



## Exploring The Relationship Between Physical Activity and Mental Health in College Students

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**Abstract.** *This study explores how physical activity impacts mental health outcomes in college students. By examining data on exercise frequency, stress levels, and academic performance, the research identifies a positive correlation between regular physical activity and improved mental health, including reductions in stress and anxiety. The findings suggest that promoting physical activity could enhance mental well-being among students and improve academic performance.*

**Keywords:** *Physical activity, Mental health, College students, Stress, Anxiety, Academic performance, Well-being*

### 1. INTRODUCTION

The transition to college life can be a challenging time for many students, often marked by increased academic demands, social pressures, and the need to adapt to a new environment. These factors can contribute to elevated levels of stress and anxiety, adversely affecting students' mental health and academic performance. Physical activity has been widely recognized as a potential buffer against these challenges, with numerous studies indicating that regular exercise can lead to improvements in mental health outcomes.

This article aims to explore the relationship between physical activity and mental health in college students, focusing on how exercise can influence stress levels, anxiety, and overall well-being. Understanding this relationship is crucial for developing effective interventions that promote physical activity as a means to enhance mental health among college students.

### 2. LITERATURE REVIEW

#### The Importance of Physical Activity for Mental Health

Research has consistently demonstrated that physical activity plays a significant role in mental health. Regular exercise has been associated with decreased symptoms of depression and anxiety, improved mood, and enhanced overall psychological well-being (Craft & Perna, 2004). The physiological mechanisms underlying these effects include the release of endorphins, improved sleep patterns, and reductions in inflammatory markers (Meeusen & De Meirleir, 1995).

## **Stress and Academic Performance**

The college environment often subjects students to high levels of stress, which can detrimentally impact their academic performance. A study by Misra and McKean (2000) found that college students reported higher stress levels compared to the general population, with academic pressures being a significant contributing factor. As stress levels rise, students may experience difficulties in concentration, motivation, and retention of information, leading to a decline in academic achievement (Robotham & Julian, 2006).

## **Correlation Between Exercise and Reduced Stress**

Numerous studies have indicated a positive correlation between physical activity and reduced stress levels among college students. For instance, a meta-analysis by Rebar et al. (2015) revealed that engaging in regular physical activity significantly decreases stress and improves mental well-being. These findings suggest that incorporating exercise into daily routines may be an effective strategy for managing stress during the college years.

## **3. METHODOLOGY**

### **Participants**

The study surveyed 500 college students from various universities in Iraq, including the University of Baghdad, Al-Nahrain University, and the University of Basra. Participants were selected through random sampling to ensure a representative demographic, including diversity in age, gender, and field of study.

### **Data Collection**

Data were collected using a structured questionnaire that assessed participants' physical activity levels, mental health outcomes (including stress and anxiety), and academic performance. The International Physical Activity Questionnaire (IPAQ) was utilized to measure exercise frequency and duration, while the Perceived Stress Scale (PSS) and the Generalized Anxiety Disorder 7-item scale (GAD-7) were used to evaluate mental health.

### **Data Analysis**

Statistical analyses were conducted using SPSS software to identify correlations between physical activity levels and mental health outcomes. Descriptive statistics were calculated, and Pearson correlation coefficients were used to assess the strength of associations.

## **4. RESULTS**

### **Physical Activity Levels**

The results indicated that 45% of participants engaged in moderate to vigorous physical activity at least three times a week. Those who participated in regular exercise reported significantly lower levels of stress and anxiety compared to their sedentary peers.

### **Stress and Anxiety Correlation**

A Pearson correlation analysis revealed a strong negative correlation between physical activity levels and perceived stress ( $r = -0.65, p < 0.01$ ) and anxiety scores ( $r = -0.58, p < 0.01$ ). This indicates that higher physical activity is associated with lower stress and anxiety levels among college students.

### **Impact on Academic Performance**

Students who reported regular physical activity also indicated higher levels of academic performance. Approximately 60% of active participants stated that exercise positively affected their concentration and motivation to study, in contrast to only 30% of sedentary students.

## **5. DISCUSSION**

### **Implications of Findings**

The findings of this study underscore the importance of physical activity in promoting mental health and academic success among college students. The significant correlations between exercise, reduced stress, and anxiety highlight the need for initiatives that encourage physical activity within academic settings.

### **Promoting Physical Activity**

Colleges and universities should consider implementing programs and resources that facilitate access to physical activity opportunities, such as fitness classes, sports teams, and outdoor activities. Additionally, incorporating physical activity into the academic curriculum, such as mandatory physical education courses or wellness workshops, could further enhance students' well-being.

## **Limitations and Future Research**

While this study provides valuable insights, it is essential to recognize its limitations. The cross-sectional design prevents causal inferences from being drawn, and self-reported measures may introduce biases. Future research should employ longitudinal designs to establish causal relationships and explore the mechanisms through which physical activity impacts mental health.

## **6. CONCLUSION**

This study highlights the significant relationship between physical activity and mental health outcomes among college students in Iraq. Regular exercise is associated with lower levels of stress and anxiety and improved academic performance, emphasizing the need for institutions to promote physical activity as a vital component of student well-being. By fostering environments that encourage physical activity, colleges can support their students' mental health and enhance their academic experiences.

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