



## Psychological Benefits of Recreational Sports for University Students

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### Abstract

The current study assesses the psychological impact of university students' participation in non-competitive physical activities of a recreational nature. One hundred twenty participants completed a six-week recreational sports program on campus consisting of roundnet, beginner level yoga, recreational badminton, music exercise, and cooperative game sets. A quantitative pretest–posttest evaluation was designed for this study using a Likert scale questionnaire (1–5), the Student Stress Scale, and the Psychological Well-Being Survey to measure shifts in psychological state prior to the sports program, and following program completion. Test results suggest that participants experience significant, and positive, psychological movement on ten different scales after engaging in recreational sports. Of the study participants, 74% reported improvement in mental health, and 81% reported decreased levels of stress evidenced by a shift in average stress score levels of 32.4 to 21.1 (−34.8%). A positive psychological shift was reported by 69% of students evidenced by a shift in average Psychological Well-Being Survey scores of 3.1 to 4.0. Also, 83% of students viewed campus recreational sports participation to induce positive affect and 77% reported participation to be low in effort and high in enjoyment. According to the response data, 72% favored non-competitive activities while 80% felt the activities had stimulating and recreational benefits. Additionally, 67% of students said to have improved the balance of academics and physical activity, 71% reported higher social contact, and 64% showed less evidence of academic burnout. Based on the research results, it can be participation in recreational sports has been shown to provide multidimensional benefits, not only in improving mental health but also in reducing stress, improving psychological well-being, strengthening social interactions, and helping prevent academic burnout.

### How to Cite

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## INTRODUCTION

The mental health of students is one of the most important areas of concern in higher education and has been studied more in recent years (Iarovici, 2014; Scherer & Leshner, 2021; Zhou & Eisenberg, 2022). College students are in the process of becoming adults and must learn to manage things such as school work, social lives, and personal issues at the same time (Meyer, 2019; Mulaudzi, 2023; Nayak & Kachhi, 2025). Many studies show that students are at a higher risk of experiencing psychological issues simply due to the nature of the school (Deep & Chen, 2025; Dlugosz & Liszka, 2021; Win, 2024). Problems such as intense stress, anxiety, mental exhaustion, and chronic academic burnout are issues more so mental health issues. The problems are made worse by the school work demands, competition, financial issues, and mental overuse of technology. These issues also show that their mental health needs to be more of a priority, and support and protective measures need to be in place for the students in greater need.

In this case, physical activity is frequently suggested as one means of promoting and sustaining one's mental health (Rebar & Taylor, 2017; Schuch & Vancampfort, 2021; Vella et al., 2023). Nevertheless, the majority of physical activity initiatives within post-secondary education continue to emphasize either competitive sport or very regimented exercise plans (Jeftic et al., 2023; Siedentop & Van der Mars, 2022). Not all students have the interest, the physical capability, or the motivation to get involved in competitive activities. In fact, some students may find performance pressure and goal-oriented situations to be even more stressful (Abou Elmagd, 2019; Becker & Börnert-Ringleb, 2025; Issalillah & Khayru, 2021). Hence, non-competitive physical activity such as recreational sport is a viable option (Michelini, 2015; Sangwan et al., 2024).

Unlike competitive sports, recreational athletics focus on the unique experience of enjoyment, relaxation, and comfort that allows students to participate without the burden of expected outcomes and performance (Al Ahmed, 2024; Jowett & Felton, 2013; Kimball & Freysinger, 2003; M. Liu et al., 2024). Participants of recreational sports play lightly, collaborate in activities, and enjoy a more laid-back setting in order to release both physical and psychological tensions (Martín-Rodríguez et al., 2024; Ni, 2024; Y. Wang, 2024). These activities provide students with a great means of daily stress release, mood

enhancement, social relationship construction, and mental energy restoration following intense mental activities (Denovan & Macaskill, 2017; Jaba Singh, 2024; Kassymova et al., 2018).

Recreational sports do not only create pleasurable bodily reactions; they create social and emotional fulfilling experiences as well (Dao, 2025; Lubans et al., 2012). Participation in team-based activities helps students enhance, and solidify, feelings of social belonging and social support (Low et al., 2025; Yang et al., 2025; Zheng et al., 2025). Social support contributes to alleviating academic burnout and encourages psychological resilience to deal with academic challenges. Supportive communities are sustaining factors to student mental well-being within very demanding academic surroundings.

