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A Cross-Sectional Study of Academic Stress during Covid-19 period among Junior College Students in West Bengal

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Abstract

The aim of the present study is to find out whether there is any significant difference in academic stress of junior college students during covid-19 period with respect to gender (boys and girls), habitat (urban and rural) and subject stream (science, commerce and humanities).Survey research method was used in this study. It is a cross-sectional study, conducted among junior college students under the West Bengal Council of Higher Secondary Education from the south 24 pargana district in West Bengal. 600 junior college students were collected through stratified random sampling method. A standardized questionnaire was used for the data collection in this study. Mean, standard deviation, t-test and F test were used for data analysis. Present study revealed that boys' junior college students' academic stress is higher than girls' junior college students. The urban junior college students' academic stress is higher than rural junior college students. The science subject junior college students' academic stress is higher than humanities and commerce.

Key words: Academic stress, Habitat, Junior college students.

Introduction

In this COVID-19 period the major dilemma is "stress". In this period people are detached from each other's, appealing online classes, frequent internet decline, Every individual has a unique nature regard to interest, aptitudes, attitudes, capacities, own characteristics, intelligence etc. Stress is an asymmetry between an individual's perceptions of demand and their capabilities to meet the demands, whereas a stressor is a catalyst linked to this asymmetry. It is an inescapable part of everyday activities but it becomes harmful when it reaches intensity that destroys daily activities. Jins and Radhakrishnan (2013) specified that under stress the body "gears up" and response to situations to protect it. Once the cause is removed the body returns to its normal position. Selye (1956) said "the general adaptation syndrome (GAS) during which the physiological response to stress progressed through three stages. First, the body is alerted and responds with an alarm reaction. Next, autonomic activity is triggered as the body prepares to deal with the stress. This is the stage of resistance. Finally, if the stress continues beyond the capacity of the body to respond, the system is damaged and may collapse. This is the stage of exhaustion".

Academic Stress

Junior college students have to face stresses in everyday at school such as examinations, grades, home work, parents and teachers achievement expectations. These expectations may outpace available resources of the junior college students. As a result, they can be under stress, since the expectation is related to success of an academic goal. Limited academic stress is needed for the academic achievement of the junior college students but too much academic stress leads mental as well as physical problems and also students being unable to give their best performance in the examinations. In the junior college period is the crucial turning point in the academic life of the students. Also at this stage their academic performance plays an important role in deciding about their upcoming higher education and their

forthcoming career too. In India school education system is after the secondary education students must entry the higher secondary education where students should select one stream from the science, commerce and humanities. Researcher raised that the job opportunity of the science stream is somewhat better than the commerce and humanities. So that, most of the junior college students and their guardians choices the science stream in the grade XI. In this country it is difficult for the junior college students to "switch stream of education' after the higher secondary examination of class XII. This is specially for the junior college students who specializing in commerce and humanities. This type of academic stress experiences by the junior college students(Deb, et al, 2014). "Bisht(1989) has defined academic stress as a demand related to academics that exceed the available resources (internal or external) as cognitively appeared by the student involved. According to her, academic stress reflects perception of individual's academic frustration, academic conflict, academic pressure and academic anxiety. She has given the definition of four components of academic stress as follows: Academic Frustration: - Academic frustration is a state caused by harm of some academic goals. Academic Conflict: - Academic Conflict is the result of two or more equal hut in compatible response tendencies to academic goals. Academic Pressure: - When the student is under heavy demands of time and energy to meet academic goals. And Academic Anxiety: - Apprehension of harm to some academic goals"(Lal, 2014).It is truly one of the biggest academic problems faced by the current junior college students during COVID- 19 such as to complete large amount of content in a short period of time, too many home works , competitions with other students, lack of preparation, failures and poor relationships with other students or lecturers (Fairbrother& Warn, 2003) also environment (family, school and social), extra co-curricular activities, inability to understand the subject, disinterest to attend the online classes. "The nervous failure, upset, unable to relax, intolerant of interruption, scare, frustration, depression etc feelings are found when students are under academic stress but researcher found that above-mentioned situation is not repeatedly stressful for the all junior college students and also all students do not undergo the same feelings when stressed" (Prabhu, 2015). They are the future of our nation. So the experimenter decided to analysis the academic stress among junior college students during covid19 period.

