

## Perceived Stress among Undergraduate Students of Rajshahi University

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### ABSTRACT

The purpose of the study was to inspect the roles of gender and socioeconomic status (SES) on perceived stress among the undergraduate students of Rajshahi University. Random sampling technique was used to select the 152 samples which including 80 males and 72 female students. Bangla version of perceived stress scale (PSS-10) translated by Islam (2016) was used to measure perceived stress scores of the participants. The data collected through PSS-10 and analyzed the data by applying t-test and one-way ANOVA by means of IBM SPSS version-25. The results of the study demonstrated that there was a significant difference exists between male and female students in terms of perceived stress scores ( $t= 2.558, p<0.05$ ). The findings also revealed that the significant effect of socio-economic status on perceived stress was found ( $F= 12.75, p<0.05$ ).

**Keywords:** Undergraduate Students, Perceived Stress, Gender and Socio-economic Status

An individual experiences stress when they see a gap between the physiological or mental requirements of a circumstance and the assets of their mental, biological or societal frameworks (Lazarus & Folkman, 1984; Lovallo, 2005). Stress can lead to the danger of cardiac events, strokes, ulcers as well as psychological illness like depressive disorder (Sapolsky, 2004). Stress can be outward and linked to the surroundings (Jones et al., 2001). Krohne (2002) states that external demands (stressors) and experienced by the body (stress) can be set into two classifications. One of these is the systematic stress that is related with physiological or psychobiological factors. The second is the psychological stress that related with cognitive psychology. An association between a person and their surroundings that they see as imminent or overloading their assets in a way that will influence their state of health is reflected in perceived stress in such a manner (Lazarus & Folkman., 1984). Numerous researchers examined the stress experience by students and the demographic factors that are contribute to it. Hamaideh (2011) carried out a study to know the difference of stress and feedback to stress among university students and inspect the possible connection between students' adverse events and variables of research. The finding showed that the most prevalent type of stressor reported by students was purposeful trigger of stress followed by pressure. Students' psychological responses to stressors were discovered to be significantly intensified.

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## Perceived Stress among Undergraduate Students of Rajshahi University

Reiner et al. (2010) run a research to see the effect of stress on gender and their study showed that in the link between perceived stress and attachment anxiety, gender served as a controller factor. In such a scenario, gender may subtly play some sort of part. In terms of perceived stress and depression, gender and city dissimilarities were identified (Liu et al., 2007). Misingo (2015) conducted a research on public University students in Kenya to measure the level of stress and the results displays that students expressed a significant degree of stress. Regarding the stressors, there were no gender disparities in mood evaluation (Stroud et al., 2002). The findings from the research of Harutyunyan et al. (2020) suggested that male pupils suffer from increased levels of stress, despite their perceived stress is considerably lesser than that of female students.

### LITERATURE REVIEW

A research (Sani et al., 2012) on medical students at Jisan University in Saudi Arabia was carried out and the stress among medical students has to be reported 71.9%, with females students experiencing higher level of stress (77%) than male students (64%). A research carried out by Hasan et al., (2019) among pharmacy students and they found that female students (34.98%) claimed to be more stress than male students (15.47%). Graves et al. (2021) done a research and their findings showed that the sum PSS score stated by females was higher than that of males. The results of the study conducted by Khadem (2019) suggested that female pupil encounters greater level of stress than male pupils. The study (Matud, 2004) looked at the roles of gender in stress and coping in a number of 2816 persons ranging in age from 18-65 with varying psychosocial variables. To control the psychosocial factors, MANCOVA outcomes revealed that women rated notably higher than males in prolonged stress and tiny everyday hazards. Another study by Chen et al. (2009) found that male students mentioned higher levels of stress, reduced emotional health, and a lower ability to use effective methods of coping. Bhosale (2014) did a study on perceived stress and the study indicated that there was no difference on stress scores levels between the male and female students.

