

RESEARCH ARTICLE

# The Level of Stress among College Students: A Case in the College of Education, Eritrea Institute of Technology

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## Abstract:

The transition of students from high school level to the college level is inherently stressful for students. It could cause psychological, academic and social shock to them. From this perspective, this research was aimed to investigate the level of stress among the College of Education (CoE) students in Eritrea Institute of Technology. Descriptive research was undertaken to assess the students' level of stress. A randomly drawn participants (N = 123) completed a self-developed questionnaire assessing their levels of stress on five domains (physiological, social, psychological, academic, and environmental). The results revealed that there was a moderate level of stress among the students. Out of the five domains, academic and environmental stressors were found contributing most to the students' level of stress. Besides, the students' levels of stress were found to have no statistically significant associations with their gender and grade point average. The study may theoretically contribute to the body of scientific knowledge on mental health studies. Practically, the study may also guide college communities to take concrete steps towards the improvement of the learning environment and subsequently mitigating the adverse impact of stress on students' wellbeing and learning outcomes.

**Keywords:** Stress, Stressors, College Students

## Introduction

Stress as an inescapable part of life generally touches a wide range of groups of population with no regard to their age, gender, educational status or socioeconomic status. Despite this fact, stress, depression and anxiety are prevailing mental health problems among college students (Kitzrow, 2003; Marthoenis, Meutia, Fathiariani, & Sofyan, 2018). College students undergo numerous educational, social, environmental and psychological adjustment difficulties in the new campus atmosphere which may affect their psychosocial well-being and learning outcomes. These happen because the new tertiary educational system has a big difference in its methods of teaching, academic requirements, type of relations between faculties and even relations among students themselves (Thawabieh & Qaisy, 2012). In short, stress seems to be very common in college students' life because college students need to ensure their academic survival and prepare themselves for the further career. It is not a surprise that much of the academic stress at the college level is associated with what students learn and how they learn it.

Stress can be a healthy, and adaptive people's response to the threat by mobilizing their energy towards the stressors (Khan, Lanin, & Ahmad, 2015). Thus, it is important to note that a certain level of stress is essential for the students in a way that it motivates students to progress in their academic journey actively, would otherwise be inactive and uninterested creatures (Nandamuri & Ch, 2007). Many researchers have also noted that stress is not always negative. It also partakes positive motivational contribution in people's life. Take, for instance, exam stress or academic workload may motivate and strengthen a college student to successfully deal with his or her academic tasks and also enhances academic achievement and creativity (Auerbach & Gramling, 1998). However, if individuals fail to employ effective stress coping mechanisms to handle the stressful situation, their feeling of stress can persist over time and, in turn, become at a higher risk of developing severe physical and mental problems (Auerbach & Gramling, 1998).

## Literature review

According to Lazarus and Folkman (1984), stress is defined as an individual's physical and psychological reaction to an event or object or which is appraised as a threat. Similarly, according to Campbell (2006) as cited in Bataineh (2013), stress is an adverse reaction that individuals manifest when they encounter excessive pressure or other types of demands placed on them. Stress especially arises when individuals are under overwhelming situation and believe that they are incompetent to handle. The definitions reflect that stress is psychophysical phenomena which come into existence as a result of a continuous interaction between the individual and the environment. Said it differently, when college students, for instance, often deal with pressures associated with finding a job or a potential life partner, such stressors do not cause anxiety or tension by themselves. Instead, the feeling of stress results from the interaction between stressors and the students' perception and reaction to those stressors (Romano, 1992).

With respect to the levels of stress and stressors, previous literature has invariably documented that college students are exposed to different kinds of stressors and stress level. For instance, in a study conducted with the sample of 249 student participants, undergraduate university students were found to experience higher levels of stress as a result of academic commitments, financial pressures, and lack of time management skills. The students' health, emotional state, and academic performance can be devastated when they negatively interpret the stressful context or when the stress level intensifies (Ranjita Misra & Mckean, 2000). In agreement with this finding, Waghachavare, Dhumale, Kadam, and Gore (2013) surveyed a large sample ( $N = 1200$ ) and demonstrated that college students experienced a certain level of stress associated with healthy lifestyles and academic factors. Recently, Bhat U et al. (2018) concluded that psychological stress is highly prevalent among college students especially among engineering and art students and those who are residing with their families.

