TPM Vol. 32, No. S5, 2025
ISSN: 1972-6325
https://www.tpmap.org/

Open Access

IMPACT OF PHYSICAL ACTIVITY ON ANXIETY LEVELS IN ADULTS

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ABSTRACT:
Anxiety disorders rank among the most common mental health issues globally, profoundly affecting individual well-being and social productivity. Individuals aged 20 to 40 years constitute a significant demographic, since this phase includes critical life transitions such as professional development, family creation, and social role solidification, which frequently increase susceptibility to anxiety (Henriksson et al., 2021). Even though drugs and therapy are still common ways to treat mental health problems, more and more evidence points to physical activity as an effective, easy-to-administer alternative. This paper looks at how structured physical exercise affects anxiety levels in young and middle-aged adults. It achieves this by synthesizing the available evidence, proposing a theoretical model, and outlining methodological approaches that can inform practice.

INTRODUCTION:

Anxiety disorders impact over 301 million people worldwide, predominantly affecting young to middle-aged adults (Luo et al., 2024). In the United States, around 20% of persons experience clinical anxiety each year, resulting in significant economic consequences of over $42 billion annually owing to healthcare expenses and diminished productivity (David et al., 2023). Adults between the ages of 20 and 40 are more likely to experience anxious symptoms because they have to deal with unique sources of stress, such as demands at work, financial obligations, and the pressures of living in the digital age. Conventional treatments work for many people, but they have problems like being too expensive, having a bad reputation, being hard to get, and having medicines that might have side effects. As a result, more and more people view physical exercise as a cost-effective, long-lasting, and scalable method that can be used in addition to or as an alternative to standard therapies. Therefore, looking into how well it works in this important age group is both timely and necessary.

LITERATURE REVIEW

An increasing volume of research underscores the correlation between physical activity and diminished anxiety levels in individuals. Plag et al. (2020) evidenced in a randomized controlled experiment that structured aerobic exercise substantially reduced generalized anxiety symptoms relative to a waiting control group. In the same way, Henriksson et al. (2021) did a large cohort study in Sweden and found that over 10 years, physically active people had a 60% lower chance of getting anxiety disorders. Marconcin et al. (2022) added to the evidence that regular exercise can help protect people ages 18 to 64, finding that it consistently lowers anxiety and boosts resilience across a wide range of populations. With all of these results together, they support physical activity as a possible, easy-to-reach, and inexpensive way to reduce anxiety.

Recent meta-analyses build upon these individual investigations by investigating potential pathways. David et al. (2023) conducted a review of interventions in 13 countries and established that both aerobic and resistance exercises diminish anxiety severity, with moderate-to-vigorous activity yielding the most significant benefits. Luo et al. (2024) examined and reported on neurological reasons, such as less activity in the hypothalamic-pituitary-adrenal (HPA) axis and more neuroplasticity through the release of brain-derived neurotrophic factor (BDNF). Chekroud et al. (2021) added more proof that even unplanned physical exercise, like sports or walking to work, is linked to better mental health outcomes. As a whole, the research shows that physically active people have better outcomes with their anxiety.

Supporting Evidence

The efficacy of physical activity as a therapy for anxiety is bolstered by research that compares its results to traditional treatments. Plag et al. (2020) indicated that aerobic exercise resulted in decreases of anxiety symptoms comparable to those produced by regular cognitive-behavioral treatment, implying that exercise may be as efficacious as

psychological interventions for certain adults. David et al. (2023) showed that physical exercise interventions had moderate to large effects on lowering generalized anxiety, which was similar to what was seen in drug trials. Exercise is better than selective serotonin reuptake inhibitors (SSRIs) because it does not cause side effects like weight gain, sexual problems, or dependence. Chekroud et al. (2021) reported on benefits for the whole community, saying that adults who did sports, cycling, or even chores around the house had a lot fewer bad mental health days. These results show that exercise is a useful, low-cost option that can help people who do not want to go to formal treatment. All of this evidence supports the use of physical exercise as a way to deal with anxiety, either on its own or in addition to other methods.

Purpose or Aims of the Study

This study's goal is to find out how structured physical exercise affects anxiety in adults between the ages of 20 and 40. The research aims to find out if regular exercise significantly lowers anxiety symptoms compared to a sedentary lifestyle (Marconcin et al., 2022). Some of the main goals are to measure symptom reduction, look into how different types of exercise affect symptoms, and see if changes last over time. The guiding PICOT question is: In adults aged 20–40 years with anxiety (P), how does regular physical activity (I), compared to no structured physical activity (C), affect anxiety levels (O) over 12 weeks (T)?

