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Investigating the Impacts of Social Fitness Activities on Mental Health and Wellbeing of Undergraduate Students

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Abstract

Purpose: This study examines the impact of social fitness activities on the mental health of undergraduate students. **Research design, data and methodology:** Using a pre-posttest design, a total of 46 university students participated in a 15-week social fitness intervention integrated into a free elective course. The intervention included structured activities such as teamwork exercises, peer discussions, role-playing, and community engagement initiatives aimed at enhancing social connections, skills, engagement, and resilience. Mental health was assessed using the General Health Questionnaire (GHQ-12), while social fitness was measured across four domains: social connection and support networks, social skills and competence, social engagement and inclusion, and social resilience and satisfaction. **Results:** The findings revealed a significant reduction in psychological distress ($p < .002$) and significant improvements in social connection ($p < .001$), social engagement ($p < .003$), and social resilience ($p < .002$). However, social skills and competence did not show significant change ($p = .50$), indicating the need for more targeted or long-term interventions. **Conclusions:** These findings underscore the importance of structured social fitness programs in promoting psychological well-being and highlight the need for sustained and specialized training to enhance social competencies among students.

Keywords : Social Fitness, Mental Health, Wellbeing, Social Resilience, Social engagement

JEL Classification Code: I10, I23, I31

1. Introduction

Mental health and wellbeing are fundamental aspects of an individual's overall health, influencing their capacity to cope with stress, maintain relationships, and contribute to society. Over the past decades, the recognition of social factors as key determinants of mental health has grown substantially (Waldinger & Schulz, 2023). Among these factors, the concept of social fitness has emerged as a crucial element that encompasses the ability to develop, maintain, and optimize social relationships throughout different stages of life. Social fitness is more than just having a social network;

it involves the skills, behaviors, and psychological resilience necessary to engage meaningfully with others, adapt to social changes, and maintain a sense of belonging and community (Eather et al., 2023; Malm et al., 2019; Mills et al., 2019; Tabassum et al., 2016).

Social fitness is a multifaceted construct that includes several key components: social connections and support networks, social skills and competence, social engagement and inclusion, and social resilience and satisfaction (Silphipat & Thummapol, 2025; Waldinger & Schulz, 2023).

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Each of these components plays a critical role in shaping an individual's mental health. Social connections and support networks provide emotional and instrumental support, which are crucial for coping with stress and preventing mental health problems (Waldinger & Schulz, 2023). Social skills and competence enable individuals to navigate social interactions effectively, fostering positive relationships and reducing the risk of social isolation (Allen et al., 2021). Social engagement and inclusion ensure that individuals feel connected to their communities, which is associated with higher levels of life satisfaction and lower levels of psychological distress (Allen et al., 2021; Waldinger & Schulz, 2023). Finally, social resilience and satisfaction reflect an individual's ability to adapt to social changes and derive fulfillment from their social interactions, contributing to overall mental health and wellbeing (Cacioppo et al., 2011; Hammoudi Halat et al., 2022). Evidence suggests that social fitness can be promoted through a variety of strategies including play-based learning (e.g., team sports, group projects, and playdates), participation in club event or volunteering, and fostering workplace social support (e.g., team-building activities, mentorship programs, and workplace wellness initiatives) (Eather et al., 2023; Ishihara et al., 2020; Mills et al., 2019; Rani, 2019; Silphipat & Thummapol, 2025; Tabassum et al., 2016).

Social fitness plays a particularly important role during university years—a critical period characterized by significant life transitions, increased autonomy, and the formation of long-term social bonds (Waldinger & Schulz, 2023). For university students, social fitness can serve as both a protective factor against the mental health challenges that are common during this stage, such as anxiety, depression, and loneliness, and as a promoter of positive psychological outcomes, including enhanced life satisfaction, self-esteem, and academic performance (Ebrahim et al., 2024). The stressors associated with academic demands, social integration, and identity development can significantly impact students' mental health. Hence, fostering social fitness during this period is essential for promoting resilience and long-term wellbeing (Antonucci et al., 2002; Lachman, 2004; Rieker et al., 2023).