Ross, Niebling, and Heckert (1999) examined interpersonal, intrapersonal, academic and environmental sources of stress and generally found daily hassles to be more stress-inducing factors than more than significant life events, in which intrapersonal sources of stress were the leading stressors. More specifically, the study delineated that change in sleeping habits, vacations/breaks, changes in eating habits, increased workload, and new responsibilities were the top five sources of stress among college students. Besides, Azila-Gbettor, Atatsi, Danku, and Soglo (2015) have carried out a cross-sectional study in 275 business students in Ghana and found that academic factors (e.g., getting good grade, exam stress, inadequate educational materials and achieving academic goal), intrapersonal and self-stressors (e.g., fear of failure, dealing with personal issue, and study skills), relationship interpersonal and social stressors (e.g., academic competition, and social support), teaching quality, relations with and support from teachers stressors (e.g., delaying in marking and feedback, accessing learning materials, understanding the expectation of teaching staff) and environmental, campus, administration and transition stressors (e.g., college transition and campus adjustment) are among the commonly stress producing factors in the students. Moreover, the study disclosed that environmental, campus, administration and transition stressors were the most stressful category. In another study, college students' high-stress levels were appeared to be positively related to their negative perception of one's self, and unhealthy behaviors such as poor diet, lack of exercise, and inconsistent sleep patterns (Walton, 2002).

Another study was conducted on academic stress among college students in the faculty of education at King Saud University. The result of the study showed that academic overloads, course awkward, inadequate time to study, workload every semester, exams awkward, low motivation, and high family expectations produced moderate level of stress among students. It was also found that fear of failure was the primary source of stress among students (Bataineh, 2013). Several previous literature seemed to have an agreement on the general prevalence of stress among the college students, but the sources of stress and magnitude of stress among students are not consistent across the studies. Although many studies reported high level of stress among the students, some studies also found university students to experience a moderate level of stress, anxiety, and depression (e.g., Bataineh, 2013; Bayram & Bilgel, 2008; Thawabieh & Qaisy, 2012). We guess that such differences in the documented findings might be

associated with the nature of the stressors, the individual's cognitive appraisal, and coping resources, or methodological issues, and sample variations.

Empirical studies on the influence of gender on stress were found to be contradictory and mixed up (Azila-Gbettor et al., 2015). For example, Sulaiman, Hassan, Sopian, and Abdullah (2009) found that female students have experienced a higher level of stress compared to male students because they tend to be extra emotional and sensitive toward what is happening in their surroundings. Jogaratnam and Buchanan (2004) found the same finding that female students reported a higher level of stress than their male counterparts concerning the time pressure dimension of stress. More to these findings, stress and anxiety levels among female college students were found to be elevated compared to counterparts (Bayram & Bilgel, 2008). Possible elucidations for female students experiencing higher stress levels could include women taking on the role of being the caretaker of the family while also working and being a successful student. Females usually report a higher level of self-imposed stress and report more physiological reactions to stressors than males while males report lower stress levels because they are taught to be masculine and not show emotional weakness.

In another study, the association between gender and stress has also shown that women found themselves in more stressful situations than males (Matud, 2004). A factor in women feeling more stressed is how they perceive life events and the responsibilities of taking on social roles. Also, women tend to be more affected by the stress and energy of those around them. Another reason women have higher stress levels is that they tend to cope more emotionally than men while men deal with stress and frustration on a rational non-emotional level. Researchers have suggested that emotion-focused coping is ineffective and more likely to be associated with psychological distress than is problem-focused coping (Matud, 2004). Unlike these findings, Khan et al. (2015) found that school boys are more stressed than school girls. This might be due the higher expectations and responsibilities that parents put on boys as well as the high standard goals that boys want to attain in their plans (Khan et al., 2015). Likewise, in a study conducted in Ghana, male students were found to experience a higher level of stress than female students (Azila-Gbettor et al., 2015). On the other hand, other studies reported that there is no significant difference between male and female on academic stress (e.g., Bhosale, 2014; Omoniyi & Ogunsanmi, 2012).