A research findings (Kim, et al., 2021) revealed that Perceived stress was unaffected by socioeconomic status. Mcleod & Kessler (1990) found in their research, people with low socioeconomic status are more adversely influenced by negative incidents than their higher-status counterparts. They also indicated that the susceptibility of low socioeconomic status throughout every kind of individual moment. Furthermore, researchers revealed that varying susceptibility is not limited to financial status as well as employment and academic status. Mouza, (2015) evaluate perceived stress among Greek undergraduate students considering socioeconomic status and the results indicated that students from lower socioeconomic status experienced higher scores of stress. Divaris et al. (2014) examine the relationship socio-economic status and career choice in terms of perceived stress and they suggested that higher stress level were connected with depending on resources such as money attributed to lower socioeconomic strata.

#### *Significance of the study*

Unlike the general public, college students are one such vulnerable group that is more likely to experience elevated levels of stress (Simegn, et al 2022). Linn & Zeppa (1984) showed that stress can prompt to academic failure, strained associations with friends and family and overall discontentment of life. This is why it is crucial to comprehend where their feelings of stress comes from and how they tackle it. Student's exams, interactions with others, troubles with relationships, life transitions, and job pursuit are the main causes of stress. Usually, this kind of stress results in behavior-related, bodily, and mental difficulties. By reducing the detrimental effects of stressors, a friendly educational setting should be created and outside

## Perceived Stress among Undergraduate Students of Rajshahi University

activities should receive more attention. The results will be helpful to each pupil, academics, instructors, vocational centers, and counseling services.

### *Objectives of the study*

- To explore the effects of gender on perceived stress of the undergraduate students of Rajshahi University.
- To inspect whether there is any effect of socioeconomic status on perceived stress of the participants.

### *Hypotheses of the Study*

- Female students would have higher perceived stress than male students.
- Lower socio-economic status students would have higher perceived stress than middle and higher socio-economic status students.

## **METHOD AND PROCEDURE**

### *Target Population*

Total undergraduate students of Rajshahi University are the population of the study.

### *Samples*

The 152 respondents have been selected purposively from Rajshahi University.

### *Variables*

The independent variables were gender and socio-economic status and the dependent variable was perceived stress.

### *Ethics*

Written informed consent was obtained from individuals prior to participating. Participants' confidentiality of data was ensured then the respondents provided information.

### *Measuring Instruments*

1. **Personal information Form (PIF):** Personal information was collected including age, gender (male and female) and socioeconomic status (higher, middle and lower).
2. **Perceived Stress Scale (PSS-10):** PSS-10 was employed in the current research because of its higher psychometric qualities over the two different editions (PSS-14 and PSS-4), as suggested by Cohen and Williamson. PSS 10 showed strong internal consistency, with Cronbach's alpha ranging from 0.71-0.91 (Chaaya et al., 2010; Mitchell et al., 2008). In numerous studies, the scale's test-retest reliability has been stated with a correlation value of  $r > 0.70$  (Lee, 2012). Islam (2016) translated the Bengali edition of PSS 10 that was applied in this research. Answers to the four positively provided questions (items 4, 5, 7, and 8) must first be shifted (i.e., 0 => (4; 1 => 3; 2 => 2; 3 => 1; 4 => 0), before the total PSS score can be calculated. The PSS score is then calculated by adding up all of the scores. Lower scores represent lower perceived stress levels and the reverse also true.

### *Procedures*

The current cross-sectional study was conducted among Rajshahi university graduate students. The sample size was 152. Simple random sampling was followed for collecting data. The inclusion of the participants was voluntary. Two girls hall and two boy hall were taken through lottery among the total Rajshahi university graduate students in order to collect

## Perceived Stress among Undergraduate Students of Rajshahi University

research data. 40 samples were from each girl hall and 36 samples were from each boy hall. At first, established the necessary rapport with the respondents, written informed consent was obtained from individuals prior to participating in the study. Then respondents' confidentiality of data was ensured, and then the participants provided the information. After that the questionnaire was provided to the respondents to fill up sincerely. They were asked to answer very carefully and not to omit any item of the questionnaire. After completing the answer questionnaire were collected and checked carefully. Finally, the respondents were given thanked by the researcher for participating into the study.

