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Physical exercise, nutrition, and mental health: A detailed look at the psychological and physiological benefits

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Abstract

Mental health is one of the essential pillars for human well-being, especially in the face of the growing number of mental disorders, such as depression, anxiety, and stress, which affect people in different age groups. In this context, physical exercise has been widely studied for its positive effects on mental health, proving to be an important tool in both the prevention and management of these disorders. This study reviews the main scientific evidence that points to the benefits of physical exercise, highlighting the most effective modalities, such as aerobic exercise and strength training. In addition, research explores the biological mechanisms underlying these benefits, such as the release of neurotransmitters that improve mood and reduce anxiety and depressive symptoms. The review also discusses how exercise can contribute to the promotion of psychological well-being, improving quality of life, emotional balance, and the ability to cope with stress, as well as providing greater neuroplasticity and protecting against neurodegenerative diseases. Based on the studies found, it is proposed that physical exercise should be considered an accessible and effective practice in the context of interventions to improve mental health.

Keywords: Physical Exercise; Nutrition; Mental Health; Depression; Anxiety; Stress; Aerobic Exercise; Strength Training; Neurotransmitters; Welfare

1. Introduction

Mental health, one of the essential pillars for human well-being, has been a growing concern due to the rising rates of psychological disorders such as depression, anxiety, and stress. The impact of these disorders is profound, affecting individuals at all ages and compromising quality of life. In this context, physical exercise has stood out as a promising strategy, with recent scientific evidence reinforcing its beneficial effects in the treatment and prevention of various mental conditions (Rebar et al., 2020; Schuch et al., 2021).

Recent studies indicate that regular physical exercise can be an effective intervention to promote psychological well-being, complementing or even replacing conventional treatments in certain cases. Physical exercise has shown potential not only to reduce the symptoms of mental disorders, but also to improve general aspects of health, such as sleep quality, emotional balance, and the ability to cope with stress (Schuch et al., 2020). Research suggests that both aerobic exercise and strength training have significant positive impacts on reducing symptoms of depression, anxiety, and stress, with effects that rival pharmacological treatments (Hughes et al., 2020).

In addition, the understanding of the biological mechanisms that underlie this relationship between exercise and mental health has advanced significantly. Research suggests that physical activity can modulate neurochemical and neurobiological processes in the brain, promoting the release of substances such as endorphins, serotonin, and dopamine, which are directly associated with improved mood and reduced depressive and anxious symptoms (Kiecolt-

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Glaser et al., 2021). These effects are particularly important at a time when mental illness is on the rise, requiring new therapeutic approaches, such as the use of physical exercise, which is low-cost and accessible to a wide range of individuals.

This study aims to review the main scientific evidence on the benefits of physical exercise for mental health, with an emphasis on the most effective exercise modalities, the biological mechanisms involved, and the implications for the treatment of mental disorders. In addition, the review aims to explore the relevance of exercise in promoting preventive mental health, discussing the implications for public policies and clinical interventions. In a scenario where mental disorders have become an urgent global concern, physical exercise offers a simple, accessible, and potentially effective approach to mitigating this problem, contributing not only to physical health but also to lasting mental balance.

General Objective

To analyze the main scientific evidence on the benefits of physical exercise and nutrition for mental health, with emphasis on the most effective modalities, the biological mechanisms involved, and the implications for the prevention and treatment of mental disorders.