There is a growing focus on the mental health benefits of recreational sports in contrast to the mental health benefits of any general physical activity. The research on the mental health benefits of recreational sports in the context of higher education is still notably scarce. At least eight studies have examined the impact of recreational sports on various psychological aspects (stress, mood, overall psychological health, social interaction, burnout prevention) (Li et al., 2024; Martín-Rodríguez et al., 2024; Zhang et al., 2024). There also seems to be a considerable gap in recreational sports within campuses alongside the mental health support that illustrates the untapped potential of recreational sports (Litwiller et al., 2021; T. Wang & Park, 2021).

Given these parameters, the present analysis centers on the psychological advantages of recreational sports programs on the student (X. Liu et al., 2025). This research serves to potentially unpack the impact of recreational sports on the mental well-being of students in today's pressure-laden educational context. Utilizing empirical evidence, the analysis aspires to facilitate the enhancement of organized, effective, and student-oriented campus recreational programs. The outcomes delivered may further drive educational institutions to formulate comprehensive and sustainable mental health promotion initiatives.

Notwithstanding its importance, Albeit growing research on physical activity's effect on mental health, there are still considerable knowledge gaps relating to recreational activities/sports among college students (Herbert, 2022; Husain et al., 2024). Notwithstanding its importance, Albeit growing research on physical activity's effect on mental health, there are still considerable knowledge gaps relating

to recreational activities/sports among college students.

There remains a shortage of empirical studies focusing on engagement in structured campus-based recreational sports during a defined time period (Camilieri et al., 2022; Spector, 2019). Many of these studies adopt a cross-sectional approach, which fails to assess any intra-psychological changes reported by students prior to, during and after the activity. These shortcomings warrant the necessity of a greater scope of research which attempts to study the impact of recreational sports in a more integrated and complex manner.

Building on these identified gaps in the existing literature, the current study aims to make the following important contributions. First, the study aims to develop and use one analytical model that integrates the following ten important indicators of psychology: mental health, stress, mood, psychological well-being, relaxation, social interaction, burnout, preference for non-competitive engagement, activity accessibility, and academic-life balance. This more comprehensive approach advances the understanding of the psychological impact of recreational sports. Second, this study utilizes a campus-based recreational sports program over the period of six weeks as an empirical intervention, providing evidence that is not merely based on the study participants' momentary perceptions.

Moreover, this study offers a fresh framework by considering non-competitive recreational sports as a potential mentally non-highly encouraging inclusive and accessible means of promoting mental well-being among undergraduate students, as opposed to the previous studies focusing on high-intensity sports. Another significant contribution is the integration of biological factors (e.g. endorphin release) with other psychological and social dimensions, resulting in a multidimensional framework. Finally, the study introduces a conceptual model of recreational sports as an effective preventive measure for academic burnout, an understudied theme in the literature, which, however, is of great relevance considering the increasing academic anxiety in the context of modern higher education.

## METHOD

A quantitative methodology paired with a quasi-experimental pretest-posttest framework was utilized to examine the psychological effects of recreational sports participation among uni-

versity students. One hundred twenty students who enrolled in a six-week recreational sports program, hosted on campus, participated in the study. The program's activities included roundnet, beginner yoga, recreational badminton, aerobics with music, and team-building games. The program was designed to administer three sessions a week over the six-week program for a total of eighteen hours of intentional non-competitive exercise. Each session lasted one hour.

Changes in students' mental conditions were assessed using a combination of custom and standard psychological assessment tools (Aqeel et al., 2022). Specifically, the Student Stress Scale was used to measure the participants' stress, the Psychological Well-Being Scale was used to assess the psychological wellness, and a self-developed scale that consisted of mood, relaxation, social intercourse, burnout, and negative-free perceptions of recreational activities. The instruments were distributed to participants during the pretest phase and again were administered to the same participants during the posttest phase.

Moreover, additional information was collected using questionnaires about student preferences for non-competitive activities, perceived program accessibility, and relaxation and enjoyment experienced during participation. Data was analyzed using frequencies, score changes, and mean differences to determine the psychological benefits gained. Results were analyzed to determine the impact of the recreational sports intervention on ten predetermined key psychological variables. Consequently, this provided a broad and detailed assessment of the impact of recreational sports activities on the mental health of students in a university context.