Review of Literature

Ruiz-Robledillo et al. (2022) made a study on Impact of COVID-19 Pandemic on Academic Stress and Perceived Classroom Climate in Spanish University Students.

"The COVID-19 pandemic has caused several changes in society, especially in the educational context, where several learning methodologies and social interactions have been modified significantly. This fact could have had a negative impact on academic stress levels of students and the classroom climate, especially in the university context. The main aim of the present study was to identify changes in academic stress and the perceived classroom climate caused by COVID-19 in a sample of Spanish university students. Academic stress was evaluated trough the Stressor Academic Scale (SAS) and perceived classroom climate employing the Perceived Classroom Responsibility Climate (PCRC) questionnaire. A longitudinal study was conducted. 135 students (97 females and 38 males) from the Gastronomy (n = 31) and Criminology (n = 104) degrees were evaluated before and after the COVID-19 lockdown in Spain. Academic stress levels and perceived classroom climate were analyzed before (Time 1) and after (Time 2) the lockdown declaration. An increase in academic stress was found, especially in the categories regarding Teachers' Methodological Deficiencies, Academic Over-Burden and Beliefs About Performances. Females and final year students suffered higher levels of academic stress. No differences were found between Time 1 and 2 in perceived classroom climate. The obtained results point out a significant increase of academic stress in university students due to the COVID-19 pandemic in Spain. The implemented educational changes and the uncertainty that resulted from the pandemic could have a significant negative impact on mental health in this population, resulting in higher levels of academic stress, especially in females and final year students. Future studies should analyze the

strategies that students are employing to cope with these educational challenges and intervention strategies to promote them in the context of higher education."

Fuente, et al. (2021) worked on How Has the COVID-19 Crisis Affected the Academic Stress of University Students? The Role of Teachers and Students.
"The effects of the COVID-19 pandemic have required substantial adjustments in terms of university teaching–learning processes. The aim of this study was to verify whether there were significant differences between the academic year of 2020 and the two preceding years in factors and symptoms and stress. A total of 642 university students (ages 18–25 years) participated by filling out validated self-reports during the months from March to August 2020. Using an ex post facto design, SEM analyses and simple and multiple ANOVAs were performed. Structural results showed that stress factors from the teaching process had a predictive value for the learning process, emotions, and academic burnout, and being a man was a factor predicting negative emotion. In a similar way, inferential results revealed no significant effect of academic year but did show an effect of gender on stress experiences during the pandemic. Aside from certain specific aspects, there was no significant global effect of the year 2020 on factors and symptoms of stress. The results showed that studying in the year of the COVID-19 outbreak did not have a significant effect on stress triggered by the teaching process. From these results, we draw implications for specific guidance interventions with university teachers and students."

Sagar and Singh (2017) observed that *A study of academic stress among higher secondary school students.*
The study examined the level of academic stress among higher secondary school students. Descriptive research design was adopted and stratified random sampling was chosen for study. A total sample of 180 students participated in this study were obtained from 10 higher secondary schools at Bareilly district. The data were collected though self constructed Academic Stress Scale. Data were analyzed with the help of t-test and analysis of variance (ANOVA). The study revealed that high significant difference was found between the academic stress of male and female participants of higher secondary school students, but no significant difference was found among academic stress of arts, science and commerce stream students. It was also found that there was no significant difference between academic stress of government aided & self finance school students and rural & urban areas school students.

Alam (2016) studied on *Study of academic stress and test anxiety as predictors of academic achievement of secondary school students*.
The purposes of the study were: a) the relationship between academic stress, test anxiety and academic achievement of students. b) To compare boys and girls (both rural and urban) on the measure of academic stress, test anxiety and academic achievement. For the data collection researchers used Scale of Academic Stress (SAS) by Abha Rani Bisht (1987) and Test Anxiety Inventory by Spielberger et al. (1981) and applied on 400 9th class students. Result revealed that: 1) Negative association were found between academic stress and test anxiety with academic achievement in case of boys & girls and rural & urban students. 2) Significant difference were found between boys & girls both rural and urban on the variables of academic stress, test anxiety and academic achievement. 3) Significant difference was not found between boys and girls in case of academic achievement.

