

Research Paper

Gender Effect in Stress and Academic Performance in the Year of Board Examination: Quantitative and Qualitative Approaches

Prof. Rasmita Das Swain^{1*}, Shiv Mangal Singh², Mansi Pandey³, Anjita Singh⁴

ABSTRACT

Gender is a ubiquitous social category in all cultures having an all-encompassing impact (implicit and explicit) on an individual's thoughts, feelings, and behavior. This research tested the gender differences in stress and academic performance of 10th and 12th class students, before their board examination with that of 9th class students. The sample consisted of 270 students for quantitative study from two central schools of Jammu i.e. 90 students from each class were selected by the purposive sampling method to represent an equal number of males and females. They were tested on the Hopkins System Checklist (HSCL) Self-report Symptom Inventory developed by Derogatis, Lipman, Rickels, Uhlenhuth, and Covi (1974). Furthermore, for the qualitative study, semi-structured interviews were conducted with 20 students from a central school in New Delhi to bring out student's voices about their experiences with examination and stress. There was considerable evidence of interaction between academic performance and gender. The findings revealed that 12th-class students were more stressed than the 9th and 10th-class students. Significant correlations have been noted between background characteristics, stress, and academic performance. The findings are discussed in light of available research and the policy imperatives having implications for adolescent mental health and examination reforms.

Keywords: *Gender, Stress, Academic Performance, Correlation, Secondary and Higher Secondary Students*

Psychological stress is a generally identifiable experience for all of us. Christensen (1981) proposed his ecological model of stress, which emphasizes the process of interchange between an organism and its environment. This process involves self-generated and environmentally induced changes or states that, once perceived by individuals as exceeding their available resources, can disrupt the homeostatic balance between the organism and its environment. The reaction to this increase in demands can manifest as

¹Professor at department of Schools Standards and Evaluation in National Institute of Educational Planning and Administration, New Delhi, India. ORCID 0009-0006-0133-2690

²Assistant Professor, Gandhi Nagar Women's College, Jammu

³Ph.D Scholar at department of Schools Standards and Evaluation in National Institute of Educational Planning and Administration, New Delhi, India. ORCID 0009-0004-8492-7352

⁴Ph.D Scholar at department of Schools Standards and Evaluation in National Institute of Educational Planning and Administration, New Delhi, India. ORCID 0009-0001-5945-167X

*Corresponding Author

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symptoms of stress, including tension, anxiety, depression, exhaustion, and a variety of psychological or psychosomatic disorders. UNICEF's report (2011) on adolescent mental health reported that around 20 percent of the world's adolescents have mental health or behavioral problems. Half of lifetime mental disorders begin before age 14, and 70 percent by age 24. The prevalence of mental disorders among adolescents has increased in the past 20-30 years. This increase is attributed to disrupted family structures, growing youth unemployment, and unrealistic educational and vocational aspirations held by families for their children. According to this report, depression is the single largest contributor to the global burden of disease for people aged 15-19 years, and suicide is one of the three leading causes of mortality among people aged 15-35 years.

Before the 1980s, research suggested that about one in every five people developed a mental disorder at some point in their life and that mental disorders were more common in women than in men (Neugebauer, 1980). Antisocial behavior, alcoholism, and other drug-related disorders were more prevalent among men. Women, on the other hand, were more likely to suffer from depression, anxiety disorders, and eating disorders (Rodin, Silberstein, and Striegel-Moore, 1985). Women's disorders seem to reflect a turning inward—negative, hostile, or anxious feelings and conflict are directed against the self. Men typically direct the same feelings and conflicts outward against either other individuals or society. Women are more willing than men to acknowledge their emotional problems and seek professional help. Many men are reluctant to admit that they are struggling with anxiety and depression for fear of seeming unmanly (Al-Issa, 1982; Russo and Sobel, 1981). There is a fairly obvious connection between the symptoms of 'male' and 'female' disorders and traditional gender roles (Broverman et al., 1972). Many masculine characteristics (independence, self-confidence, logic, decisiveness, aggression) are associated with good psychological adjustment, whereas not many feminine traits (submissiveness, emotionality, lack of objectivity, home orientation) are (Broverman et al., 1972). Our societal bias seems to favor masculine roles over feminine roles, often resulting in serious problems for both men and women. Kaplan (1983) has suggested that the way behavior is evaluated, depending on whether a man or a woman exhibits it, seldom favors women. When men express expectations, these intensify around the time of puberty (Hill and Lynch, 1983); the changes in appearance that signal the onset of physical and sexual maturation are directly tied to gender-role issues.