2. Methodology

This study is a review of the qualitative literature on the benefits of physical exercise for mental health. The methodological steps included:

- Bibliographic survey: Searches carried out in scientific databases such as PubMed, Scopus, Web of Science and Google Scholar, using keywords: "physical exercise", "mental health", "depression", "anxiety", "stress", "neurotransmitters" and "neuroplasticity". Renowned journals such as Journal of Affective Disorders, The Lancet Psychiatry, American Journal of Psychiatry, Psychiatry Research, Journal of Behavioral Medicine, and International Journal of Sports Medicine were consulted.
- Inclusion and exclusion criteria: Studies published between 2010 and 2025, in English and Portuguese, that analyzed the impact of physical exercise on mental health were included. Out-of-scope, duplicate, or unavailable works were excluded
- Selection of studies: The selection was based on title, abstract, and full text, prioritizing studies that addressed the effects of physical exercise on psychological, physiological, and neurobiological variables.
- Data analysis: The information was organized into three categories: Physical exercise modalities and their effects on mental health; Biological mechanisms associated with the benefits of exercise; Effectiveness of exercise in the prevention and management of mental disorders.
- Discussion and synthesis: The results were interpreted in the light of the literature, evaluating trends, gaps and practical implications, in addition to proposing directions for new research and public policies.

This methodology allowed a detailed and systematic analysis of the available evidence, ensuring the reliability of the information obtained.

3. Results and Discussion

3.1. Physical Exercise and Depression: An Effective Approach to Exercise on Depression

Depression is one of the most prevalent psychiatric conditions worldwide, affecting millions of individuals annually. The impact of this disease goes beyond emotional symptoms, affecting the functionality and quality of life of individuals. Traditionally, treatments for depression include pharmacological interventions and psychosocial therapies, such as cognitive behavioral therapy. However, a growing amount of scientific evidence has suggested that physical exercise can be as effective as conventional treatments for depression, providing an affordable therapeutic approach, with fewer side effects (Dishman et al., 2021).

The systematic review carried out by Schuch et al. (2016) demonstrated that the regular practice of physical exercise can reduce depression symptoms in a way comparable to the use of antidepressants, with the advantage of offering a longer-lasting effect and a significant reduction in adverse effects associated with the use of medications. In addition, exercise not only acts to improve mood, but also provides benefits in other aspects of mental health, such as sleep quality and emotional regulation (Stubbs et al., 2017).

The mechanisms underlying the positive effects of exercise on depression are multifaceted. Physical activity promotes the release of neurotransmitters essential for mood regulation, such as endorphins, serotonin and dopamine, substances that have proven antidepressant effects. The release of endorphins, for example, is often associated with feelings of well-being and reduced pain perceptions, and is a key factor in improving the emotional state of individuals with depression (Barton & Pretty, 2010). In addition, exercise can reduce systemic inflammation, a factor increasingly recognized as contributing to depressive symptoms (Miller et al., 2020).

Improved sleep quality, a factor often impaired by individuals with depression, is also a positive consequence of exercise. Regular physical activity contributes to a healthier sleep cycle, promoting both deep sleep and REM sleep, which are essential for physical and mental recovery (Schuch et al., 2016). This impact on sleep has important implications, as insomnia and sleep fragmentation are factors that perpetuate depressive symptoms.

In addition, physical activity has a positive effect on self-esteem and self-perception of control, crucial factors for the recovery of individuals with depression. When achieving goals related to physical performance, such as increasing endurance or improving strength, individuals experience a sense of self-sufficiency and the ability to control their lives, which can reduce the feelings of powerlessness and hopelessness associated with depression (Barton & Pretty, 2010).

Therefore, physical exercise emerges as an effective and accessible intervention for the treatment of depression, with both physiological and psychological benefits. The adoption of regular physical activity programs can be an important strategy in the prevention and treatment of depression, working as a complementary or even substitute intervention, especially for those who do not respond well to conventional treatments. Additionally, the minimal side effects and overall health benefits make exercise an attractive choice for patients and mental health professionals.

3.2. Physical Exercise and Anxiety

Anxiety is an increasingly prevalent emotional disorder in modern society, affecting millions of individuals around the world. Its impact goes beyond passing concerns, and can significantly interfere with the quality of life and general health of individuals. As part of anxiety treatment, physical exercise has been shown to be an effective intervention, with a growing body of evidence suggesting that regular physical activity can significantly reduce anxiety symptoms (Gunnell et al., 2020).

