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An analytical study of stress levels among school boys and girls in Mandi Kalan, District Bathinda (Punjab)

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Abstract
The main aim of the present study is to examine the academic stress among school boys and girls. The total participants of the study were 60 (30 boys and 30 girls). Data was gathered from students attending three government schools: Govt. High School, Jeondan; Govt. Sen. Sec. School, Pitho and Govt. Sen. Sec. School, Mandi Kalan, District Bathinda Punjab. The survey included the standardized SS-LVNS (Stress Scale by Dr. Vijay Lakshmi and Dr. Shruti Narain from Patna) to measure the stress levels of the students. Results indicate a significant difference in stress levels between boys and girls. This suggests that, on average, boys experience lower stress levels than girls.

Keywords: Stress, academic stress, boys, girls, Bathinda

Introduction
Academic stress is the anxiety and stress that comes from schooling and education. Pursuing their education comes with a great deal of strain. According to Abouserie (1994) [1], students report experiencing academic stress at regular intervals during the semester. The biggest causes of academic stress include preparing for and taking tests, competing for grades, and having a lot of material to learn in a short amount of time. A student's imbalanced academic and social performance, as well as their time management for extracurricular activities outside of school, are major sources of stress. Stress connected to studies, homework, examinations, reading, tuition, and other academic contests are all major sources of stress. Students who struggle to strike a balance between their social, familial, and academic obligations experience particularly high levels of academic stress. Because they are more concerned about their career, stress is quite prevalent. The way teachers treat their students has a big impact on how stressed out they are as well. One significant stressor associated with these duties is the fear of failing academically (Kolko, 1980) [4]. When a teacher is approachable, students feel less pressure to discuss academic matters with them. In contrast, kids who have unfriendly professors don't feel as at ease because of dread, which typically results from stress. Among students, this tendency has produced several trustworthy circumstances. In such circumstances, a student is more dependent on tuition than on the instructors. If the tuition-teacher is unable to comprehend the student's issue, it will raise their stress level to the point where the student gradually loses interest in their studies. Students' stress levels differ depending on whether their job presents obstacles or a threat. The pressure to do well on exams and tests, along with the time constraints, create a very stressful academic atmosphere. According to Erkutlu & Chafra (2006) [3], when work is presented as a challenge, students become less stressed because they are competing with one another to meet the given goals if the task is assigned in small portions and is not expected to be completed within the allotted time (Carveth *et al.*, 1996) [2].

These days, classes like Karate, Kung Fu, and yoga are offered to students in an effort to reduce stress. Yoga is a key component in lowering stress levels and enhancing pupils' ability to concentrate. Furthermore, kids who are in good health will naturally have lower stress levels, therefore emphasis should be placed on the co-curricular activities listed above. Thus, schools ought to use such measures in order to enhance student performance in a welcoming setting (Porwal and Kumar, 2014) [5].

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Objectives of the study
- To conduct a comprehensive analysis of stress level among school boys.
- To find out the stress level among school girls.
- To compare the stress level among school boys and girls.

Hypotheses
- The hypothesis was there will be significant difference among stress level of school boys.
- The hypothesis was there will be significant difference among stress level of school girls.
- The hypothesis was there will be significant difference among stress level of school boys and girls.

Methodology
Design of study
- The study was designed to assess and compare stress levels among school boys and girls aged 14 to 18 years in Mandi Kalan, District Bathinda. It aimed to conduct a comprehensive analysis and comparison of stress levels among these students.

Source of Data
- Data was gathered from students attending three government schools: Govt. High School, Jeondan; Govt. Sen. Sec. School, Pitho; and Govt. Sen. Sec. School, Mandi Kalan. These schools were selected to ensure a diverse and representative sample across different academic disciplines, enhancing the generalizability of the findings. The study was conducted in collaboration with these educational institutions, ensuring access to the necessary student population and fostering cooperation from school authorities.

Sampling Method
- A simple random sampling method was used to select a total of 60 students, with an equal distribution of 30 boys and 30 girls. This approach ensured balanced representation across gender, academic disciplines, and academic years. The random selection process helped mitigate selection bias, ensuring that each student within the defined population had an equal chance of being included in the study.

Selection of Subjects
- Participants were school students aged 14 to 18 years from the three selected government schools in Mandi Kalan. This age group was chosen to focus on adolescents who were likely experiencing various stressors related to academic, social, and familial pressures. This selection aimed to capture a critical developmental stage where stress levels can significantly impact mental health and academic performance.

Collection of Data
- Data was collected through anonymous surveys and questionnaires, designed to encourage honest and accurate responses from the students. Anonymity was crucial to ensure that participants felt comfortable sharing sensitive information about their stress levels and personal experiences. The surveys were administered in a controlled environment within the schools, with the presence of researchers to assist and ensure the proper completion of the questionnaires.

Tools and Techniques
- The survey included the standardized SS-LVNS (Stress Scale by Dr. Vijay Lakshmi and Dr. Shruti Narain from Patna) to measure the stress levels of the students. This tool was selected for its recognized reliability and validity in assessing stress. The SS-LVNS provides a structured and systematic approach to quantify stress levels, allowing for consistent data collection and comparison.