Adolescent girls are pressured to give up masculine characteristics and behaviors that were acceptable in childhood, especially those involving autonomy and achievement in "masculine" areas (Morgan & Farber, 1982). Consequently, gender-role expectations may delay the development of an independent sense of self (identity achievement) until adult roles are assumed. The culturally created incompatibilities between femininity and achievement create psychological conflicts for adolescent girls and adult women (Hyde, 1991; Lloyd, 1985). Many men are encouraged to be highly competitive (Doyle, 1989; Gould, 1978; Keen, 1991). The majority of adolescents who have internalized this success ethic are unable to realize their dreams. The model used to assert the level of stress in youth has included depression, anxiety, discomfort, and stress (Lustman, Sowa, & O'Hara, 1984). Research on adolescent stress has shown that the lengthiness of adolescence, the myriad changes, identity crisis, conflict between the physical changes of puberty and society's demand for social and emotional maturity (S. Hall, 1904; Erikson, 1968), uncertainty about the future, and anxiety over choices to make (Marcia, 1980) contribute to emotional turbulence (Offer & Offer, 1975; Petersen, 1987). This turbulence can manifest as

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depression, suicidal behavior, drug and alcohol abuse, and chronic delinquency (Petersen, 1988; Takanishi, 1993; Jacobs, 1971). Additionally, adolescent pregnancy is a concern (Moore, 1985; Zelnik, Kantner, & Ford, 1981).

A vast number of studies have been conducted, and many of their findings conflict. Moreover, new evidence is constantly emerging. Needless to say, it has been an overwhelming task to keep up with trends in the field. Fortunately, meta-analysis (a statistical technique that evaluates the results of many studies on the same question) provides insights into the magnitude of the differences and whether males or females score higher on cognitive abilities, personality traits, social behavior, and psychological health (Hyde, 1981; Hyde, 1984; Eagly & Carli, 1981). While the overall prevalence of psychological disorders is about the same for both sexes, substantially more women than men receive psychotherapy (Al-Issa, 1982; Russo & Sobel, 1981). Research on the effects of stress has concentrated on negative outcomes such as impaired task performance, disruption of attention, and other cognitive processes (Tobias, 1985; Hill & Wingfield, 1984; Paulman & Kennelly, 1984). Researchers have consistently reported a negative correlation between virtually every aspect of school achievement and a wide range of stress measures (Covington & Omelich, 1987; Anderson, 1990; Baumeister, 1984; Singh, 1966; O'Brien, Margolin, & John, 1995). The methodology in this stress research focuses on stress manifestation and organism reaction to life's crises.

In the Indian context, students enrolled in the science stream have been found to be academically more stressed compared to students enrolled in the commerce or arts streams. An inadequate academic environment causes more academic stress in students enrolled in science streams, while apprehensiveness about the future causes more academic stress in students enrolled in arts streams (Sweta, 2018). A study conducted in Karnataka revealed that 28% of Grade 11 students and 26% of Grade 12 students experienced high or extreme stress. Significant stressors included lack of time for revision, queries from neighbors or relatives, and parental expectations regarding academic performance. Factors such as gender, residence, and the medium of instruction until Grade 10 were associated with academic stress (Mayya et al., 2022). Furthermore, examination stress among female students was significantly higher than that among male students, as females tend to become more emotional and tense easily (Saharia & Goswami, 2021; Parul, 2022). However, some studies contradict this argument, stating that male students experience more stress than female students because they are conditioned to be the breadwinners of the family in a patriarchal society and are expected to bear the financial burden of the entire family (Singh & Sagar, 2017). Additionally, research has revealed that the extended impact of COVID-19 has led to increased levels of distress, suggesting that females are more predisposed to academic stress and tend to have poorer emotional adjustment than their male counterparts (Singh et al., 2022).