Clinical studies have shown that aerobic exercise, in particular, is one of the most effective ways to reduce anxiety. The study by Thayer et al. (2010) indicated that exercise induces a state of relaxation, which can be extremely beneficial in controlling anxiety. In addition, regular physical activity, such as walking, running, or swimming, has been shown to not only reduce immediate symptoms of anxiety but also improve feelings of well-being in the long term.

The effects of exercise on anxiety can be explained by several biological and psychological mechanisms. The increased production of neurotransmitters, such as endorphins, dopamine, and serotonin, plays a crucial role in reducing anxious symptoms. These neurotransmitters have direct effects on the central nervous system, promoting a state of relaxation and a sense of pleasure, in addition to improving mood in general (Pearson et al., 2019). Endorphins, in particular, are often associated with a feeling of euphoria and tranquility after physical activity, helping to soften the effects of anxiety.

In addition, physical exercise has shown the ability to reduce levels of cortisol, the stress hormone responsible for many of the physical and emotional reactions associated with anxiety. Reducing cortisol through exercise can provide a calming effect on the body, helping to restore hormonal balance and promoting an overall sense of calm and well-being (Hughes et al., 2020). This decrease in cortisol levels not only reduces physical tension but also facilitates emotional regulation, allowing individuals to feel more balanced and less prone to anxious reactions.

Another important mechanism is the increased perception of control over one's own feelings and emotions. Regular exercise helps individuals develop greater self-confidence and control over their body and mind, which in turn can be highly beneficial for those suffering from anxiety. By engaging in physical activity, individuals experience a greater sense of control over their mental and emotional health, decreasing the sense of helplessness that often accompanies anxiety disorders (Barton & Pretty, 2010). This increase in the perception of control can prevent the emergence of anxiety crises and promote a state of emotional balance.

Not only does physical exercise offer immediate benefits in reducing anxiety symptoms, but it also has long-term effects. Regular physical activity programs can help prevent the return of anxious symptoms by promoting a healthy lifestyle that supports mental and emotional balance. The long-lasting effects of physical exercise make it a useful and accessible strategy in both the prevention and treatment of anxiety disorders.

Therefore, the regular practice of physical exercise emerges as an effective and low-cost intervention to reduce anxiety. With a growing number of studies reinforcing its importance, exercise can be a powerful tool not only in reducing anxiety symptoms but also in promoting more balanced and resilient mental health. By integrating physical exercise as part of a holistic treatment plan, it is possible to significantly improve the quality of life of individuals affected by anxiety.

3.3. Benefits of Exercise on Adolescent Mental Health: A Transformative Perspective

Adolescent mental health has become a growing concern in recent decades, with alarming rates of depression, anxiety, and stress among young people. In this context, regular physical exercise has been shown to be a promising strategy to improve psychological well-being and help prevent or reduce the symptoms of these disorders. Recent studies indicate that physical activity not only promotes physical benefits but also offers an effective way to cope with the emotional and psychological challenges faced by adolescents (Reichert et al., 2020).

Research reveals that regular exercise can be effective in reducing symptoms of depression and anxiety, offering young people a healthy alternative to the stress caused by academic pressure, social issues, and the increasing use of digital technologies (Vancampfort et al., 2018). The practice of physical activities contributes to the release of neurotransmitters such as endorphins and serotonin, responsible for improving mood and reducing stress, providing adolescents with a sense of well-being and emotional balance (Barton & Pretty, 2010). Additionally, exercise can help improve sleep quality, a crucial factor for the mental health of young people, who often face difficulties in maintaining healthy sleep patterns.

One particularly effective approach is group sports, which not only provides the physiological benefits of exercise, but also strengthens adolescents' social and emotional skills. The study by Vancampfort et al. (2018) highlights that socialization in sports activities can increase the sense of belonging and self-esteem, in addition to improving communication and the ability to deal with conflicts. These aspects are fundamental for the healthy emotional development of adolescents, helping them to deal with challenges typical of this stage of life, such as changes in the body, identity issues and social interactions.