The relationship between social fitness and mental health is bidirectional and dynamic. Individuals with high social fitness are more likely to experience positive mental health outcomes because they can effectively utilize their social resources to manage stress, seek help when needed, and maintain a sense of belonging (Waldinger & Schulz, 2023). Conversely, individuals with poor social fitness may struggle with social interactions, leading to increased feelings of loneliness, stress, and mental health issues such as depression and anxiety (Brandt et al., 2022). The impact of social fitness on mental health is particularly pronounced during periods of transition or stress, making it a critical area of focus for university students who are navigating the complexities of emerging adulthood (Rieker et al., 2023). Research has consistently shown that strong social connections and support networks are associated with better mental health outcomes. For instance, studies have found that individuals with robust social networks are less likely to experience depression, anxiety, and stress, and are more likely to report higher levels of happiness and life satisfaction (Eather et al., 2023; Malm et al., 2019; Mills et al., 2019; Tabassum et al., 2016). Additionally, social skills, such as effective communication and conflict resolution, are crucial for maintaining healthy relationships and reducing the risk of social isolation (Allen et al., 2021). Social engagement and inclusion, which involve active participation in community activities and feeling valued within one's social groups, have also been linked to improved mental health outcomes (Allen et al., 2021; Waldinger & Schulz, 2023).

Despite the recognized importance of social fitness, there is a lack of empirical research specifically examining its impact on university students' mental health and wellbeing. Given the unique challenges faced by this population, there is a critical need to explore how social fitness interventions can enhance students' mental health outcomes. Understanding the role of social fitness in this context could lead to the development of targeted interventions that not only improve students' social connections but also promote resilience, reduce mental health issues, and enhance overall wellbeing.

1.1 Objectives

1. To evaluate the effects of social fitness activities on the mental health and well-being of undergraduate students.
2. To identify the specific aspects of mental health influenced by participation in social fitness activities.
3. To provide evidence-based recommendations for implementing social fitness programs in academic institutions.

1.2 Hypotheses

H1: Students who participate in the social fitness intervention will show significant improvements in mental health outcomes compared to their pre-intervention status.

H2: There will be a significant increase in social connection and support networks, social skills and competence, social engagement and inclusion, and social resilience and satisfaction following the intervention.

1.3 Conceptual Framework

The conceptual framework for this study, derived from

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review of relevant literature, highlights social factors as as key determinants of mental health and well-being, with social fitness as its core focus. Social fitness is conceptualized through four interconnected components: 1) social connections and support networks, which provide emotional and instrumental aid to buffer stress; 2) social skills and competence, enabling effective communication, empathy, and active listening to foster relationships and reduce isolation; 3) social engagement and inclusion, promoting community participation and a sense of belonging to enhance life satisfaction; and 4) social resilience and satisfaction, supporting adaptability and fulfillment in relationships to boost psychological resilience. Targeted social fitness activities are designed to enhance social and interpersonal skills, build meaningful relationships, and promote overall well-being. These include lectures to provide foundational knowledge on social fitness and the importance of interpersonal skills; weekly workshops focusing on team-building, communication, and empathy to strengthen collaboration and understanding; and self-directed learning assignments to foster self-awareness and personal growth. Group projects and presentations encourage teamwork and collaborative problem-solving, while peer discussions and role-playing simulate real-life social scenarios, enabling participants to practice and refine their skills in a supportive environment. Together, these activities equip individuals with the tools to navigate social interactions effectively and build lasting connections. These components collectively enhance coping mechanisms, reduce stress, and mitigate anxiety and depression while improving life satisfaction and psychological resilience. The framework posits a bidirectional relationship where improved social fitness positively impacts mental health, which in turn reinforces active engagement in social fitness activities. This framework depicts in Figure 1.

