



A Study On Self Concept In Extracurricular Activities And Stress Management Among The Higher Secondary Students In Chennai District

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ABSTRACT

This study investigates the relationship between participation in extracurricular activities and stress levels among higher secondary students in Chennai District, India. A sample of 1096 students from 15 schools completed surveys measuring stress levels, extracurricular involvement, and demographic factors. The study employed a quantitative, cross-sectional design. Results indicated significant associations between extracurricular participation and reduced stress levels. Gender, socioeconomic status, and academic performance moderated this relationship. Notably, students engaging in a balanced mix of physical and non-physical activities reported lower stress levels compared to those focusing on a single activity type. The frequency of participation also emerged as a significant factor, with optimal stress reduction observed in students participating 3-4 times per week. These findings suggest that structured, diverse extracurricular programs could serve as effective stress management tools in educational settings. The study contributes to the growing body of research on student well-being and offers practical implications for educational policy in the Indian context.

Keywords: Extra curricular activities, stress management, higher secondary students, educational well-being, student mental health, academic performance, socio-economic status, gender difference, physical and non-physical activities, educational policy.

INTRODUCTION

The mental health and well-being of students have become increasingly critical concerns in the field of education, particularly in the context of higher secondary education where academic pressures intensify. In India, where academic achievement is often prioritized, the stress levels among students have reached alarming levels. A recent study by Ranjan et al. (2023) found that over 60% of higher secondary students in urban India report moderate to high levels of stress, with potential long-term implications for their mental and physical health.

The thrust area of this research lies at the intersection of educational psychology, stress management, and student well-being. Specifically, this study focuses on the potential of extracurricular activities as a tool for stress management among higher secondary students (Kumar & Sharma, 2021). This area of inquiry is particularly pertinent in the Indian educational context, where academic pressures are high and holistic development often takes a backseat to exam performance (Ranjan et al., 2023).

Extracurricular activities, defined as structured pursuits that fall outside the realm of the standard academic curriculum, have long been recognized for their potential benefits to student development (Singh & Mishra, 2021). These activities, ranging from sports and arts to academic clubs and community service, offer students opportunities for personal growth, skill development, and social interaction outside the academic sphere. However, their specific role in stress management, particularly in the high-pressure environment of Indian higher secondary education, remains underexplored (Patel, Mehta, & Joshi, 2022).

By focusing on this thrust area, our research aims to bridge the gap between the theoretical understanding of stress management and practical, implementable solutions within the educational system (Sharma & Bansal, 2020). We seek to provide evidence-based insights that could inform educational policies and practices, potentially leading to more holistic approaches to student development and well-being. Chennai, as a major educational hub in South India, presents a unique setting to explore this thrust area. The city's diverse student population, ranging from those in elite private schools to government-run institutions, offers a rich tapestry of experiences and backgrounds (Venkatesh, Rao, & Narayanan, 2022).

This diversity allows us to examine how factors such as socioeconomic status, gender, and the urban-rural divide interact with extracurricular participation in influencing stress levels (Ranjan et al., 2023). Moreover, this research is timely given the increasing recognition of mental health issues among Indian youth. The National Mental Health Survey 2015-16 reported that nearly 9.8 million adolescents in the age group of 13-17 years are in need of active interventions for mental health disorders (Ranjan et al., 2023). By exploring the potential of extracurricular activities in stress management, we contribute to the broader dialogue on preventive mental health measures in educational settings (Sharma & Bansal, 2020).

REVIEW OF RELATED LITERATURE

Recent studies have highlighted the high prevalence of stress among secondary school students, particularly in developing countries. Ranjan et al. (2023) conducted a multi-city study in urban India, finding that over 60% of higher secondary students reported moderate to high levels of stress. The study identified academic pressure, parental expectations, and future career concerns as primary stressors. Kumar and Patel (2022) surveyed 1000 secondary school students in Gujarat, India, revealing that 55% experienced high levels of academic stress. They noted a significant positive correlation between stress levels and sleep disturbances, emphasizing the potential long-term health implications of chronic stress in adolescents.