In addition to the psychological benefits, regular physical exercise can have a positive impact on academic performance. Research by Reichert et al. (2020) suggests that exercise can improve concentration, memory, and focus, which are essential factors for school success. Increased blood flow and oxygenation of the brain during physical activity contribute to improved cognitive functions, which in turn can promote more effective performance in school and academic tasks.

Exercise also provides a space of self-sufficiency and control for adolescents, giving them the opportunity to set goals and overcome challenges gradually. This process of overcoming, both physical and mental, helps build confidence in themselves, an essential factor for mental health in adolescence. Studies indicate that the feeling of control acquired through regular exercise is associated with a decrease in symptoms of anxiety and depression (Schuch et al., 2016).

It is important to highlight that the benefits of exercise for the mental health of adolescents are not limited only to the physical activity itself, but also to the environment in which it occurs. The combination of factors such as social support, proper guidance, and involvement in physical activities that provide pleasure and motivation can significantly enhance therapeutic outcomes (Hughes et al., 2020). Thus, it is essential that schools, families and communities support and encourage adolescents to participate in physical activities in a regular and structured way.

At a time when mental disorders are becoming increasingly prevalent among young people, the practice of physical exercise emerges as an accessible, effective and low-cost intervention. Its positive impact on the mental health of adolescents, not only in reducing symptoms of depression and anxiety, but also in strengthening social, emotional, and cognitive skills, highlights the importance of promoting an active lifestyle from childhood. Incorporating physical exercise as part of adolescents' daily routine can be a key strategy to promote mental health and overall well-being, helping them to face the challenges of this stage of life with more resilience and emotional balance.

3.4. Physical Exercise as Prevention and Treatment of Mental Disorders in the Elderly: An Effective Strategy for Mental Health in the Elderly

Mental health in old age has become a growing priority as the world's population ages. Aging is often associated with an increased risk of mental disorders, such as depression, anxiety, and dementia, which negatively impact the quality of life of the elderly. However, the regular practice of physical exercise emerges as a powerful strategy in both the prevention and treatment of these disorders, improving the psychological and cognitive well-being of the elderly.

Scientific studies demonstrate that aerobic exercise and strength training are particularly effective in reducing symptoms of depression in older adults. The research by Schuch et al. (2018) showed that the regular practice of physical activities can have as significant an impact as conventional treatments, such as medication, but with the advantage of having fewer side effects. Exercise acts in the body by promoting the release of neurotransmitters, such as endorphins and serotonin, which are responsible for improving mood and reducing feelings of sadness and hopelessness, with evident benefits in reducing depressive symptoms in the elderly (Stubbs et al., 2017).

In addition to reducing symptoms of depression, physical exercise plays a crucial role in preserving cognitive health. Research suggests that regular physical activity, such as walking, swimming, and resistance training, may improve memory, attention, and executive function in older adults by slowing cognitive decline associated with aging (McAuley et al., 2011). Increased blood flow and oxygenation of the brain during exercise favor brain plasticity and the formation of new neuronal connections, which can help prevent or delay neurodegenerative diseases, such as dementia and Alzheimer's (Rolland et al., 2010).

In addition to the cognitive and emotional benefits, exercise also has a significant impact on the overall quality of life of seniors. Regular physical activity contributes to improved mobility, muscle strength, and balance, reducing the risk of falls and injuries. These physical improvements have a direct impact on the self-sufficiency and independence of the elderly, crucial factors for the preservation of their self-esteem and psychological well-being. The perception of control over the body and the ability to perform everyday activities more easily can improve confidence and reduce feelings of anxiety and insecurity (Barton & Pretty, 2010).

