, such as a fun game of tennis or pickleball, or a nature hike, can create this happy feeling. Exercise improves your health and sense of well-being, which gives you more energy every day, for behavioral factors also contribute to the emotional benefits of exercise. As your waistline shrinks and your strength and stamina increase, your self-image will improve. Interventions offered during the workplace setting may be seen as more accessible to staff members due to geographical accessibility and the increased likelihood of social support/modeling from colleagues, and individual sessions may be favoured due to lack of pressure from other staff and the ability to exercise at one's preferred ability level. You'll earn a sense of mastery and control, of pride and self-confidence. Exercise also has some clear benefits to relieve your stress. Maybe you enjoy an active tennis or pickleball match, or maybe you like a meditative walk down the street.

- It pumps up your endorphins.
- It cuts down on the negative effects of stress.
- It's meditation in motion.
- It improves your mood.
- It changes up your exercise plan.

Conclusion

The integration of sports and exercise into

daily routines, starting from early education and facilitated by accessible facilities and technological tools, offers a promising solution to counter the adverse effects of sedentary lifestyles. The many factors are discussed while maintaining your physical fitness, such as reduced health risks, increased longevity, boosted muscle and bone health, management of body weight, and chronic health conditions. There is also adequate evidence to suggest that physical exercise improves depressive and anxiety symptoms. Translating the evidence of the benefits of physical exercise on mental health into clinical practice is of paramount importance. Future implications of this include developing a structured exercise therapy and training professionals to deliver it; to stay physically fit, understand the importance of fitness and wellness, and include regular exercise in your routine along with a well-balanced diet. By fostering a culture of active living, society can reap the benefits of improved physical fitness, reduced healthcare burdens, and enhanced well-being.

References:

1. Frontera, W. R., Slovik, D. M., & Dawson, D. M. (Eds.). (2006). Exercise in rehabilitation medicine. Human Kinetics.
2. McGonigal, K. (2019). The joy of movement: How exercise helps us find happiness, hope, connection, and courage. Penguin.
3. Smith, A. L., & Biddle, S. J. (2008). Youth physical activity and sedentary behavior: challenges and solutions. Human Kinetics.
4. "Mental health". World Health Organization. 17 June 2022.
5. Murphy T (2016-07-14). "Actions - H.R.2646 - 114th Congress (2015-2016): Helping Families in Mental Health Crisis Act of 2016". www.congress.gov. Retrieved 2021-05-06
6. Mania precipitated by meditation: a case report and literature review. Yorstson GA. Mental Health, Religion & Culture. 2001;4:209-213