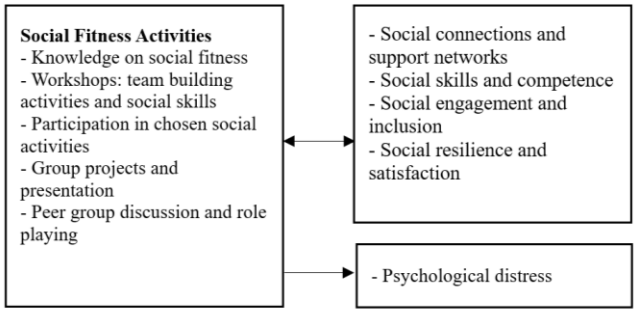

Figure 1: Conceptual Framework

2. Methods

This study utilized a pre-post test design to assess the impact of a social fitness intervention on university students' mental health and wellbeing. Participants were assessed at baseline (pre-intervention) and immediately after the intervention (post-intervention). The pre-test and post-test design enables comparisons within the same subjects, assessing their social skills and interactions before and after the intervention, giving important insights into its effectiveness.

2.1 Population and Sample

The study population comprises undergraduate students aged 18 or over enrolled in a semester-long elective course, integrating social fitness activities. The sample includes 46 participants who voluntarily enrolled in the course and agreed to take part in the study. The sample size of 46 participants was determined using G*Power to ensure sufficient statistical power for detecting significant effects of the intervention. A medium effect size (Cohen's d = 0.5) was assumed, with a statistical power of 0.80 and an alpha level of 0.05, which are standard parameters for educational intervention studies. The G*Power calculation indicated that 46 participants would be needed to achieve reliable results. This sample size enhances the statistical power of the analysis and allows for more reliable insights into the intervention's effectiveness. Given the pilot nature of the study, convenience sampling was used, as all participants were drawn from the course enrollment. This approach ensures feasibility while providing insights into the intervention's practical application in an academic setting.

2.1.1 Inclusion Criteria

1. Undergraduate students aged 18 or over actively enrolled in the course.
2. Willingness to complete all pre- and post-intervention assessments.
3. Consistent participation in course activities (e.g., workshops, lectures, discussions).

2.1.2 Exclusion Criteria

1. Students currently receiving psychotherapy or psychiatric treatment for severe mental health issues will be excluded to prevent confounding effects.

2.2 Research Instrument

The pre-posttest intervention evaluated in the current study was a semester-long free elective course offered to undergraduate students. The course was co-taught by instructors from the university and trainers from a service training company, incorporating teamwork exercises, peer discussions, role-playing, and community engagement initiatives to enhance social connections, skills, engagement, and resilience. The class met weekly for three-hour lectures

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and activities that covered broad content on social fitness and skills. The primary instructor represented their respective discipline and also took efforts to synthesize and bridge topics from week to week. In addition to the weekly lecture, students were divided into small groups for 1.5 hour weekly social fitness activities facilitated by other faculty members. Throughout the semester, course content and activities emphasized both personal and professional implications of the material.

Demographic information and two measures were used: the General Health Questionnaire (GHQ-12) and Social Fitness developed based on the review of relevant literature. The GHQ-12 consists of 12 items that assess respondents' current mental state, focusing on their ability to perform daily functions and the presence of distressing symptoms. Social fitness was measured using a 20-item self-report scale designed to assess four domains: social connection and support networks, social skills and competence, social engagement and inclusion, and social resilience and satisfaction.