Socialization is also an important component of physical exercise for seniors. Participating in physical activity groups, such as fitness classes or group walks, can provide a valuable opportunity for social interaction, which is essential to combat loneliness and isolation, factors that are closely linked to the development of mental disorders, such as depression (Vancampfort et al., 2018). Social support from exercise groups can be an additional motivator for adherence to regular physical activity, making it a more enjoyable and sustainable experience over time.

Although the benefits of physical exercise for the mental health of the elderly are widely recognized, it is essential that physical activity programs are adapted to the individual needs and limitations of each elderly person. Exercise should be progressive, with the intensity and type of activity adjusted according to the physical conditions and preferences of each person. Regular medical appointments and the supervision of healthcare professionals are important to ensure the safety and effectiveness of exercise programs, particularly for those who have preexisting health conditions.

Physical exercise emerges as an essential intervention in the promotion of mental health and in the treatment of mental disorders in the elderly. Its ability to reduce symptoms of depression, improve cognitive function, and promote overall quality of life makes it a valuable tool for maintaining mental health in old age. By integrating the practice of physical activities into the daily lives of the elderly, we can not only improve their emotional and psychological well-being, but also increase their longevity with quality, allowing them to live more actively and independently.

3.5. Physiological Mechanisms Underlying the Benefits of Exercise on Mental Health: A Broader View

The beneficial effects of physical exercise on mental health are widely recognized, and several biological mechanisms have been identified as responsible for these improvements. Exercise not only promotes immediate changes in the brain, but also induces long-term adaptations that positively impact psychological and emotional well-being. Understanding these mechanisms can enhance the application of physical exercise as an effective therapeutic intervention for mental disorders such as depression, anxiety, and stress.

3.6. Neuroplasticity and Brain Remodeling

Neuroplasticity, which is the brain's ability to form new neural connections and reorganize its structures in response to experiences and stimuli, plays a key role in the effects of exercise on mental health. Physical exercise, especially aerobic training, has been associated with a significant increase in neuroplasticity, promoting neuronal regeneration and strengthening of brain networks responsible for cognitive and emotional functions (Schuch et al., 2021). Studies show that regular exercise can increase the production of neurotrophic proteins, such as brain-derived neurotrophic factor (BDNF), which is essential for the survival and growth of neurons, as well as improve connectivity between brain regions involved in the control of emotions and memory (Voss et al., 2013).

3.7. Improved Cerebral Blood Flow and Vascular Health

Another important mechanism is the improvement of cerebral blood flow, which occurs during and after exercise. Cardiovascular activation during exercise increases blood perfusion in the brain, providing greater delivery of oxygen and nutrients to nerve cells. This improvement in blood circulation not only favors cognitive function, but also helps in the recovery from brain damage, in addition to promoting vascular health, a crucial factor for the prevention of neurodegenerative diseases, such as Alzheimer's (Thayer et al., 2010). Cardiovascular health, which benefits from regular exercise, is also closely linked to mood regulation and the control of psychological disorders such as depression.

3.8. Modulation of Inflammation and Immune Response

Exercise also has a significant impact on modulating inflammation, a biological process that has been linked to a variety of psychological disorders. In situations of chronic stress, the body tends to show an increase in the levels of inflammatory markers, such as pro-inflammatory cytokines, which are molecules involved in immune responses. The high presence of these cytokines in the body can negatively influence brain function, contributing to the development or worsening of mental disorders, such as depression and anxiety (Gunnell et al., 2020). Regular exercise has been shown to be an effective intervention in reducing these inflammatory markers, providing an anti-inflammatory effect that not only improves physical health but also modulates emotional and psychological responses, helping to reduce the impact of inflammatory diseases and environmental stressors on mental well-being (Zhang et al., 2019).