Several studies have ascertained that there is an inverse relationship between students' level of stress and their academic performance with the assumptions that higher level of stress hampers students' effective functioning in the field of learning (Bennett, 2003; Elias, Ping, & Abdullah, 2011). In a study conducted among 656 undergraduate students in India, low performing and high performing students were found to have significantly different scores on different sources of stress (Veena & Shastri, 2016). Similarly, Taylor and Owusu-Banahene (2010) concluded that stress has a crippling effect on students' academic performance. In addition, components of stress such as social and financial stress were also claimed to decline students' academic performance (Pariat, Rynjah, & Kharjana, 2014). From the reviewed literature, it seems that many studies are in favor of the adverse effect of stress on students. However, there some studies which challenge the inverse relationship between stress and academic performance and advocate for the positive contribution of stress to students' learning outcome. For

instance, Siraj et al. (2014) explored the association between stress levels and the academic performances and demonstrated that respondents with a high and severe stress level were observed to have a higher cumulative grade point average. The medical students were found to be highly capable of managing their stress well and, thus, deny the adverse effect of stress on their academic performance. On the other hand, other studies found no statistically significant relationship between stress and academic performance (Azila-Gbettor et al., 2015; Jogaratnam & Buchanan, 2004).

## Statement of the problem

The transition of students from high school to the college environment is very much stressful for students. It could cause psychological, academic and social shock to them. This arises as the teaching methodology, crowds, finances, competition, type of relations with students (especially with opposite sex) and teachers much more differ from that of the high school level. Moreover, the academic demands that they find in the college level is far threatening for them. Scott (2009) has also attested that college students are bare to the extensive amount of stress, which necessitate successfully and constantly changing coping strategy. These stressors occur as a result of internal and external factors that make their learning environment complex. Students are expected to thrive and succeed, overcome economic hardships, worries about vague futures, societal problems and opportunities. Colleges are the places where students often meet their future partners. Furthermore, they are required to prepare and perform well in home works and tests in various subjects and disciplines. These may, in turn, intensify the inconsistent outcomes they obtain in their academic works. Therefore, in this situation, if students fail to cope with such demands, stress may lead to anxiety, drinking problems, depression and a multitude of other mental health problems. Raised stress levels amongst students can go beyond the decline in their academic accomplishments and can affect both the physical and mental health of students.

Even though a wide range of studies have conducted on stress among students, the findings are self-contradictory and mixed up. For instance, Agolla (2009) stated that many scholars in the field of behavioral sciences have carried out extensive research on stress and its outcomes, but the topic still needs more attention. Similarly, studies concerning the nature of the relationship between students' feeling of stress and their demographic characteristics such as gender and academic performance are not well-documented. More importantly, there was a significant paucity of empirical studies on the mental health problems of college students in the Eritrean context. To address such research gaps, the present study took an initiation to explore the students' levels of stress in the contexts of academic, environmental, psychological, social and physiological factors. The study is believed to theoretically contribute to the body of scientific knowledge on mental health studies. Practically, the study may guide college communities to take concrete steps towards the improvement of the learning environment and subsequently mitigating the adverse impact of stress on students' wellbeing and learning outcomes.

## Research Questions

Based on the reviewed literature, the study set the following guiding research questions?

1. What is the overall level of stress among the college of education students?
2. To what extent is the academic stress level of the college of education students?
3. What is the level of social stress among the college of education students?
4. What is the level of psychological stress among the college of education students?
5. What is the level of physiological stress among the college of education students?
6. What is the level of environmental stress among the college of education students?
7. What is the relationship between the level of stress and students' gender, and academic performance?

## Methods

### *Participants*

The present study was descriptive research in which quantitative data were collected using a survey method. A total of 123 students of second, third and fourth year degree and diploma program students have participated. 63 (51%) of the participants were male students, and 60 (49%) were female students. About grade point average, 30 (33%) of the participants were higher performing students, 34 (34%) average performing and 36 (33%) were lower performing students.

### *Measure*

**Demographics.** To obtain demographic information of the students, questions related to their gender and academic performance were provided. Academic performance was measured using their cumulative grade point average.