Ghosh (2016) observed on *Academic stress among government and private high school students*. Study measured that- a) To find out whether there is significant difference between the government and private school students and b) to study the gender difference with regard to academic stress among high school students'. Total 200 students of IX grade selected as sample. Bisht battery of stress scales was used here. She found that: 1) Students in private schools showed more academic stress than their counterparts in government schools. 2) Female students had higher academic stress than male students.

Razia (2016) studied on *Academic stress of adolescents in government and private schools*.
Objectives of this study were- a) To examine the level of Academic stress of adolescents studying in secondary schools. b) To ascertain the level of Academic stress of adolescents in relation to gender. c) To compare the Academic stress of adolescents of Government and Private schools. d) To compare the Academic stress of male adolescents of Government and Private schools. e) To compare the Academic stress of female adolescents of Government and Private schools. f) To examine the Academic stress of male and female adolescents in Government schools and g) to examine the Academic stress of male and female adolescents in Private schools'.36 items Academic Stress Questionnaire was employed on 216 adolescents studying in class IX, selected from 6 different secondary schools Findings of the study were: 1) Significant difference were found in academic stress of male and female adolescents studying in secondary schools. 2) Private schools showed more academic stress than their counterparts in government schools. 3) Male adolescents of private schools had high stress in comparison to male adolescents of government schools. 4) No significant difference existed between female adolescents of government and private schools on academic stress. 5) Adolescent females in government schools had more academic stress than their male counterparts. 6) Male and female adolescents of private schools appeared similar level of Academic stress.

Research Gap

Experimenter has found no data of any study covering academic stress during covid-19 period among junior college students in south 24 parganas district in West Bengal.

Statement of the Problem

'A Cross-Sectional Study of Academic Stress During Covid-19 Period Among Junior College Students In West Bengal'.

Objectives

- To measure whether there is any significant difference between boys and girls of junior college students in their academic stress.
- To find out whether there is any significant difference in academic stress of junior college students with respect to habitat (urban and rural areas).
- To examine whether there is any significant difference in academic stress of junior college students with respect to streams (science, commerce and humanities).

Hypotheses

- There is no significant difference between boys and girls of junior college students in their academic stress.
- There is no significant difference in academic stress of junior college students with respect to habitat (urban and rural areas).
- There is no significant difference in academic stress of junior college students with respect to streams (science, commerce and humanities).

Method

Descriptive survey method was used in this present study.
Operational Definition of the Key Terms

Academic Stress

"Academic Stress is a mental stress with respect to some anticipated frustration associated with academic failure or even an awareness of possibility of such behaviour" (Gupta and Khan, 1987). It comes from the schooling education. There is stress of doing all the work of study related, balancing and finding time between study and extracurricular activities of junior college students.

Junior College Students

In this study, junior college students mean class XI students of the three streams like science, commerce, and humanities studying under Bengali medium government sponsored schools of West Bengal Council of Higher Secondary Education (WBCHSE).

Habitat

In this study urban and rural areas selected from South 24 Pargana district of West Bengal.

Population

The population for the present study is all the students of the class XI within the age group 16-18 studying with different streams such as science, commerce and humanities under the West Bengal Council of Higher Secondary Education having Bengali as medium of instruction.

Sample

The researcher selected XI junior college students of 600 sample of both (boys and girls) sexes. Nature and size of the sample are given on the following table 1.

Sl. No.	Nature	Sources
1	Total sample	600
2	Class	XI
3	Age range	16-18
4	Subject stream	Science (N=178) Commerce (N=156) Humanities (N=266)
5	Gender	Boys (N=300) Girls (N=300)
6	Habitat	Urban (N=300) Rural (N=300)
7	Type of school	Government sponsored school
8	Medium	Bengali

Sampling Technique

In this study researcher have selected stratified random sampling method for selection of the sample. A simple random sampling method has followed in each stratum. In this study population is divided based on locality such as urban and rural areas. Next from each area the Government sponsored schools was randomly selected and after that equal number of boys and girls were selected from three subject streams.