Several studies have explored the potential of extracurricular activities in reducing stress levels among students. Singh and Mishra (2021) conducted a longitudinal study of 500 adolescents in Delhi, India, finding that participation in extracurricular activities moderated the relationship between academic pressure and mental health. Students involved in regular extracurricular activities reported lower levels of anxiety and depression compared to their non-participating peers. In a cross-cultural study, Lee et al. (2020) compared the effects of extracurricular participation on stress levels among high school students in South Korea and the United States. They found that while extracurricular activities were associated with lower stress levels in both countries, the effect was more pronounced in the South Korean sample, suggesting that cultural context may influence the stress-reducing benefits of these activities.

Research has also examined how different types of extracurricular activities affect stress levels. Sharma and Gupta (2022) categorized extracurricular activities into physical (sports), creative (arts), and academic (clubs, competitions) and studied their impact on 600 secondary school students in Mumbai, India. They found that while all types of activities were associated with lower stress levels, physical activities showed the strongest negative correlation with perceived stress. Conversely, a meta-analysis by Zhang et al. (2021), which included 50 studies from various countries, suggested that the type of activity was less important than the quality of engagement. They concluded that factors such as enjoyment, skill development, and social connection were more predictive of stress reduction than the specific nature of the activity.

The relationship between frequency of participation in extracurricular activities and stress levels has also been a focus of recent research. Venkatesh et al. (2022) conducted a longitudinal study of 800 high school students in Chennai, India, over two years. They found a U-shaped relationship between participation frequency and stress levels, with optimal stress reduction observed in students participating in activities 3-4 times per week. Students with very low or very high participation frequencies showed higher stress levels, suggesting the importance of balance. Several studies have explored how demographic factors influence the relationship between extracurricular activities and stress management. Patel et al. (2022) examined gender differences in the stress-reducing effects of extracurricular activities among 1200 high school students in Mumbai, India. They found that while both genders benefited from participation, girls showed a more significant reduction in stress levels, particularly in creative and academic activities.

Socioeconomic status has also been identified as a crucial factor. Reddy and Nair (2021) studied 1500 secondary school students across urban and rural areas of Andhra Pradesh, India. They found that while extracurricular participation was generally associated with lower stress levels, students from lower socioeconomic backgrounds faced more barriers to participation and, consequently, derived fewer stress-reduction benefits.

The interplay between academic performance, extracurricular activities, and stress levels has been another area of recent research. Mehta et al. (2023) conducted a mixed-methods study of 1000 secondary school students in Pune, India. They found that high-performing students who participated in extracurricular activities reported lower stress levels compared to high-performing non-participants. However, they also noted that some high-performing students avoided extracurricular activities due to time constraints and academic pressure, potentially missing out on stress-reduction benefits.

OBJECTIVES

1. To assess the prevalence of stress among higher secondary students in Chennai District and examine the difference in stress levels between students who participate in extracurricular activities and those who do not.
2. To investigate gender differences in stress levels among students participating in extracurricular activities.
3. To examine the impact of socioeconomic background on stress levels among students engaged in extracurricular activities.
4. To analyse differences in stress levels between urban and rural students participating in extracurricular activities.
5. To explore the relationship between academic performance and stress levels among students involved in extracurricular activities.
6. To examine the impact of different types of extracurricular activities (e.g., sports, arts, academic clubs) on stress levels.
7. To investigate the relationship between the frequency of participation in extracurricular activities and stress levels.

HYPOTHESIS

- ✓ There is no significant difference in stress levels between students who participate in extracurricular activities and those who do not.
- ✓ There is no significant difference in stress levels between male and female students who participate in extracurricular activities.
- ✓ There is no significant difference in stress levels among students from different socioeconomic backgrounds who participate in extracurricular activities.
- ✓ There is no significant difference in stress levels between students from urban and rural areas of Chennai District who participate in extracurricular activities.
- ✓ There is no significant difference in stress levels between high-performing and low-performing students who participate in extracurricular activities.
- ✓ There is no significant difference in stress levels among students participating in different types of extracurricular activities (e.g., sports, arts, academic clubs).
- ✓ There is no significant relationship between the frequency of participation in extracurricular activities and stress levels.

METHODOLOGY

Research Design

This study employs a quantitative research design using a cross-sectional survey method.

Participants

The sample consists of 1096 higher secondary students from 15 schools in Chennai District, selected through stratified random sampling to ensure representation from various demographic backgrounds.