For the purposes of the present research, stress is conceptualized along the lines of Hans Selye (1936, 1956, 1982). Stress refers to the body's response to threat. This study tested the hypothesis based on Selye's (1956, 1974) influential theory of stress reactions called the general adaptation syndrome. According to Selye, our psychological response to stress can be broken into three phases. During the first phase, the body mobilizes its resources for resistance after a brief initial shock. In the second phase, resistance levels off and eventually begins to decline. If the third phase of the general adaptation syndrome is reached, it leads to

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health problems and exhaustion. The limited available evidence forms the basis of this research. It aims to test the following:

1. Are there differences in stress among students in the 9th, 10th, and 12th grades (those who take board exams and those who do not)?
2. Are there differences in stress among high achievers, average achievers, and low achievers?
3. Are there any interaction effects or joint effects of class and academic performance, class and gender, and academic performance and gender on stress, background factors, and academic performance?
4. Are there any differences in stress among students in the arts, science, and commerce streams in the 12th grade?

METHODOLOGY

A mixed-method approach was chosen for this study. Under the quantitative method, a three-way ANOVA 332 factorial design was used. The first three units of the design referred to classes (9th, 10th, and 12th). The second unit was the three types of academic performance (high, average, and low achievers), and the last two units were gender (male and female). The basis for categorizing students into low, average, and high achievers was the percentage of marks obtained by students: low achievers scored between 60-70 percent, average achievers between 70-80 percent, and high achievers scored above 90 percent.

Under the qualitative method, semi-structured interviews were conducted with students (boys and girls) from classes 9th, 11th (recently appeared for board examinations), and 12th. Central schools were chosen for the study because they included children from all hierarchical positions of central government services and different states, providing a fair representation of children from all over India. Class 9th students were selected as they have to appear for the national examination in the next year. Additionally, 10th-grade students were selected as they took the first nationally conducted examination, the outcome of which was to determine their performance, choice of subject stream, and anxiety to prove their academic ability. For 12th-grade students, it is the second board examination, which holds great significance for their future career and study goals. Semi-structured interviews were conducted with students from classes 9th, 10th, and 12th.

Sample

Under the quantitative method, an ex-post-facto research design of the order 3 (classes 9th, 10th, and 12th) x 3 (academic performance: high, moderate, and low achievers) x 2 (gender) was used. Purposive sampling was employed, and 270 students were identified from two central schools in Jammu and assigned to different cells. High achievers were identified using the statistically measured Mean + ½ SD, and low achievers were identified using Mean – ½ SD. Ninety students from each class were selected to represent an equal number of males (45) and females (45) from each class. All students were tested one month prior to their board exams and final exams. For the purposes of the present research, stress is conceptualized along the lines of Hans Selye (1936, 1956, 1982), focusing on stress manifestation and organismic reactions to threat.

Furthermore, under the qualitative method, purposive sampling was used to select students for semi-structured interviews. A sample of 20 students was selected for the interviews, consisting of 5 class 9th students (3 girls and 2 boys), 4 class 11th students (1 boy and 1 girl from the Humanities and Science sections), and 11 class 12th students (2 boys and 2 girls

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each from Commerce, 2 boys and 2 girls each from Humanities, and 1 boy and 2 girls from the Science section).

Tools

The Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) includes five factors encompassing 45 different reactions towards stress, measured across five dimensions:

1. **Somatization (12 items):** Reflects distress from the perception of bodily dysfunction such as headaches, pain, soreness, and discomfort.
2. **Obsessive-Compulsive (8 items):** Reflects irresistible thoughts, impulses, and actions not connected to ego drives such as forgetfulness, worry, carelessness, indecisiveness, and difficulty in concentrating.
3. **Interpersonal Sensitivity (7 items):** Reflects feelings of personal inadequacy and inferiority compared to others, such as being annoyed, critical of others, hot-tempered, and socially insecure.
4. **Depression (11 items):** Reflects being low in spirit and dejected.
5. **Anxiety (7 items):** Reflects apprehension, distress, and uneasiness manifested in shakiness, trembling, and being afraid.

The stress scale is a self-assessment inventory with a 4-point rating scale:

1. Not at all true for me
2. A little bit true for me
3. Quite a bit true for me
4. Extremely true for me.

This scale was used by Das (1994) and had a Cronbach reliability of 0.87 for 600 undergraduate students. The factor analysis of the stress scale resulted in seven factors explaining 47.6% of the total variance. The Cronbach reliability of the stress scale for the 270 samples in this study was 0.89. The academic performance index was formed by averaging the previous year's annual examination and pre-board examination scores.

Data on background variables were obtained using personal and family information sheets devised for the purpose. Students were tested in small groups within the school setting. Data were analyzed using ANOVA, critical ratio, and correlation procedures. Furthermore, a semi-structured interview schedule was prepared with 12 questions focusing on areas such as causes of stress across streams, gender, and differences between high- and low-performing individuals.