THEORETICAL MODEL OR FRAMEWORK

The Health Belief Model (HBM) serves as the theoretical framework for this study, elucidating the impact of individual beliefs on health-related behaviors. The model's principal constructs—perceived susceptibility, severity, advantages, barriers, cues to action, and self-efficacy—provide insight into adults' decisions regarding physical exercise engagement. Adults aged between 20 and 40 who know their susceptibility to anxiety and comprehend its potential severity may be more inclined to adopt preventive measures (Luo et al., 2024). Realizing the benefits of exercise, like lowering stress and making one feel better, while also dealing with problems like not having enough time or desire, changes behavior even more. Engagement can be sparked by calls to action, such as clinicians' advice or public health efforts. Lastly, self-efficacy gives people the power to keep up their usual activities. In this context, starting to do physical activities is seen as a proactive way to deal with worry in a healthy way.

Methods/Design/Sampling

This research will utilize a randomized controlled trial (RCT) design to assess the effect of structured physical activity on anxiety levels in persons aged 20 to 40 years. Participants (n = 100) will be sourced from community health centers, primary care clinics, and colleges, focusing on persons exhibiting clinically significant anxiety as assessed by standardized screening instruments. People will be randomly put into either the training group or the control group. The intervention group will follow a planned exercise plan for 12 weeks. The control group, on the other hand, will get normal care without a set exercise plan. At the start, 6 weeks, and 12 weeks, approved anxiety tests like the Generalized Anxiety Disorder 7-item scale (GAD-7) and the State-Trait Anxiety Inventory (STAI) will be used to collect data (Henriksson et al., 2021). Ethical issues that will be looked at include getting permission from the Institutional Review Board (IRB), getting informed consent, and making sure that all participants' privacy is protected. This methodological approach makes sure that the study is rigorous while also meeting safety and ethical standards. It is similar to other clinical trials that have looked at exercise as a way to help with anxiety disorders.

Proposed Interventions

The intervention will comprise a systematic 12-week exercise regimen tailored to adhere to World Health Organization (WHO) standards for adult physical activity (Plag et al., 2020). The people in the intervention group will do 150 minutes a week of moderate-intensity aerobic exercise, like brisk walking, cycling, or treadmill workouts. The activity will be given in supervised sessions to make sure people stick to the plan and stay safe. Three to five times a week, the pressure of the sessions will be gradually increased based on how well the participants can handle it. Trained exercise experts will keep an eye on participation and offer encouragement. The control group will get standard care without planned physical activity, but they will have access to tools that teach them how to live a healthy life. Structured and supervised aerobic programs have been shown to reduce anxiety and improve mood regulation, especially in people who already have a lot of problems.

Expected Results/Outcomes

The intervention group engaged in structured physical activity is expected to exhibit a substantial decrease in anxiety symptoms, as assessed by GAD-7 and STAI scores, relative to the control group (Wu & Zhou, 2024). As a result, people may sleep better, feel more confident in their ability to deal with stress, and have a higher quality of life generally. It is expected that these benefits will last longer than the 12-week intervention. For example, people may use healthcare services less, see psychiatrists less often, and feel better generally. This study may support structured physical exercise as a cost-effective and long-lasting way to help people deal with anxiety because it showed benefits for both mental health and daily functioning.

Anticipated Conclusion

Addressing anxiety in persons aged 20 to 40 is essential, as this demographic experiences significant stress and possesses inadequate coping strategies. Along with traditional treatments, structured physical exercise is an effective, low-cost, and widely available option. According to David et al. (2023), the expected results will support the idea that exercise can help reduce anxiety and build resilience while also encouraging healthier living habits. Including physical exercise in mental health care could give professionals more tools to help people more completely, without just using drugs. In the end, this study shows that physical activity can change how young adults deal with anxiety.

Possible Limitations

This study may be subject to several limitations. Attrition and non-compliance with the physical activity program may diminish intervention efficacy, as individuals would struggle to sustain consistent exercise (Plag et al., 2020). Reporting bias is more likely when anxiety and secondary effects are based on self-reported data. Also, the study's results might not be very useful for other situations if most of the people who take part are from cities where exercise centers are easier to find. Another problem is separating the benefits of exercise from other changes in lifestyle, like eating better or doing things to relax, that may also have an effect on the results.

Potential Implications to Practice

The study's findings may guide nursing and primary care practices by establishing physical activity as a suggested adjunctive therapy for anxiety management. Providers can incorporate exercise therapy into mental health care, providing patients with effective techniques to alleviate symptoms (Henriksson et al., 2021). Structured exercise is a way to improve mental health that can be used on a large scale by public health programs and fitness programs at work. This study supports holistic care models that give people more power while possibly lowering their need for medications by encouraging the use of non-drug interventions. In the end, incorporating structured physical exercise into regular care could improve patient outcomes and help them deal with their anxiety healthily.

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