2.3 Validity and Reliability of the Research Instrument

The GHQ-12, a widely used screening tool for detecting psychological distress and minor psychiatric disorders, is known for its brevity, strong psychometric properties, and ability to maintain reliability and validity while minimizing participant burden (Comotti et al., 2023; Donath, 2001). In this study, the GHQ-12 demonstrated good internal consistency, with a Cronbach's alpha value of 0.87. The Index of Item-Objective Congruence (IOC) was used to assess content validity, with five experts in the field of psychology, sociology, and nursing, ratings ranging from 0.80 to 1.00, indicating strong agreement on item relevance. The Social Fitness scale was adapted from the Social Skills Inventory and developed based on a thorough literature review. It was validated by a panel of five experts to ensure its content validity and alignment with the study's objectives. The IOC for the Social Fitness scale also ranged from 0.80 to 1.00, confirming strong expert agreement. Additionally, a pilot test with 10 samples was conducted to evaluate reliability, yielding a Cronbach's alpha value of 0.936, which is considered highly acceptable and indicative of strong internal consistency (Hair et al., 2006).

2.4 Data Collection

Data was collected at two time points: pre-intervention (T1) and post-intervention (T2). Participants completed the GHQ-12, and Social Fitness survey at both time points.

2.5 Data Analysis

Paired t-tests were used to compare pre- and post-intervention scores on all measures, assessing within-group differences over time. Effect sizes were calculated to determine the magnitude of the intervention's impact, providing additional insight into its practical significance. Descriptive statistics were analyzed to summarize the demographic characteristics and baseline data of the study participants. All statistical analyses were conducted using SPSS software, ensuring rigorous data processing and interpretation.

2.6 Ethical Consideration/Informed Consent

This research study has obtained ethical approval (No. 33/2024) from Assumption University's Institutional Review Board (IRB) before data collection. The IRB ensures that the study abides by moral standards and safeguards the welfare and rights of the participants. Before any data collection, participants were fully informed about the goals of the study, the obligations placed on them, and any potential risks. Consent was obtained from all participants and be made aware that they can withdraw from the study at any moment without facing any repercussions. Data obtained from participants were kept private and confidential at all times.

3. Results

The study included a total of 46 participants. Of these, 81.6% were female, while 12.2% were male. The majority of participants (53.1%) were between 18-19 years old, whereas those aged 20-22 years and 23-25 years each accounted for 20.4% of the sample. In terms of academic year distribution, 69.4% were first-year students, 12.2% were in their fourth year, and 6.1% were second- and third-year students, respectively. The detailed demographic characteristics are presented in Table 1.

Table 1: Demographic Information

Demographic information	Sample	
	n=46	%
Gender		
Female	40	86.9%
Male	6	13.1%
Age		
18-19 years old	26	53.1%
20-22 years old	10	20.4%
23-25 years old	10	20.4%
Year of study		
1st year	34	69.4%
2nd year	3	6.1%
3rd year	3	6.1%
4th year	6	12.2%

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The study found that 71.4% of participants had GHQ-12 scores greater than 2 during the pre-intervention phase, indicating elevated psychological distress (Table 2). The average GHQ-12 score before the intervention was 2.37 (S.D. = 2.11). Following the completion of a 15-week intervention, the average GHQ-12 score significantly decreased to 1.17 (S.D. = 1.34), demonstrating a notable reduction in distress levels. This improvement was statistically significant (p-value < .001) as shown in Table 3.

Table 2: GHQ-12 Average Score Between Pre-Intervention and Post-Intervention Phase

Variables	GHQ-12 ≤ 2		GHQ-12 > 2	
	n=46	(%)	n=46	(%)
Pre-intervention	11	22.4	35	71.4
Post-intervention	16	34.78	30	65.22
Min-Max	0-7		0-4	
$\bar{X}$ ± S.D.	2.37 + 2.11		1.17 + 1.34	

Table 3: A comparison of the Average GHQ-12 scores Between the Pre-Intervention and Post-Intervention Phases.