### *Data processing and Statistical Analyses*

The data were collected through the use of Perceived Stress Scale. After data collection process the scores of each subject of the study were calculated. The scores of each individual were coded and entered into data analysis software (IBM SPSS version 25) in order to analyze the obtained scores. To investigate the effect of Gender, on perceived stress of the respondents' independent *t*-test were applied. One way Analysis of Variance was also applied in order to see the effect of Socio-economic Status (SES) on perceived stress.

## RESULTS

To examine the obtained scores, the raw data were coded and entered into IBM SPSS version-25. Using independent sample *t*-test gender difference was calculated. To know disparities of perceived stress among Socio-economic status (high, middle and low) the one-way analysis of variance was employed.

### *The effect of Gender on Perceived Stress*

*Table-1 Mean Difference in Perceived Stress Scores of male and female students*

Dependent Variable (DV)	Level of Independent Variable	N	Mean	SD	df	t
Perceived Stress	Male	80	17.74	4.503	150	2.558*
	Female	72	19.73	5.082		

\*Significant at 0.05 level

The result in the table-1 indicates that, the mean and std. deviation of the male respondents are 17.74 and 4.503 and the mean and std. deviation of the female participants are 19.73 and 5.082. Table-1 shows that mean difference is 1.99 in which is statistically significant ( $t=2.558$ ,  $p<0.05$ ). That means male students feel lower level of perceived stress than their male counterpart.

### *The role of Socio-economic Status on Perceived Stress*

Results of One way Analysis of Variance presented in table-2 and table-3 respectively

**Table-2**

Dependent Variable (DV)	Level of SES	N	Mean	SD
Perceived Stress	Higher Class	27	15.11	4.089
	Middle Class	86	19.01	4.546
	Lower Class	39	20.82	4.888
	Total	152	18.78	4.903

## Perceived Stress among Undergraduate Students of Rajshahi University

**Table-3**

Dependent Variable (DV)	Sources of Variance	Sum of Squares (SS)	df	Mean Squares (MS)	F
Perceived Stress	Between Groups	530.437	2	265.218	12.75*
	Within Groups	3099.399	149	20.801	
	Total	3629.836	151		

\*Significant at 0.05 level

The result presented in Table-2 shows that mean of the higher class, middle class and lower class students are 15.11, 19.01, and 20.82. The result table-3 demonstrated that the mean difference among socio-economic status is significant ( $F=12.75, p<0.05$ ). The results clearly suggest that lower socio-economic group have higher levels of perceived stress than the rests.

### DISCUSSION

The study was conducted on undergraduate students of Rajshahi University in order to explore the effect of Gender, and Socio-economic Status academic on perceived stress of the participants. The study was conducted on 152 university students. Perceived stress of the undergraduate university students was measured by using a Bangla translated version of Perceived Stress Scale. Two hypotheses were formulated to explore the effect of gender, socio-economic status on perceived stress. To analyze the data of the current study independent sample t-test and one way analysis of variance were applied.

The **first** hypothesis stated that female students would have higher perceived stress than male students. And the result table presented in table-1 revealed that significant difference was found between male and female students in terms of perceived stress ( $t=2,558, p < 0.05$ ). This finding confirmed the first hypothesis. This result is obvious because previous research also supports the matter (Sani et al., 2012; Hasan et al., 2019; Graves et al., 2021 and Khadem, 2019) despite the fact that some research indicated opposing result (Chen et al., 2009; Bhosale, 2014).

The **second** hypothesis of the current study was lower socio-economic status students would have higher perceived stress than middle and higher socio-economic status students. And the result of the study was also indicated that significant difference was existed among the socio-economic status of the respondent (higher class, middle class and lower class) in terms of perceived stress ( $F=12.75, p<0.05$ ). The result also means perceived stress is affected by socioeconomic status. Now we can probably say that the socio-economic status is one of the best predictors of perceived stress. Some findings illustrated the same outcome (Mouza, 2015; Divaris et al., 2014) although contrary outcomes indicated by the research of Kim et al. (2021).

### CONCLUSION

The research findings showed that undergraduate male students feel lower perceived stress. Perceived stress is significantly related with socio-economic status. To consider the study findings the university administration developing strategies for handling and minimizing stress.

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## Perceived Stress among Undergraduate Students of Rajshahi University

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### **Conflict of Interest**

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