RESULTS

The Annova table 1 revealed the following analysis and findings. The main effects of classes on stress indicated that stress scores for 9th, 10th, & 12th-class students differed significantly.

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Table 1. Summary of Three Way Anova (3x3x2 Factorial Experiment) for stress

Sources of Variation	df	SS	MS	F
Classes	2	7314.661	3657.330	20.661**
Academic Performance	2	383.644	191.822	1.084
Sex	1	2774.258	2774.258	15.672**
Classes x Academic Performance	4	541.456.	364.765	
Classes x Sex	2	707.366	353.683	1.998
Academic Performance x Sex	2	1843.875	921.938	5.208**
Classes x Academic Performance x Sex	4	211.712	52.928	.299
Within	252	44608.658	177.018	
Total	269	58277.867	216.646	

** Significance at .01 level of significance.

Table 2 shows that 12th-grade students exhibited higher stress (Mean = 38.84, SD = 16.06) compared to 9th-grade students (Mean = 37.68, SD = 10.89) and 10th-grade students (Mean = 27.21, SD = 13.97). The significance of the differences between classes was computed using a critical ratio.

Table 2. Means and SDs on Stress

	9 th class		10 th class		12 th class		Total
High Achievers	M	F	M	F	M	F	N=81
	N=15	N=16	N=15	N=13	N=9	N=13	M=32.72
	M=3.00		M=17.67		M=27.44		SD=14.42
	M=42.69		M=31.61		M=42.23		
		SD=9.10		SD=10.83		SD=14.99	
		SD=8.67		SD=13.44		SD=13.89	
Average Achiever	N=14	N=15	N=13.	N=18	N=20	N=18	N=98
	M=38.64		M=25.85		M=40.40		M=35.44
	M=36.13		M=28.22		M=41.00		SD=15.79
	SD=13.53		SD=15.01		SD=16.28		
		SD=11.92		SD=17.22			
Low Achievers	N=16	N=14	N=17	N=14	N=16	N=14	N=91
	M=37.69		M=24.18		M=33.37		M=35/31
	M=37.64		M=37.00		M=44.28		SD=13.76
	SD=9.53		SD=10.19		SD=11.76		
		SD=11.63		SD=18.28			
Total	N=45	N=45	N=45	N=45	N=45	N=45	N=270
	M=36.42		M=22.49		M=35.31		M=34.58
	M=38.93		M=31.93		M=42.38		SD=14.72
	SD=10.84		SD=12.20		SD=15.11		
		SD=10.91		SD=16.37			

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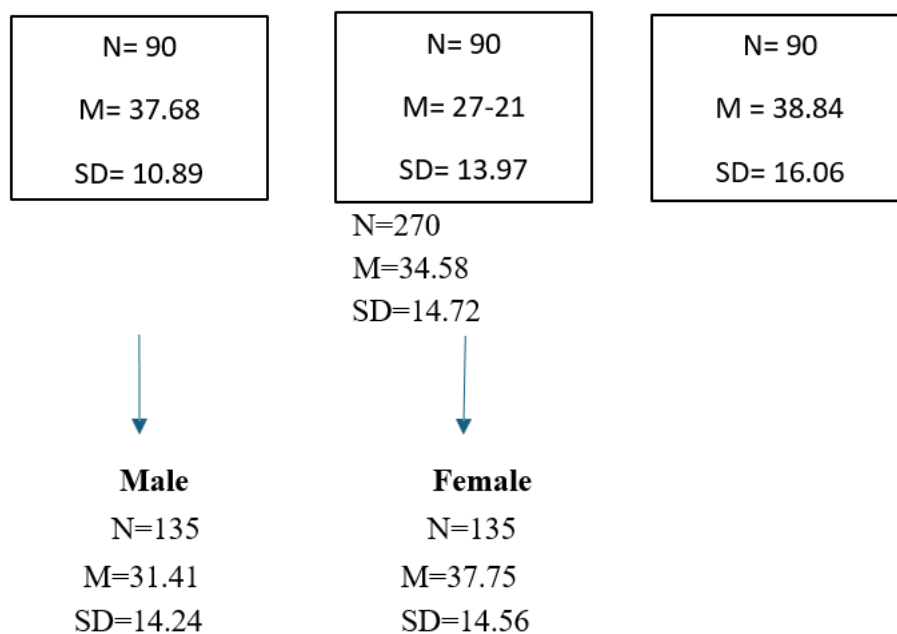


Table 3 shows that the critical ratio indicated that 12th-grade students differed significantly from 10th-grade students (C.R. = 5.185, $p < .01$). The 9th-grade students also differed significantly from 10th-grade students in terms of stress (C.R. = 5.610, $p < .01$). However, 12th-grade students did not differ significantly from 9th-grade students. The results revealed that 10th-grade students experienced less stress compared to 9th- and 12th-grade students. This implies that 9th-grade students entering 10th grade experienced perceived stress, while 12th-grade students experienced induced stress.