Variables	$\bar{X}$	S.D.	t	p-value
GHQ-12				
Pre-intervention	2.37	2.112	-3.21	<.002*
Post-intervention	1.17	1.338		

Note: *p-value < .05*

The findings also revealed significant improvements across multiple dimensions of social fitness. Social connection and support networks showed the most significant increase, with scores rising from 16.37 (S.D. = 2.96) pre-intervention to 21.78 (S.D. = 3.41) post-intervention (p-value < .001), emphasizing the effectiveness of structured social activities in fostering meaningful relationships. Social engagement and inclusion also improved significantly, with scores increasing from 18.15 (S.D. = 4.25) to 20.91 (S.D. = 3.97) (p-value < .05), highlighting the role of active participation in enhancing students' sense of belonging. Social resilience and satisfaction followed a similar trend, increasing from 18.46 (S.D. = 3.69) to 21.11 (S.D. = 3.99) (p-value < .05), reinforcing the idea that strengthened social networks contribute to greater emotional well-being. However, social skills and competence did not show a statistically significant change, with scores only slightly increasing from 20.74 (S.D. = 4.33) to 21.57 (S.D. = 5.47) (p-value = .50), suggesting that longer-term interventions or targeted training may be required to enhance social competencies effectively. Overall, the total social

fitness score improved from 75.54 (S.D. = 15.67) to 84.54 (S.D. = 14.85) (p-value < .05), demonstrating the positive impact of social fitness activities on students' well-being. Table 3 illustrates the comparative results of social fitness components before and after the intervention.

Table 3: Comparative Results of Social Fitness Components Before and After the Intervention.

Variables	$\bar{X}$	S.D.	t	p-value
Social connection and support networks				
Pre-intervention	16.37	2.96	7.81	<.001**
Post-intervention	21.78	3.41		
Social skills and competence				
Pre-intervention	20.74	4.33	-.77	.44
Post-intervention	21.57	5.47		
Social engagement and inclusion				
Pre-intervention	18.15	4.25	3.16	<.003*
Post-intervention	20.91	3.97		
Social resilience and satisfaction				
Pre-intervention	18.46	3.69	3.31	<.002*
Post-intervention	21.11	3.99		
Social fitness				
Pre-intervention	74.54	15.67	3.09	<.003*
Post-intervention	84.54	14.85		

Note: *p-value < .05*, **p-value < .001

4. Discussion

The findings of this study highlight the significant impact of social fitness activities on the mental health and well-being of undergraduate students. Consistent with previous research, our results indicate that active participation in social engagement initiatives fosters a sense of belonging and reduces feelings of loneliness (Jose & Lim, 2014; Zhang et al., 2018). Students who regularly engaged in structured social activities reported lower stress levels and improved emotional regulation, aligning with (Ozbay et al., 2007; Wickramaratne et al., 2022) findings on the benefits of strong perceived social support networks. This reinforces the idea that social fitness contributes to psychological resilience, offering emotional, informational, and practical support crucial for coping with academic and personal challenges.

These outcomes can be further understood through the lens of Social Cognitive Theory (Bandura, 1986), which posits that personal factors, behavior, and environmental influences interact dynamically. In our study, the social

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fitness environment provided modeling opportunities for students to observe and adopt positive social behaviors (observational learning), which likely enhanced their self-efficacy—or belief in their ability to manage social and emotional challenges. As students gained confidence and successfully engaged with peers, they reinforced their own behavioral capabilities, which in turn reduced psychological distress. This reciprocal process supports Bandura's concept of reciprocal determinism, where environmental design (structured social activities), personal belief systems (e.g., confidence in coping), and behaviors (social participation) mutually reinforce one another.

The study's quantitative analysis revealed statistically significant improvements in several aspects of social fitness following a 15-week intervention. The GHQ-12 results indicated a significant decrease in psychological distress (p-value < .002), supporting existing literature on the mental health benefits of social support. Moreover, social connection and support networks showed the most substantial improvement, with scores increasing from 16.37 to 21.78 (p-value < .001), highlighting the effectiveness of structured social interactions. Social engagement and inclusion and social resilience and satisfaction also demonstrated significant improvements (p-values < .05), reinforcing research by (Nielsen et al., 2021) that suggests active participation in social environments enhances well-being. However, social skills and competence did not show a statistically significant change (p-value = .50), indicating that while engagement increased, skill-building may require longer-term interventions or targeted social skills training (Spence, 2003).