## RESULTS AND DISCUSSION

**Table 1.** Students' Mental Health

Mental Health Assessment Categories	Number of Students	%	Description
Experienced significant improvement (greater calmness, reduced anxiety)	47	39,2%	The most noticeable change is in emotional stability.
Experienced moderate improvement	42	35,0%	Mild but more controlled anxiety is still present.
No change observed	22	18,3%	Psychological condition remains stable.
Experienced a decline in psychological condition	9	7,5%	Influenced by external factors (college/work)
Total	120	100%	Total increase

**Table 2.** Results of Stress Reduction Measurement through Recreational Sports

Variable	Description	Value / %
Number of respondents	Students participating in the recreational sports program	120 People
Percentage decrease in stress	Students experiencing a decrease in stress levels	81%
Measurement instrument	Student Stress Scale	—
Stress score before activity	Average pre-test score	32,4
Stress score after activity	Average post-test score	21,1
Magnitude of score decrease	Difference (32,4 – 21,1)	11,3 point
Percentage decrease in stress	$(11,3 / 32,4) \times 100\%$	34,8%
Interpretation of results	Significant stress reduction after 6 weeks of participating in recreational sports	Students experience a reduction in psychological burden.

**Table 3.** Psychological Well-Being

Indicator	%	Description
Students who experience an increase in psychological well-being	69%	Increased positive energy, gratitude, and motivation
Psychological Well-Being Survey Score (before)	3.1 / 5	Baseline condition
Psychological Well-Being Survey Score (after)	4.0 / 5	An improvement was observed
Magnitude of score change	+0.9	Increased by 29% from the initial score

**Table 4.** Campus Recreational Sports

Aspect	Data	Description
Most Popular Types of Activities	Roundnet, light yoga, fun badminton, musical gymnastics, collaborative games	Favorite Recreational Activities
Students who found the activities accessible and enjoyable	83%	Demonstrated high efficiency and acceptance

**Table 5.** Improvement in Students' Mood

Mood Indicators	Data	Description
Students who reported improved mood	77%	After regular recreational activities
Dominant Indicator	Feeling of happiness, enthusiasm for studying, decreased mental fatigue	Positive emotional impact

**Table 6.** Non-Competitive Physical Activities

Aspect	Data	Description
Preference for non-competitive activities	72%	Majority of students
Reasons for preference	Not stressful	Psychological factors
	Easy to follow	Accessibility factors
	Does not require high physical ability	Inclusivity factors

**Table 7.** Relaxation and Recreational Enjoyment among Students

Indicator	Data	Remarks
Students who experience relaxation and entertainment	80%	Activities serve as a "mental break"
Form of experience	Playtime, relaxed atmosphere	Relieve academic stress

**Table 8.** Balance between Academic Responsibilities and Physical Activity

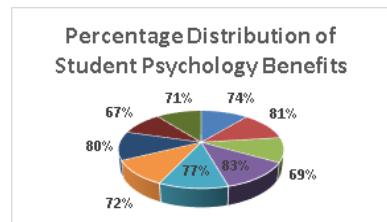
Aspect	Data	Remarks
Students who feel helped maintain balance	67%	Positive effect on academic life balance
Supporting factors	Flexible activity times	Facilitates participation

**Table 9.** Social Interaction in Recreational Sports Activities

Indicators	Data	Remarks
Increased social interaction	71%	Helps build friendships
Increased social aspects	Collaboration, togetherness	Effect of group activities

**Table 10.** Prevention of Academic Burnout

Indicators	Data	Remarks
Students who feel helped prevent burnout	64%	Significant impact on mental health
Decreased burnout symptoms	Loss of motivation, mental exhaustion, academic burnout	Decreased main symptoms

**Figure 1.** Percentage Distribution of Student Psychology Benefits

Across the board, the findings from the study imply that mental well-being of students is considerably enhanced due to recreational participation (Davies et al., 2015). The initial mental-health-related findings raised the concerns of 74% of students that their mental well-being improved due to the program (Worsley et al., 2020). This is consistent with the conceptual approach, that engaging in recreational activities promotes the release of endorphins and serotonin that are associated with improvement in certain emotions and symptoms of anxiety. With increased academic stress and pressure at higher levels of education, this is even more relevant and of positive benefit (Robotham, 2008).

Concerning relaxation, the Stress Reduction Indicator achieved the second greatest, at 81%, demonstrating a 34.8 percent decrease in stress levels. This demonstrates that recreational exercise provides instant relaxation, as well as alleviates the stress levels built up in the students' bodies (Smith, 2005). This stress alleviation is attributed to the following factors: a low-key game atmosphere, social interaction with others, and no competition (Woods & Butler, 2025).