The main effect of stress was found to be significant at the .01 level of significance. Males and females from the 9th, 10th, and 12th grades differed significantly in stress levels. The mean scores showed that female students (N = 135, M = 37.75, SD = 14.56) exhibited higher stress than male students (N = 135, M = 31.41, SD = 14.24).

Table 3. The Mean, SD and Critical ratio or Stress of 9th, 10th & 12th Class.

	9th Class Stress level	10th class Stress level	12th class Stress level
9 th	N=90 M=37.68 SD=10.89	N=90 M=27.21 SD=13.97	N=90 M=38.84 SD=16.06
10 th	S EDM=1.866 C.R.=5.610 P<.01	S EDM=2.04 C.R.=0.568 Insignificant	
12 th	S EDM=2.243 C.R.=0.568 P<.01		

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Table 4 shows that the F-ratio for the interaction effect between academic performance and sex was found to be significant. It appears that when academic performance interacts with sex, the differences in students' stress significantly increase. High-achieving females in the 9th, 10th, and 12th grades exhibited higher stress than their male counterparts. The same trend was observed in average and low-achieving females. This finding corroborates the results of Bisht (1984) and Siddiqui and Akhter (1983).

Table 4. Mean and SDs on academic performance

	9 th Class		10 th Class		12 th Class		Total
	M	F	M	F	M	F	
High Achiever	N=15	N=16	N=15	N=13	N=9	N=13	N=81
	M=479.07		M=442.07		M=339.78		M=432.54
	M=468.87		M=448.77		M=371.15		SD=61.79
	SD=47.94		SD=30.55		SD=46.01		
	SD=36.46		SD=43.30		SD=36.57		
Average Achiever	N=14	N=15	N=13	N=18	N=20	N=18	N=98
	M=352.78		M=341.38		M=266.30		M=317.14
	M=360.00		M=338.94		M=267.56		SD=46.15
	SD=29.45		SD=20.20		SD=18.19		
	SD=22.50		SD=24.56		SD=15.22		

Table 5 reveals that stress varies according to the subject stream opted by the students. The difficulty level of the subjects varies for different students. The level of stress among arts students (N = 30, M = 48.37, SD = 15.75) and science students (N = 30, M = 37.40, SD = 15.26) differed significantly (C.R. = 2.74, $p < .01$) in the 12th grade. Specifically, the stress scores of arts students were higher than those of science and commerce students. At the same time, there were no significant differences in the stress scores of science and commerce students in the 12th grade, which supports the study by Das (1989).

Table 5. The Mean, SD, and Critical Ratio for Stress of Arts, Science, and Commerce Stream of 12th Class.

	Arts Stress level.	Science Stress level	Commerce Stress level
Arts	N=30 M=48.37 SD=15.75	N=30 M=37.40 SD=15.26	N=30 M=30.77 SD=12.12
Science	S EDM =4.0002 C.R.=2.74 P<.01	S EDM =3.626 C.R.=4.853 P<.01	
Commerce	S EDM=3.557 C.R=1.863 Insignificant		

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Table 6 revealed that stress differed significantly between male and female students in some subject streams. Female students in the arts and commerce streams did not differ significantly in stress from their male counterparts. However, female students in the commerce stream differed significantly from male students in the same stream (C.R. = 5.213, $p < .01$).

Table-6. Means and SDs on the stress of 12th class male and female students.