These findings align with prior studies, such as Afita and Nuranasmita, 2023 which emphasize the role of social networks in promoting resilience and reducing anxiety. However, the data also suggest that while structured interventions improve social fitness overall, certain dimensions—particularly skill acquisition—may require more focused approaches. The demographic breakdown of the study indicates that first-year students (69.4%) formed the majority of participants, which may suggest that early exposure to social fitness activities is crucial in adapting to university life. Future interventions could focus on extending these benefits to upper-year students and ensuring inclusivity across disciplines.

4.1 Implication of the Results

The findings of this study suggest that social fitness activities play a crucial role in enhancing students' mental well-being and overall quality of life. The statistically significant improvements in social connection, engagement, and resilience highlight the importance of structured interventions in fostering supportive social networks. These results reinforce previous research indicating that strong social ties contribute to reduced stress, improved emotional regulation, and better academic performance (Lopes & Brackett, 2004; Ozbay et al., 2010). Furthermore, enhanced social fitness is associated with greater self-esteem, improved coping strategies, and increased adaptability to academic and personal challenges (Harris & Orth 2019; Khim, 2015; Liu, 2023)

The study also underscores the role of structured interventions in promoting social integration among students from diverse backgrounds. Given the modern challenges of digital communication and social isolation, these findings suggest that universities should prioritize fostering in-person interactions alongside virtual engagement strategies (Stieger et al., 2023). The improvements observed in social resilience and satisfaction highlight the necessity of incorporating social fitness programs within student support services to enhance their overall university experience. Additionally, the variation in social skill development across participants suggests that interventions should be tailored to different personality types and social competency levels to maximize effectiveness.

4.2 Recommendation for Further Study

Future research should explore the long-term effects of social fitness interventions on students' psychological resilience and academic success. Longitudinal studies would provide deeper insights into how sustained participation in social activities influences mental health outcomes over time. Additionally, further investigation into the role of digital socialization versus face-to-face interactions could help determine the most effective approaches to fostering meaningful connections in the digital age.

Expanding the sample size and including participants from a wider range of educational and cultural backgrounds would enhance the generalizability of the findings. Future studies should also examine the impact of social fitness interventions on students with pre-existing mental health conditions to determine their potential in therapeutic applications. Additionally, research could focus on evaluating specific types of social engagement activities—such as mentorship programs, collaborative projects, or community service—to identify the most impactful strategies for fostering social well-being. Lastly, examining the implications of social fitness on professional and career development could offer valuable perspectives for integrating these activities into workplace training programs, ensuring students are well-prepared for future professional environments.

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4.3 Study Limitation

One of the key limitations of this study is its small sample size, which may limit the generalizability of the findings. With 46 participants, all of whom were drawn from a single elective course, the sample may not be representative of the broader population of undergraduate students. This limits the ability to apply the results to other academic contexts, diverse student populations, or settings outside of the specific course in question. Additionally, while the sample size was calculated to achieve adequate statistical power, the small and non-random sample may reduce the external validity of the findings, and caution should be taken when attempting to generalize the results to other groups or environments. Future studies with larger, more diverse samples are recommended to enhance the generalizability of the conclusions.

5. Conclusion

In conclusion, this study underscores the importance of social fitness in enhancing the mental well-being of undergraduate students. Strong social connections, social competence, and active participation in social activities have been shown to reduce stress, foster emotional resilience, and improve overall quality of life. The significant improvements in social engagement, resilience, and perceived social support highlight the role of structured interventions in promoting psychological well-being. However, the lack of significant change in social skills suggests a need for extended training programs to reinforce interpersonal competencies.

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