**Stress.** To measure stress, based on the theoretical conceptualization of stress and previous studies, College Students' Stress questionnaire which comprised five subscales (i.e., academic, physiological, social, psychological and environmental) was designed. The measure contains a total of 50 items rated on four points ranging from 1 (never) to 4 (always). Each subscale contains ten items. Higher scores reflected a higher level of stress. The questionnaire was thoroughly reviewed by four senior experts in the College of Education in order to check how well the test measures what it was devised to measure. The internal consistencies for the subscales were satisfactory and ranged from 0.60 to 0.80 (see Table 1). Similarly, the overall measure showed high reliability coefficient ( $\alpha = .87$ ).

## *Procedure*

In the process of data collection, questionnaires were distributed to the volunteer individual participants in their respective classrooms. As the level of education was known to understand the English language of item statements, the questionnaire was used with no translation to the local language. Thus, the questionnaire was easily administered by the participants. However, to avoid some difficulties, we were present at the time and place of distributing questionnaires. To smoothly facilitate the process of data collection, we recruited some faculty member from the college.

## *Data analyses procedure*

First, data were inputted into 21 SPSS version. Then, descriptive statistics such as frequency of distributions, mean, and standard deviation were used to summarize and analyze the data. Finally, to test whether students' level of stress significantly differed across their gender and cumulative grade point average, chi-square test for independence was determined

## **Results**

### *Descriptive statistics of the study variables*

Table 1 presented the summary of the mean, standard deviation and Cronbach's alpha values for the study variables. Reliability coefficients for all the subscales of stress were found to be satisfactory, and the values ranged from 0.60 to 0.80. The overall stress scale showed high internal consistency ( $\alpha = 0.87$ ).

**Table 1.** Summary of mean, SD and alpha values

Components of stress	No. of items	Alpha	<i>M</i>	<i>SD</i>
Academic	10	0.60	25.13	4.84
Physiological	10	0.80	18.04	5.56
Social	10	0.74	17.17	4.72
Environmental	10	0.71	29.13	5.27
Psychological	10	0.68	18.32	4.93
Overall	50	0.87	108.13	18.21

### *Academic stress*

To determine the level of academic stress, the study employed descriptive statistics (frequency distribution). As presented in Table 2, the results presented that the majority of the students (71%) reported a moderate level of stress, 13% high level of stress and 16% low level of stress.

**Table 2.** Frequency distribution of the level of academic stress

Levels of academic stress	Frequency	Percent	Valid percent	Cumulative Percent
Lower	20	16.00	16.00	16.00
Moderate	87	71.00	71.00	87.00
Higher	16	13.00	13.00	100.00
Total	123	100.00	100.00	100.00

Table 3 presented the frequency distribution of the specific factors that produce academic stress. All the academic stressors have been found to contribute to the level of stress of the students. However, a high percentage of the students have responded that they most of the time experienced a high level of stress as a result of insufficient educational facilities in the college (item seven) and difficulty in studying for long hours (item five). Many participants have also pointed out that they sometimes experienced stress due to lack of fair grading system, academic overload, difficulty in dealing with one's academic problems, and poor subject matter and pedagogical competence of instructors. Dissatisfaction with one's department and college (item eight), feeling of depression due low cumulative grade point average (item four), on the other hand, were found contributing to a lesser extent to the level of stress of the students in comparison with the rest of the stressors.

**Table 3.** Summary of the Frequency distribution for academic stressors

Academic stressors	Never (%)	Rarely (%)	Sometimes (%)	Frequently %
1. Unfair grading system in the college	12.20	29.30	37.40	21.10
2. Pressure in daily studying	21.10	40.60	22.00	16.30
3. Difficult to deal with academic problems	22.00	28.50	34.10	15.40
4. Depression due to low CGPA	36.60	24.40	20.30	18.70
5. Difficulty in studying for long hours	5.70	29.30	32.50	32.50
6. Too much academic workload	6.50	35.00	35.00	23.50
7. Inadequate educational facilities	10.50	24.40	24.40	40.70
8. Dissatisfaction with one's program	44.70	16.30	17.90	21.10
9. Instructors' poor subject matter mastery & pedagogical competence	29.30	26.00	30.90	13.80
10. Boringness in attending classes regularly	30.10	22.00	25.10	22.80

CGPA - Cumulative Grade Point Average

### *Physiological stress*

As indicated in Table 4, the majority the participant students (71.6%) have responded that they experienced a low level of stress as a result of physiological stressors. On the other hand, 26% and 2.4% have experienced moderate and high level of stress respectively. Therefore, the results reflected that physiological factor in the present study was found having less contribution to the high level of stress of the students.