	ARTS		SCIENCE		COMMERCE	
	M	F	M	F	M	F
High Achiever	N=6 M=43.67 SD=17.70	N=4 M=38.50 SD=16.62	N=2 M=14.50 SD=2.12	N=7 M=44.28 SD=12.36	N=3 M=25.33 SD=3.78	N=6 M=267.50 SD=7.39
Average Achiever	N=6 M=45.33 SD=18.21	N=4 M=63.50 SD=12.82	N=5 M=29.40 SD=17.30	N=6 M=40.50 SD=15.73	N=5 M=34.80 SD=12.17	N=6 M=26.83 SD=7.93
Low Achiever	N=3 M=43.33 SD=15.63	N=7 M=54.14 SD=10.49	N=8 M=29.00 SD=11.88	N=2 M=40.50 SD=24.75	N=7 M=26.71 SD=10.32	N=3 M=44.33 SD=27.54
Total	N=15 N=1 M=52.47 M=44.266 SD=15.63 SD=54.28		N=15 M=32.53 SD=15.17	N=15 M=42.27 SD=14.19	N=15 M=29.13 SD=10.37	N=15 M=32.40 SD=13.83

Table 7 shows a significant but negative relationship between stress and academic performance i.e. greater the stress poorer the academic performance.

Table 7. Correlation (r) values between Academic Performance and Stress for the 270 students.

Academic Performance	Stress		r-value	Significant
Total Sample	Mean=328.68	M=34.58	.135	P=.013
N=270	SD=88.33	SD=14.72		

Table 8 shows that when the degree of correlation between stress and academic performance was compared among the three classes, the degree of correlation differed between classes. Academic performance was negatively related to stress. In other words, higher stress was associated with lower academic performance.

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Table 8. The Correlation (r) value of Academic Performance and Stress for the class 9th, 10th & 12th class.

Class	N	r-value	significance
Academic performance & stress			
9 th class	90	-.056	P=.0299
10 th class	90	-.158	P=.068
12 th class	90	-.037	P=.363

Table 9 revealed correlations of background factors of students with their stress and academic performance. Older students showed lower academic performance. Fathers' occupations were negatively associated with academic performance, suggesting that higher-status occupations of fathers might hinder academic performance due to increased social expectations. Conversely, higher income of the father was positively associated with academic performance, indicating that greater social and economic resources might benefit students academically.

The findings revealed that 12th-grade students experienced more stress than 9th- and 10th-grade students. The stress level was highest among 12th-grade students, followed by 9th-grade and then 10th-grade students.

Table 9. Correlation of demographic profiles with stress and academic performance (N=270)

	Stress (N=270)	Academic Performance (N=270)
Age	.084	-.432** P=.00
Occupation of Father	.059	-.158* P=.005
Occupation of mother	.034	.222* P=.00
Income of father	-.047	.322* P=.00
Income of mother	.068	.236* P=.00
Education of father	.021	.3449*
Education of mother	.083	.346* P=.00
Family size	-.049	-.027
Types of family	-.049	-.027

The correlation of demographic characteristics with stress and academic performance (N = 270) suggested that the age, occupation, income, and education of parents were not significantly related to stress. However, students belonging to large family sizes and joint families were reported to be more stressed, indicating an inverse relationship between these variables. Urban students were reported to be more stressed (r = .161*, significant).

The demographic characteristics were found to have a significantly positive correlation with the occupation of the mother, as well as the income and education of parents. The

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correlation of social category and place of residence with academic performance showed that general and urban students reported better performance. The age and occupation of the father were significantly negatively related to academic performance (-.432** and -.158**, respectively). Furthermore, the findings from semi-structured interviews suggested specific trends among 9th-grade students.

Qualitative Data Analysis on Causes of Stress

Grade 9 students face various causes of stress, as revealed through interviews with five students (three girls and two boys). Most consider themselves middle-level achievers, with grades ranging from 80 to 95 percent. The students' career aspirations are diverse, with some aspiring to engineering careers while others seek medical careers. However, they are burdened with heavy homework from school and additional coaching classes, leaving them with tight schedules and limited time for relaxation.

One of the Grade 9 students stated, "I feel stressed because there are no mental health seminars, and our school counselor isn't supportive. I'm afraid to talk to the counselor because she seems unfriendly and strict. Also, school isn't great for learning—the classes are big, and we don't interact much with teachers. I like my coaching classes better because the teachers are friendlier, we have fun quizzes, and we get breaks between classes."

The students' tough schedules, juggling school, coaching, and homework, leave them with little time for leisure and relaxation. They often attend coaching classes for several hours after school, some returning home as late as 10 p.m. Despite spending hours at school, they feel that real learning is minimal, with classes overcrowded, usually consisting of 50 to 60 students, and just one teacher. One student expressed their disappointment in school examinations, stating, "They seem pretty easy, and I can pass them with minimal preparation, just by using NCERT books. But my coaching classes are different. They offer a more exciting learning experience. The teachers there are friendly, we have interactive quizzes, and we get to have meaningful discussions using extra reference materials."