Results and Discussion
Statistical analysis is a crucial component of research as it allows researchers to systematically collect, analyze and interpret data to uncover patterns, relationships and trends. In this study, statistical analysis was employed to compare the stress level among boy's students and girl's students.

The primary aim of using statistical techniques was to determine whether there are significant differences in stress level among these two groups. The following sections outline the methods and results of the statistical analyses conducted in this study.

Table 1: Stress level of school boys

N	Mean	SD
30	20.53	1.65

Table 1 presents the descriptive statistics for the stress levels among school boys. Here is an in-depth analysis of the table:

Sample Size (N)
- The sample consists of 30 school boys. This is a sufficient sample size to provide reliable estimates of the stress levels within this population.

Mean Stress Level
- The mean stress level for school boys is 20.53. The mean represents the average stress score, indicating that on a standard stress measurement scale, boys have a moderate level of stress. This central tendency measure provides a general idea of the typical stress level experienced by boys in the sample.

Standard Deviation (SD)
- The standard deviation is 1.65. This statistic measures the dispersion or spread of the stress levels around the mean. A lower standard deviation indicates that the stress scores of the boys are relatively close to the mean, suggesting that most boys experience similar levels of stress with few extreme values.

Interpretation
Moderate Stress Levels
- The mean score of 20.53 suggests that, on average, school boys experience a moderate level of stress (Fig 1). This finding can be used by educators, parents, and counsellors to understand the general stress burden among male students and to identify the need for stress management programs.

Consistency in Stress Scores
- The relatively low standard deviation (1.65) indicates that there is not much variability in the stress levels among the boys in the sample. This homogeneity in stress levels means that interventions aimed at reducing stress can be broadly applied across the group without needing

significant individual adjustments.
- Overall, Table 1 provides a clear and concise summary of the stress levels among school boys, highlighting the average level of stress and the consistency of these levels within the group. This information is crucial for developing targeted strategies to address and manage stress in school environments.
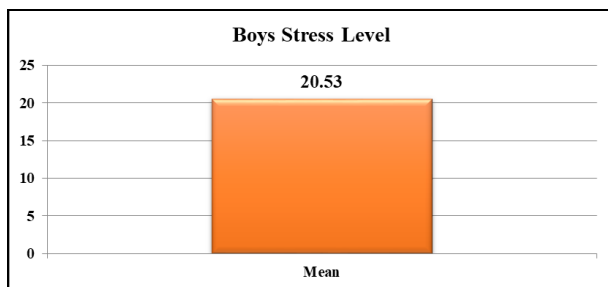

Fig 1: Stress level of boys

Table 2: Stress level of school girls

N	Mean	SD
30	26.63	2.29

Table 2 presents the descriptive statistics for the stress levels among school girls. Here's a detailed analysis of the table:

Sample Size (N)
- The sample consists of 30 school girls. This is an adequate sample size for providing reliable insights into the stress levels within this population group.

Mean Stress Level
- The mean stress level for school girls is 26.63. The mean represents the average stress score, indicating that, on a standard stress measurement scale, girls tend to experience higher levels of stress compared to the boys in the sample (mean of 20.53 for boys). This higher average stress level suggests that school girls, on average, face more stress than their male counterparts.

Standard Deviation (SD)
- The standard deviation is 2.29. This statistic measures the spread or dispersion of the stress scores around the mean. A higher standard deviation indicates more variability in the stress levels among the girls. This means that while some girls may experience stress levels close to the average, others may experience significantly higher or lower levels of stress.

Interpretation
- **Higher Average Stress Levels:** The mean score of 26.63 suggests that, on average, school girls experience a higher level of stress compared to boys (Fig 2). This finding could be indicative of various factors that contribute to stress among girls, such as academic pressure, social dynamics, or extracurricular commitments.

Greater Variability
- The standard deviation of 2.29 indicates a greater variability in stress levels among school girls compared to boys (SD of 1.65). This suggests that while some girls may have stress levels near the average, others could be experiencing significantly different levels of stress. This

variability might necessitate more personalized approaches to stress management for girls.
- Overall, Table 2 provides important insights into the stress levels among school girls, highlighting not only the higher average level of stress but also the greater variability in stress experiences within this group. These insights are crucial for educators, parents, and mental health professionals in developing effective strategies and interventions tailored to address the specific stressors faced by school girls.
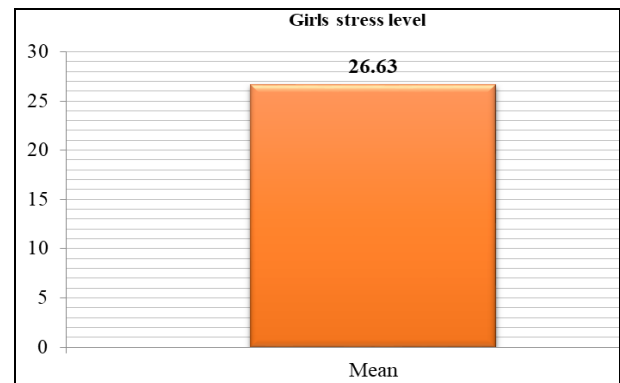

Fig 2: Stress level of girls

Table 3: Comparison of stress level among boys and girls

Group	N	Mean	SD	DF	t-value	p-value
Boys	30	20.53	1.65	58	2.03	0.001
Girls	30	26.63	2.29	58		

*Significance level at 0.05

The table 3 provides a comparison of stress levels between boys and girls, with data on sample size, mean stress level, standard deviation, degrees of freedom, t-value, and p-value. For boys, the sample size is 30, with a mean stress level of 20.53 and a standard deviation of 1.65. The calculated t-value for boys is 2.03, with a p-value of 0.001.