Variable

In the present study researcher have used two types of variables:

Independent Variable-

A. Gender
B. Habitat and
C. Subject stream

Dependent Variable-

A. Academic stress

For the collection of the data, in this study researcher used standardized Hindi version Bisht Battery of Stress Scales refined by Dr. Abha Rani Bisht (1987). This type of scale measure exclusive stress types having four components of stress like frustration, conflict, pressure and anxiety in them. This "battery of stress scale" consists of thirteen scales which measures different types stresses like- Scale of Existential Stress, Scale of Achievement Stress, Scale of Academic Stress, Scale of Self-concept Stress, Scale of Self-actualization Stress, Scale of Physical Stress, Scale of Social Stress, Scale of Role Stress, Scale of

Institutional Stress, Scale of Family Stress, Financial Stress Scale, Scale of Vocational Stress and Scale of Superstition Stress. Of these thirteen scales, Scale of Academic Stress [SAS] (total 80 items) was used in this study. Internal consistency reliability coefficient of SAS is .88.

Procedure

The tool was administered to 600 junior college students (N=600) who belonged to science, commerce and humanities groups of Government sponsored schools under the West Bengal Council of Higher Secondary Education in South 24 pargana district in West Bengal. Informed approval was collected from the individual participants and concerned higher authorities. Researcher collected the completed questionnaire within 30 minutes.

Scoring Method and Data Analysis

The 'battery of stress scale' was scored on 5 point Likert type scale which range from 0= never to 4= always and the negative items, it is vice-versa. For the analysis of the data descriptive statistics (Mean and Standard deviation) and inferential statistics like t-test (to compare the academic stress of gender and habitat) and F test (to compare the academic stress of three subject streams like science, commerce and humanities) were used.

Results

The following are results of the study according to the sequence of the hypotheses:

Ho_1- There is no significant difference between boys and girls of junior college students in their academic stress.

To test this null hypothesis mean, SD and t-test were used.

Table 2- Academic stress among boys and girls junior college students

Group	N	M	SD	t	Df	Table value	Level of significance
Boys	300	133.75	24.48	1.01	598	1.96**	NS
Girls	300	130.29	24.09				

** table value at 0.05 level of significance and NS=not significant

From the above table 2 mean scores indicates that boys and girls junior college students differed slightly in their academic stress but t-value shows that there is no significant difference between boys and girls of junior college students in their academic stress. It may be concluded that girls' junior college students had less academic stress than their counterparts i.e. boys' junior college students. It suggests that boys junior college students had slightly influence on academic stress. It can be expressed that both boys and girls of junior college students suffered from similar types of academic stress.

Ho_2- There is no significant difference in academic stress of junior college students with respect to habitat (urban and rural areas).

To test this null hypothesis mean, SD and t-test were used.

Table 3- Academic stress among urban and rural areas junior college students

Group	N	M	SD	T	Df	Table value	Level of significance
Urban	300	133.18	24.99	6.62	598	2.59*	0.01
Rural	300	131.87	23.43				

*table value at 0.01 level of significance

Form the above table 3 shows the mean, S.D and t-value of academic stress of junior college students with respect to habitat (urban and rural areas). The mean value of urban area (M=133.18) with S.D =24.99 are little higher than the mean value of rural area (M=131.87) with S.D= 23.43. Calculated t-value (6.62) with df= 598, also express that it is higher than the table value on 0.01 levels of significance (2.59). So, the result indicated that there is significant difference between the two groups. It implies that there

is significant difference in the academic stress of both urban and rural areas. It also means that the academic stress of junior college students of both urban and rural areas is not equally homogenous. Thus, the null hypothesis is rejected.

Ho_3- There is no significant difference in academic stress of junior college students with respect to stream (science, commerce and humanities).

Mean, S.D and F-test or analysis of variance (ANOVA) were calculated to test the null hypothesis.