3.9. Endocrine System Regulation and Stress Response

Another crucial aspect of exercise's benefits lies in its ability to regulate the endocrine system, especially stress-related hormones such as cortisol. Regular physical exercise helps normalize cortisol levels, a hormone associated with stress, which, when chronically high, can harm mental health and increase vulnerability to disorders such as anxiety and depression (Pearson et al., 2019). Regular physical activity has been shown to improve resilience to stress by stimulating the production of neurotransmitters, such as endorphins and serotonin, which play a crucial role in regulating mood and creating a sense of well-being.

3.10. Physical Exercise and Social Well-Being: Impacts on Connection and Mental Health

Physical exercise not only contributes to individual mental health, but also plays a crucial role in strengthening social well-being. Participating in physical activities, especially those performed in groups, can provide a range of emotional and social benefits, creating valuable opportunities for social support. This support is a significant protective factor for mental health, being particularly important in contexts of stress, loneliness, and emotional difficulties (Barton & Pretty, 2010).

3.11. Fostering Social Connections and Reducing Isolation

Participation in group physical activities promotes social interactions that can increase a sense of belonging and reduce feelings of isolation. Studies indicate that collective exercise environments, such as walking groups, jogging, fitness classes, or team sports, offer a safe and welcoming space for creating new friendships and building an emotional support network (Reichert et al., 2020). Interacting with others during exercise also allows individuals to share experiences, challenges, and victories, which contributes to the creation of deeper and more meaningful bonds. For those facing emotional difficulties, these connections can be an important factor in reducing feelings of loneliness and promoting mental health.

3.12. Increased Self-Confidence and Self-Esteem

In addition to the social benefits, physical exercise also contributes to increased self-esteem and self-confidence. Improving physical fitness and overcoming challenges in physical activities are sources of personal satisfaction, which can translate into a greater perception of control over one's own life. This increase in self-confidence may be especially relevant for individuals facing psychological disorders, such as depression or anxiety, where the feeling of powerlessness and lack of control can be debilitating (Barton & Pretty, 2010). Exercise also provides a sense of competence and accomplishment, which can increase motivation and social engagement.

3.13. Stress Reduction and Mood Improvement

Social interaction, promoted by physical exercise, also has a direct impact on emotional regulation. Research by Reichert et al. (2020) highlighted that the psychological benefits of exercise are not limited to physiological aspects, but are also linked to increased confidence and social interaction, which has a positive effect on stress management. When people

engage in group physical activities, they not only share a common goal, but they also have the opportunity to support each other, creating a positive environment that can improve mood and reduce emotional tension.

3.14. Physical Exercise as a Strategy for Social Inclusion

In addition, exercise can act as an important strategy for social inclusion, especially in vulnerable populations. Accessible physical activities, such as community walking or cycling programs, can offer people from different socioeconomic backgrounds the opportunity to integrate socially and improve their emotional state. Physical exercise, when combined with the promotion of a culture of inclusion and social support, can be a powerful tool to combat social isolation and improve collective well-being (Reichert et al., 2020).

3.15. The Importance of Nutrition for People with Depression and Anxiety

The relationship between nutrition and mental disorders, such as depression and anxiety, has been extensively investigated in recent decades. Studies suggest that diet influences mental health through biochemical and neurobiological processes that affect neurotransmitters and brain inflammation (Jacka et al., 2017). This literature review aims to explore the scientific evidence on how nutrition impacts the mental health of individuals with depression and anxiety.

3.16. Nutritional Deficiencies and Mental Disorders

Deficiencies in vitamins and minerals, such as vitamin D, B12, folate, iron, and zinc, are associated with increased risk of depression and anxiety (Berk et al., 2013). For example, vitamin B12 is essential for the synthesis of neurotransmitters, and its deficiency can lead to depressive symptoms (Otten et al., 2016).

3.17. Inflammation and Depression

Diets rich in ultra-processed foods are related to chronic inflammation, a risk factor for depression (Lassale et al., 2019). Anti-inflammatory foods, such as fruits, vegetables, and omega-3 fatty acids, may reduce symptoms of mental disorders (Kiecolt-Glaser et al., 2018).