The strictness of school teachers adds to the students' stress levels. One student mentioned, "Teachers at school often taunt and criticize us when we don't finish our homework, and it makes me feel like I'm not good enough, and I have to do well all the time. Sometimes, they make us stand with our hands up as a punishment, which really affects how I feel about myself. On the other hand, the coaching classes have more understanding and friendly teachers, which makes learning more enjoyable. Plus, I like that we get breaks between classes at coaching; it gives me a chance to relax, which we don't get in the school's back-to-back classes."

Apart from academic pressures, interpersonal conflicts at school, such as fights with friends and relationships between students, also contribute to stress and disruptions in their studies. These conflicts add emotional strain, impacting their ability to concentrate on academics and further intensifying their overall stress levels. Grade 11 students face various causes of stress, as revealed through interviews with four students, two in commerce and two in humanities. The transition to the first-time board exams brings immense pressure. One of the students said, "My parents and teachers have really high expectations, and I have my own big goals to meet. I also feel like I have to outdo my friends, which makes me even more anxious. On top of that, relatives keep asking about my 10th-grade results, which just makes me feel even more stressed about doing well in school." Although the school provides study

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material during board exams, the students face emotional challenges as they part ways with their friends who have chosen different streams after 10th grade, leaving them to navigate the academic journey independently.

Among grade 12 students, humanities students expressed dissatisfaction with the teaching quality in classrooms and felt societal pressure due to the perception of their stream being inferior. Preparing for entrance exams alongside schoolwork added to their stress, and the difficulty of remembering historical dates posed a challenge. One of the humanities students said, "I feel that everyone looks down upon students from the humanities section. There is a notion among teachers, parents, and other students that we don't study anything. However, I feel that we also have a lot of syllabi and the subjects are equally as important as other science or commerce subjects." Commerce students struggled with the unclear foundation from 11th grade, leading them to rely on coaching for additional resources and support. Juggling school and coaching syllabi, coupled with numerous assignments, resulted in late nights and exhaustion. Science students preparing for competitive exams like JEE and NEET experienced heightened pressure, fear of imperfection, and discouragement from extracurricular activities.

One of the students from the science section mentioned, "We all notice the absence of mental health counseling in our school, and our counselor is unfriendly and hard to approach. We really wish we had fewer assignments and more meaningful learning experiences because right now, it's all about meeting deadlines. Our school lacks sensitivity and awareness when it comes to mental health and sexual orientation, and that just adds to our stress. We think it would be great to have breaks between classes to break the monotony and focus less on rote learning." Addressing these concerns requires a comprehensive approach, including improvements in teaching methodologies, mental health counseling services, and a more balanced academic workload to nurture the students' holistic development during this crucial phase of their education. Efforts should be made to address these issues to create a more nurturing and supportive environment for their growth and development. The findings revealed that all of the boys experienced common causes of stress stemming from societal expectations and academic pressures. Parents and teachers place high expectations on boys to excel academically, leading to constant comparison of their marks with other students during parent-teacher meetings.

Boys also face the burden of being seen as future providers and leaders, with parents urging them to earn more and support their families. This pressure to perform well academically and secure a successful future adds to their stress levels. Limited time for leisure and play due to school and coaching commitments contributes to their feelings of being overwhelmed. One of the boys who was interviewed mentioned, "I often feel like I'm expected to hide my emotions and not talk about my feelings openly, which puts more strain on my mental well-being. When there are financial problems at home, it adds even more stress because I feel like I need to help support my family's financial stability." Addressing these stressors requires a balanced approach that promotes emotional expression, reduces academic pressures, and fosters a supportive environment for boys to navigate the challenges they face.

Similarly, all the girls also expressed common causes of stress in their lives, with academic pressure being a significant factor, particularly in subjects like Math and Science. Many girls mentioned feeling stressed due to parental comparisons with their younger siblings or other

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students during parent-teacher meetings, adding to their anxiety. While some girls have relatively fewer household chores, others feel burdened by comparisons with their brothers who contribute more at home. One of the girls mentioned, "I often find myself worrying about the future and marriage, and I can't help but compare myself to other girls who are helping with household chores. This makes me feel stressed. I feel like I have limited leisure and social activities, with restricted playtime and freedom outside the campus. It's really tough for me to balance my academic responsibilities with household chores and the pressure to build a stable career within a limited time frame. This adds to my stress."