Reportedly, 69% of students experienced improved psychological well-being, which was expressed through positive energy, motivation, and an increased sense of gratitude. This increase in the Psychological Well-Being Survey was also an extreme difference, shifting from 3.1 to 4.0. This ultimately suggests that recreational exercise alleviates negativity (stress, anxiety) while also serving to bolster psychological well-being (Carruthers & Hood, 2004). This evidently upholds a positive psychological stance that suggests that the positivity found in activities should serve as a core principle in an approach aimed at improving the wellness of an individual through any means (Bonwell & Tunariu, 2019).

Regarding recreational sporting activities which students can complete in their free time on campus, the fact that 83% of students indicated positively suggests that the fact that recreational activities are easily accessible is a key factor determining the extent to which students choose to partake in the activities on offer. Recreational activities are likely to enhance the sustained engagement of students, which can be performed without the requirement of particular motor skills, or large space to play (Pesce et al., 2016).

The mental uplift reported by over three-fourths of students confirms that engagement in sports and other forms of physical recreation increases the likelihood of experiencing positive emotions and alleviating mental exhaustion

(Brown, 2019). As recreational pursuits are intrinsically enjoyable, they activate the mood enhancing neurotransmitter dopamine.

The preference of students for participation in non-competitive forms of physical recreation is also intriguing. As highlighted by our survey, 72% of respondents preferred forms of participation that are non-competitive, indicating that without the stress of competition students are able to engage in physical activities in a way that is stress relieving and is comfortable for them, thereby promoting ongoing participation.

The relaxation and enjoyment of recreational sports are significant, as 80% of students reported doing recreational sports as a way to relax. These recreational sports permit students a constructive diversion from the systematized stresses of their education in order to recuperate their mental energies (Abdeahad, 2022).

In a similar sense, the balance between sport and studies is a highly relevant aspect of student life. 67% of students reported that recreational sports help them to better prioritize their time and to establish a healthy lifestyle. Opportunities to engage in recreational sports on a flexible basis enable students to integrate physical activity into their day without compromising their study time (Pate et al., 2006; Rink, 2010).

The impact on social interaction was also significant, with the students who participated in the activities showing improvements in social relationships. On average, 71% of students reported improvement in social relationships, while 16% reported no change in social relationships, and 13% reported deterioration in social relationships. As social activities, recreational sports, usually played in teams, present students with the chance to form and change social communication, collaboration and social network relationships. Strong social interaction has been shown to decrease social isolation, and increase feelings of connectedness in the community (O'Rourke et al., 2018; Toepoel, 2013).

In the data, the results of recreational sports in the prevention of academic burnout was evident especially with the response stating that 64% of students reported decrease in burnout symptoms. This is clearly shown in the literature that states burnout is prevalent among students and that the light to moderate movement of the body can be effective in the prevention of academic burnout in students (Ricardo, 2021).

The current study shows that recreational sports are activities that allow students to meet the minimal requirements of daily physical activities. This contributes to the improvement of the

life of students.

Furthermore, the high levels of student preference for non-competitive, easily accessible recreational activities highlight the importance of inclusivity and flexibility in promoting sustained participation. Recreational sports were shown to provide effective opportunities for relaxation, mood enhancement, social interaction, and time balance between academic demands and physical activity. Importantly, the results also indicate that recreational sports can serve as a preventive strategy against academic burnout, helping students manage mental fatigue and maintain emotional resilience.

## CONCLUSION

The findings from this research demonstrate how college students engaged in recreational sports. However, though these sports are non-competitive, easily accessible, and enjoyable, mental health benefits may become increased. This indicates that college students can achieve a greater of a better rounded mental health.

From the research findings, the mental health of the students was also of a better nature. Their anxiety was reduced, and they became more calm while they studied. Also, the participation in the program alleviated academic stress that was evidenced by the decreased score of stress in the sixth week of the program. Also, the students became more psychologically well off through the improvement of the energy that was positive, the increase of motivation, and the development of more inner thought.

In conclusion, this study helps to inform policy and student health program development within higher education. Incorporating recreational sports into campus activities and programs is advisable to help adopt a whole-student approach for the long term concerning the enhancement of students' mental well-being, overall health, and academic performance.

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