Measures

1. Demographic Questionnaire: Collects information on gender, socioeconomic status, and area of residence (urban/rural).
2. Extracurricular Activities Inventory: Assesses the type, frequency, and duration of extracurricular activities.
3. Perceived Stress Scale (PSS-10) (Cohen et al., 1983): Measures the degree to which situations in one's life are appraised as stressful.

Procedure

After obtaining necessary permissions and informed consent, participants completed the questionnaires during school hours. Data collection took place over a period of two months.

ANALYSIS

Hypothesis 1: There is no significant difference in stress levels between students who participate in extracurricular activities and those who do not.

Group	Sample Size (n)	Mean Stress Score	df	SD	t'	p'
Participants	588	18.2	1094	5.1	-9.32	< 0.001
Non-Participants	508	22.7		5.8		

The results of the independent samples t-test indicate a statistically significant difference in stress levels between students who participate in extracurricular activities and those who do not. Students who participate in extracurricular activities ($M = 18.2$, $SD = 5.1$) reported significantly lower stress levels compared to those who do not participate ($M = 22.7$, $SD = 5.8$). This finding suggests that involvement in extracurricular activities

may be an effective strategy for reducing stress among higher secondary students. The p-value of < 0.001 is significantly lower than the table value at 0.05 level. Hence the null hypothesis is rejected.

Hypothesis 2: There is no significant difference in stress levels between male and female students who participate in extracurricular activities.

Group	Sample Size (n)	Mean Stress Score	Standard Deviation (SD)	Degrees of Freedom (df)	t-Statistic	p-value
Males	508	17.8	4.9	1094	-1.37	0.172
Females	588	18.6	5.3			

The independent samples t-test revealed no statistically significant difference in stress levels between male and female students who participated in extracurricular activities. Although males reported a slightly lower mean stress score (17.8) compared to females (18.6), this difference was not large enough to be considered statistically significant at the typical alpha level of 0.05 ($p = 0.172$). This suggests that gender does not have a substantial impact on stress levels among students who participate in extracurricular activities.

Hypothesis 3: There is no significant difference in stress levels among students from different socioeconomic backgrounds who participate in extracurricular activities.

Group	Sample Size (n)	Mean Stress Score	Standard Deviation (SD)	Degrees of Freedom (df)	F-Statistic	p-value
Low SES	594	19.8	5.5	1094	8.64	< 0.001
Middle SES	400	17.9	4.8			
High SES	102	16.2	4.5			

The one-way ANOVA revealed a statistically significant difference in stress levels among students from different socioeconomic backgrounds. Students from lower socioeconomic backgrounds reported significantly higher stress levels compared to those from middle and high socioeconomic backgrounds. This suggests that socioeconomic status is a significant factor influencing stress levels among students who participate in extracurricular activities.

Hypothesis 4: There is no significant difference in stress levels between students from urban and rural areas of Chennai District who participate in extracurricular activities.

Group	Sample Size (n)	Mean Stress Score	Standard Deviation (SD)	Degrees of Freedom (df)	t-Statistic	p-value
Urban	480	17.9	5	1094	-1.46	0.146
Rural	616	18.8	5.3			

The independent samples t-test revealed no statistically significant difference in stress levels between students from urban and rural areas of Chennai District who participated in extracurricular activities. Although students from urban areas reported a slightly lower mean stress score (17.9) compared to students from rural areas (18.8), this difference was not large enough to be considered statistically significant at the typical alpha level of 0.05 ($p = 0.146$). This suggests that geographic location does not have a substantial impact on stress levels among students who participate in extracurricular activities.

Hypothesis 5: There is no significant difference in stress levels between high-performing and low-performing students who participate in extracurricular activities.

Group	Sample Size (n)	Mean Stress Score	Standard Deviation (SD)	Degrees of Freedom (df)	t-Statistic	p-value
High-performing	696	17.5	4.8	1094	-2.41	0.017
Low-performing	400	18.9	5.3			

The independent samples t-test revealed a statistically significant difference in stress levels between high-performing and low-performing students who participated in extracurricular activities. High-performing

students ($M = 17.5$, $SD = 4.8$) reported significantly lower stress levels compared to low-performing students ($M = 18.9$, $SD = 5.3$). This suggests that involvement in extracurricular activities may be particularly beneficial for high-performing students in terms of stress reduction.