Similarly, for girls, the sample size is 30, with a mean stress level of 26.63 and a standard deviation of 2.29. The degrees of freedom for both groups are 58 with a significance level of 0.05 and a tabulated t-value of 2.00, the calculated t-value of 2.03.

Results indicate a significant difference in stress levels between boys and girls. This suggests that, on average, boys experience lower stress levels than girls in the given sample.

Findings
The findings from the comparison of stress levels between boys and girls reveal a statistically significant difference in their experiences. Boys, on average, exhibit lower stress levels compared to girls within the sample studied. This finding suggests that gender may play a role in influencing stress levels, with girls tending to report higher levels of stress than boys. Such insights highlight the importance of understanding and addressing gender-specific factors that contribute to stress.

Further research could explore the underlying reasons for these differences, including social, biological, and psychological factors, to develop targeted interventions and support mechanisms that effectively address the unique stressors faced by boys and girls. Additionally, these findings underscore the need for gender-sensitive approaches in promoting mental health and well-being among adolescents.
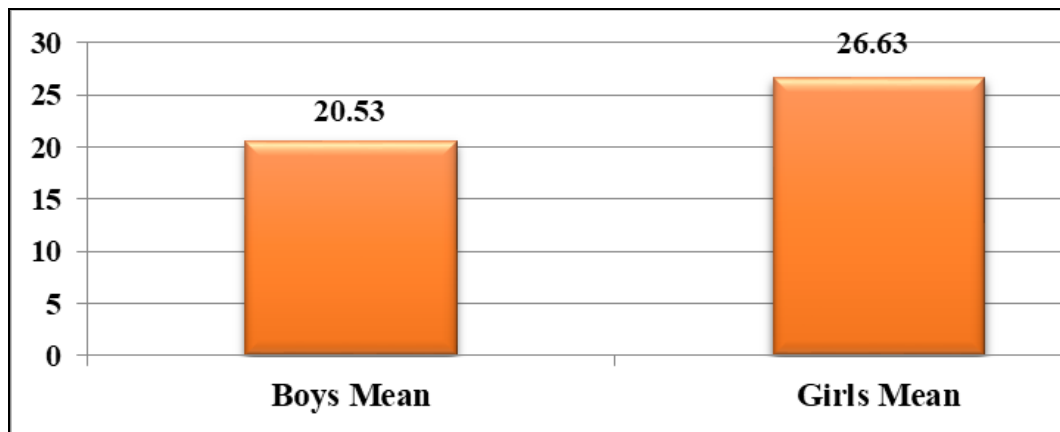
Fig 3: Comparison of stress level among boys and girls

- The research problem focused on conducting an analytical study of stress levels among school boys and girls in Mandi Kalan, District Bathinda, Punjab. The study aimed to conduct a comprehensive analysis, compare stress levels between genders, and test hypotheses regarding potential differences in stress levels.
- The objectives of the study were to assess stress levels among school boys and girls separately, compare these levels between genders, and determine if significant differences existed. The hypotheses posited significant differences in stress levels among school boys, girls, and between the two genders.
- The study was delimited to three specific government schools in Mandi Kalan, with a sample size of 60 students aged 14 to 18 years, focusing solely on stress levels during the academic year 2023-24.
- Data were collected through anonymous surveys and questionnaires administered in collaboration with the selected schools. The standardized SS-LVNS tool was employed to measure stress levels.
- Quantitative data analysis was performed using statistical software, calculating descriptive statistics and conducting t-tests for comparison. Results revealed a moderate stress level among school boys and a higher level among school girls, with a statistically significant difference between the genders.
- The findings suggest gender-specific patterns in stress experiences, underscoring the importance of gender-sensitive approaches in addressing adolescent stress. Further research could explore underlying factors contributing to these differences and develop targeted interventions to support the mental health of school-aged children.

Conclusion

The comprehensive analysis of stress levels among school boys and girls reveals significant differences in their experiences. Boys exhibit lower average stress levels compared to girls, suggesting a gender-specific influence on stress perception. These findings emphasize the necessity of understanding and addressing gender-specific stressors in adolescents. Tailored interventions and support mechanisms should be developed to cater to the unique needs of both-genders, promoting mental health and well-being in school environments. Further research into the underlying factors driving these differences is warranted to inform targeted interventions and foster a gender-sensitive approach to adolescent mental health.

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