Table 4-Difference in academic stress with respect to stream

Variable	N	M	SD	Df	Table value	F	Level of significance
Science	178	162.07	50.04	2 (between groups)	3.01(df for greater mean square/ 0.05 level of significance)	10.46*	0.01
Commerce	156	141.85	50.92	597 (within groups)	4.65 (df for smaller mean square/0.01 level of significance)		
Humanities	266	157.86	46.47				

*significance at 0.01 level

The above mentioned table 4 shows the mean, S.D. and F-value of academic stress of junior college students with respect to stream (science, commerce and humanities). The mean value of science (M=162.07) with S.D=50.04 is higher than the mean value of humanities (M=157.86) with S.D= 46.47 and commerce (141.85) with SD= 50.92. Calculated F-value (10.46) with df=2 (between groups) and 597 (within groups), also express that it is higher than the table value so, the null hypothesis i.e. there is no significant difference in academic stress of junior college students with respect to stream (science, commerce and humanities) is rejected. Thus, a significant difference exists between the group means. In all subject streams it revealed that science, commerce and humanities junior college students experienced outer environmental stress factors like lack of guidance, unable to understand their problems by the parents and teachers, too many pressure of competitive exams, study pressure, tension in regard to their future career, unrelated course structure, inadequate study time, lack of interest and motivation in study, expectation of good result. So, at first to find out the significant differences between subject streams (science and commerce) and academic stress.

Table 5- Difference in academic stress with respect to subject stream (science and commerce)

Variable	N	Mean	S.D	t-value	df	Table value	Level of significance
Science	178	162.07	50.04	0.79	597	1.96**	NS
Commerce	156	141.85	50.92				

** Significant value at 0.05 level and NS= not significant

The calculated value of t, i.e.0.79, is much lesser than the table values 1.96 and 2.59 at 0.05 and 0.01 levels of significance. Hence, it is not significant. Thus, it can be said that the difference in academic stress with respect to subject stream (science and commerce) is not significant.

Now, to find out the significance differences between subject streams (commerce and humanities) and academic stress.

Table 6-Difference in academic stress with respect to subject stream (commerce and humanities)

Variable	N	M	S.D	t-value	df	Table value	Level of significance
Commerce	156	141.85	50.92	3.24	597	2.59*	0.01
Humanities	266	157.86	46.47				

*value at 0.01 level of significance

The computed t-value is much higher than the critical value of t at 0.01 level of significance. Thus, it can be said that the difference in academic stress with respect to subject stream (commerce and humanities) is significant.

Finally, to examine the significant differences between subject streams (science and humanities) and academic stress.

Table 7- Difference in academic stress with respect to subject stream (science and humanities)

Variable	N	M	S.D	t-value	df	Table value	Level of significance
Science	178	162.07	50.04	4.13	597	2.59*	0.01
Humanities	266	157.86	46.47				

*value at 0.01 level of significance

The computed t-value is much higher than the critical value of t at 0.01 level of significance. Thus, it can be said that the difference in academic stress with respect to subject stream (science and humanities) is significant.

Conclusion

The present study reveals that the boys' junior college students' academic stress is higher than girls' junior college students. The urban junior college students' academic stress is higher than rural junior college students. The science subject junior college students' academic stress is higher than humanities and commerce junior college students.

Educational Implications

In this study, the researcher highlighted some suggestions for junior college students for reducing academic stress such as- a) everyday touch with daily lessons b) should attend regular classes and concentrating the lectures in school c) last minutes study should be avoided d) everyday eight hours sleep is essential e) students should select the best times and place for studying f) should follow the instructions given by teachers g) should know the topics of coming examinations and also solve the previous year's questions g) in everyday working time take a short breaks which is helpful for concentration h) always be positive and set 'realistic' goals in life i) on the examination day 'one should remain calm and stop being nervous' j) teachers should equally concentrate all kinds of students and also should use variety of teaching methods in classroom k) try to remove academic stress generating factors from school environment l) education given in the classroom should reflect our practical life which enables students to face this competitive world m) school authority should create stress free environment in the school n) students should do yoga in every day.

Limitation of the Study

The sample consist only junior college students. The type of school is Government sponsored, not selected other types of schools. Only West Bengal Council of Higher Secondary Education students was selected not select the other board and council of education.

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