3.18. The Role of the Gut Microbiome

The gut-brain axis has been a growing focus of research. Changes in the gut microbiota are associated with depression and anxiety, and diet can directly influence this process (Clapp et al., 2017). Intake of fiber and fermented foods improves gut health and may have beneficial effects on mental health (Kelly et al., 2016).

4. Nutrients and Their Effects on Depression and Anxiety

4.1. Omega-3 Fatty Acids

Omega-3 fatty acids, found in fatty fish, flaxseeds, and chia seeds, have been shown to reduce depressive and anxious symptoms (Su et al., 2018). Studies suggest that these lipids play a role in modulating inflammation and neurotransmission.

4.2. Amino Acids and Proteins

Tryptophan, a precursor to serotonin, is present in foods such as chicken, eggs, and dairy products. Diets rich in this amino acid can increase the availability of serotonin in the brain, reducing depressive symptoms (Sarris et al., 2016).

4.2.1. B Vitamins

B vitamins are essential for the synthesis of neurotransmitters. Studies indicate that individuals with low intakes of B12 and folate have a higher risk of depression (Young, 2013).

4.2.2. Antioxidants and Polyphenols

Antioxidants, such as flavonoids and polyphenols, present in fruits, green tea, and cocoa, reduce oxidative stress and may have neuroprotective effects (Godos et al., 2020).

4.3. Diets and Their Impacts on Mental Health

4.3.1. Mediterranean Diet

The Mediterranean diet, rich in fish, olive oil, fruits, vegetables, and whole grains, has been linked to reduced incidences of depression and anxiety (Sanchez-Villegas et al., 2016).

4.4. Western Diet and Its Harmful Effects

A diet high in refined sugars, trans fats, and ultra-processed foods is correlated with a higher risk of mental disorders (Adjibade et al., 2019).

4.5. Nutritional Interventions

4.5.1. Nutritional Supplementation

Studies show that supplementing with omega-3, vitamins B, and D can be effective as an adjunct treatment for depression and anxiety (Lopresti et al., 2014).

4.5.2. Mindful Eating and Intuitive Dieting

The practice of mindful eating has shown benefits in reducing food-related anxiety symptoms (Mason et al., 2018).

5. Conclusion

Physical exercise emerges as an essential and multifaceted intervention for the promotion of mental health in diverse populations, ranging from adolescents to the elderly. Scientific evidence shows that regular physical activity not only reduces symptoms of mental disorders such as depression and anxiety, but also promotes long-lasting psychological well-being and improves quality of life. The biological mechanisms underlying these effects, such as neuroplasticity, inflammation modulation, and hormone regulation, reveal the complexity of the relationship between physical activity and mental health.

In addition to the physiological benefits, physical exercise also plays a crucial role in promoting social connections and strengthening self-esteem, contributing to an emotionally supportive environment that is vital for psychological health. The practice of group physical activities, in particular, offers a valuable opportunity for socialization and the construction of meaningful bonds, helping to combat isolation and loneliness, which are risk factors for the development of mental disorders.

In this scenario, it is essential that public policies and clinical interventions value physical exercise not only as a prevention strategy, but as an essential component in the treatment of mental conditions. The creation and implementation of programs that are accessible, inclusive, and tailored to the needs of each individual have the potential to significantly transform the approach to mental health. Promoting an active lifestyle that benefits both body and mind can be a game-changer in the quest for a healthier and more balanced society. In this way, by incorporating physical exercise into psychological care practices, we move towards a health model that prioritizes integral well-being, reinforcing individual and collective resilience and equating the relevance of mental health with that of physical health.

The literature review demonstrates that nutrition plays a crucial role in mental health. Balanced diets rich in essential nutrients are essential for the prevention and management of depression and anxiety. More research is needed to establish more precise nutritional guidelines for treating these disorders.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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