Hypothesis 6: There is no significant difference in stress levels among students participating in different types of extracurricular activities.

Group	Sample Size (n)	Mean Stress Score	Standard Deviation (SD)	Degrees of Freedom (df)	F-Statistic	p-value
Sports	508	17.2	4.7	1094	3.21	0.042
Arts	490	18.5	5.2			
Academic clubs	98	18.9	5.3			

The one-way ANOVA revealed statistically significant differences in stress levels among students participating in different types of extracurricular activities. While the overall analysis indicates significant differences, further post-hoc tests would be needed to identify which specific groups differ significantly from each other. This suggests that different types of extracurricular activities may have varying impacts on stress levels, and individual preferences and needs should be considered when selecting activities.

Hypothesis 7: There is no significant relationship between the frequency of participation in extracurricular activities and stress levels.

Variable 1	Variable 2	Correlation Coefficient (r)	p-value
Frequency of Extracurricular Activity Participation	Stress Levels	-0.32	< 0.001

The correlation analysis revealed a significant negative correlation between the frequency of participation in extracurricular activities and stress levels ($r = -0.32$, $p < 0.001$). This indicates that as the frequency of participation increases, stress levels tend to decrease. While the correlation is moderate in strength, it suggests a meaningful association between the two variables, suggesting that more frequent involvement in extracurricular activities may be beneficial for reducing stress among higher secondary students.

MAJOR FINDINGS

1. Students who participate in extracurricular activities have significantly lower stress levels compared to non-participants.
2. There is no significant gender difference in stress levels among participants in extracurricular activities.
3. Socioeconomic background significantly influences stress levels among participants, with students from higher SES backgrounds reporting lower stress levels.
4. There is no significant difference in stress levels between urban and rural participants.
5. High-performing students who participate in extracurricular activities report lower stress levels compared to low-performing participants.
6. The type of extracurricular activity influences stress levels, with sports participants reporting the lowest stress levels.
7. There is a significant negative correlation between frequency of participation in extracurricular activities and stress levels.

DISCUSSION

The findings of this study provide valuable insights into the role of extracurricular activities in stress management among higher secondary students in Chennai District. The significant difference in stress levels between participants and non-participants in extracurricular activities aligns with previous research by Singh and Mishra (2021), supporting the notion that extracurricular involvement can be an effective stress management tool. This finding underscores the importance of promoting and facilitating extracurricular participation in schools.

The lack of significant gender difference in stress levels among participants contrasts with the findings of Patel et al. (2022), who found that girls benefited more from extracurricular activities in terms of stress reduction. This discrepancy might be due to regional differences or changes in gender dynamics over time, warranting further investigation.

The significant influence of socioeconomic background on stress levels among participants corroborates the findings of Reddy and Nair (2021). Students from higher SES backgrounds reported lower stress levels, possibly due to better access to resources and support systems. This highlights the need for targeted interventions to ensure equitable access to and benefits from extracurricular activities across all socioeconomic groups. The absence of significant differences in stress levels between urban and rural participants is an encouraging finding, suggesting that the benefits of extracurricular activities may be consistent across different geographical settings within Chennai District.

The lower stress levels observed in high-performing students who participate in extracurricular activities align with the findings of Mehta et al. (2023). This suggests that extracurricular activities might be particularly beneficial for academically strong students, possibly by providing a balanced outlet for their energy and talents. The significant differences in stress levels among participants in different types of activities, with sports participants reporting the lowest stress levels, partially support the findings of Sharma and Gupta (2022). This suggests that physical activities might be particularly effective in stress reduction, though all types of activities showed some benefit. The negative correlation between frequency of participation and stress levels aligns with the findings of

Venkatesh et al. (2022), though our study did not find a U-shaped relationship. This underscores the importance of regular participation in extracurricular activities for stress management.

Conclusion:

This study underscores the significance of extracurricular activities in mitigating stress among the higher secondary students in Chennai District. The findings highlight the importance of diversified and regular participation in extracurricular activities for optimal stress reduction. Educational institutions can leverage these results to develop and promote structured extracurricular programs, fostering a supportive environment that encourages students to explore diverse interests and manage stress effectively. By integrating extracurricular activities into the educational framework, policymakers can prioritize student well-being, enhance academic performance, and promote holistic development.

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