Addressing these stressors requires creating an environment that promotes equality and support, empowering girls to pursue their interests and aspirations without unnecessary comparisons or limitations. Encouraging open communication and understanding the unique challenges girls face can help foster their overall well-being and growth.

DISCUSSION

This implies that the educational environment of 12th-grade students has certain unique characteristics not present for 9th and 10th-grade students, which are associated with the higher stress levels experienced by 12th-grade students. These psychological characteristics can be identified as being in a 'higher age group,' i.e., late teens, and having 'higher expectations.' In other words, 12th-grade students are in their advanced adolescence, whereas 9th and 10th-grade students are in their early teens. The 12th-grade board examination is the most important factor in determining the type and quality of education a student can pursue.

Moreover, this provides some validation for the controllability and predictability effect for the appraisal of stress depending upon the exact circumstances. People who are very concerned about how others will evaluate them often find being in control quite stressful. Burger (1989), Folkman (1984), and Das (1989) observed higher stress among 10th-grade students than 9th and 12th-grade students, in that order. The sample students were from a central school in New Delhi, where 10th-grade students exhibited higher stress, supported by studies showing that novices experienced considerably more arousal than experienced individuals (McGrath, 1977). Familiarity with a challenge can make yesterday's crises today's routine. The 12th-grade board examination is a milestone in deciding a career in later adult life.

Together, the above-mentioned characteristics act as causative factors, leading to higher stress and lower performance, as stress affects cognitive functioning. In this area, there seems to be a need for 'student counseling' to be institutionalized, where career and performance-related advice can be rendered periodically to reduce stress levels and enhance academic performance. Additionally, parents can be counseled to set realistic goals for their children, thus saving them from the trauma of failed expectations. Structured instructions, repetition of lesson parts, cooperative learning, test-taking skills, and practice tests can help students manage stress. Changes in governance and management have increased responsibility and accountability, putting teachers under constant pressure to perform, which is measured by the students' outcomes. Teachers and students are accountable to each other, to parents, and to the larger society (Singhal, 2004). For younger students, apprehensions about board examinations often provoke fears and doubts about their capabilities, giving them a stressful feeling that they will never be good enough (Singhal, 2004).

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The findings revealed that the number of 'average achievers' was higher and their stress levels were greater than those of 'low achievers' and 'high achievers' in secondary classes. An 'average achiever' suffers from a syndrome similar to that of a middle-class individual. They neither perceive themselves as low achievers nor as high achievers. They experience what can be called the 'twilight zone syndrome,' where their academic identity is blurred; they constantly fear sliding backward. Simultaneously, they nurture hope and dreams of climbing up, influenced by the expectations of their parents and relatives. This implies that student potentialities are not being converted into appropriate action either due to system defects or personal inadequacies.

Such findings should have significant implications for teachers, administrators, and parents. They should seek ways to help students utilize their abilities more meaningfully and maximize their potential. Strategies should be identified to develop effective study habits and promote academically oriented behavior. In this context, the teacher's style of teaching and the content taught should be reality-oriented rather than overly abstract, which tends to make average achievers disinterested learners. Students need to acquire positive values of work, sincerity, and learning. Only if they value academic performance will they make the effort to improve. The average academic performance of students also revealed that our education system lacks vocational orientation, and is abstract and non-challenging. It seems that more professional elements should be incorporated into the curriculum. Alternatives to traditional written tests should be developed, such as oral exams, open-book tests, group tests, and oral presentations that involve creating finished products. All these changes require policy-related adjustments.

Limitations of the study

The study was constrained to two central schools with a sample size of 270 students from grades 9th, 10th, and 12th. Other psychological variables such as teacher's attitudes, school climate, and parent-teacher involvement could have been investigated alongside stress. Stress levels could also have been assessed both before and after board examinations, correlating with academic performance to understand their interplay. This study's findings may not be universally applicable to other demographics such as primary school children, college students, or those pursuing professional courses.

Suggestions for future research

In future studies, it will be important to investigate the sources, nature, and intensity of stress in students, focusing on causal factors and coping strategies. Understanding these factors could provide insights into students' future psychological well-being. Additionally, exploring the impact of social support on stress levels would be valuable.

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