**Table 4.** Summary of the frequency distribution of the level of physiological stress

Level of physiological stress	Frequency	Percent	Valid percent	Cumulative Percent
Lower	88	72.00	72.00	72.00
Moderate	32	26.00	26.00	98.00
Higher	3	2.40	2.40	100.00
Total	123	100.00	100.00	100.00

As indicated in Table 5, though most of the stressors have been found having less contribution to the levels of stress of the students, 24.4% of the participants have agreed that item ten (tiresomeness) contributes most to a high level of stress which is high in comparison with the rest of the items. Item one (a daily headache, item four (breathing problem) and item five (increased heartbeat), item six (poor appetite) were, on the other hand, found having least contribution to the students level of stress.

**Table 5.** Frequency distribution for physiological stressors (for each item)

Physiological stressors	Never %	Rarely %	Sometimes %	Frequently %
1. Daily headache	59.30	22.00	14.60	4.10
2. Gastrointestinal problem	44.70	26.00	19.50	9.80
3. sleep problem	59.30	20.30	14.60	5.80
4. Breathing problem	82.10	7.30	7.30	3.30
5. Increased heart beat	69.10	14.60	12.20	4.10
6. poor appetite	51.20	21.10	17.10	10.60
7. Back pain	45.50	28.50	16.30	9.80
8. Unstable bodily temperature	45.40	30.90	16.30	7.30
9. Urinating	60.20	20.30	14.60	4.90
10. Tiresomeness	13.00	28.50	34.10	24.40

### *Social stressors*

As presented in Table 7, most of the respondents (75.6%) have agreed that they experience a low level of stress as a result of social factors. 23.6% of them have also experienced a moderate level of stress. However, only one person (0.8) was found having a high level of social stress.

**Table 6.** Frequency distribution of the level of social stressors

Levels of social stress	Frequency	Percent	Valid percent	Cumulative Percent
Lower	93	75.60	75.60	75.60
Moderate	29	23.60	23.60	99.20
Higher	1	0.80	0.80	100.00
Total	123	100.00	100.00	100.00

Table 7 depicted the frequency distributions of specific factors that contribute to students' social stress. Even though all the social stressors had less contribution to the higher level of stress of the college of education students but some stressors were exceptionally having much least contribution. For instance,

91.9% of participants have responded that they experienced a lower level of stress as a result of family stress - item one (lack of a good relationship with my family). 78.8% and 71.5% respondents also responded that they experienced a lower level of stress as a result of conflict with teachers stress - item ten (getting into conflict with teachers) and social conflict stress - item four (conflict with others) respectively. More to these items, item two (unable to enjoy meeting people), item 3 (lack of good relationships with others) and item nine (poor conflict resolution skill) were found having least contribution to the students' high level of stress. In contrary, some participants have reported that item five (preferring to be alone) and item six (insisting others on my opinion) have an average contribution to the students' level of stress.

**Table 7.** Summary of the frequency distribution of the level of social stressors

Social stressors	Never %	Rarely %	Sometimes %	Frequently %
1. Lack of good relationship with family	91.90	4.90	2.40	0.80
2. Unable to enjoy meeting people	59.30	23.60	8.00	8.90
3. Lack of good relationships with others	66.70	17.10	13.00	3.20
4. Conflict with others	71.50	19.50	8.20	0.80
5. Preferring to be alone	35.80	28.50	22.00	13.70
6. Insisting others on my opinion	21.10	28.50	29.30	21.10
7. Difficulty in dealing with others	45.50	23.60	22.00	8.90
8. Dealing with others nervously when they try to provoke me	43.90	28.50	20.30	7.30
9. Poor conflict resolution skill	50.40	30.10	16.20	3.30
10. Getting into conflict with teachers	78.80	17.10	4.10	0.00

### *Environmental Stress*

As presented in Table 8, 53.5% of the students have experienced a moderate level of stress, and 41.5% of the participants experience a high level of stress as well. The rest of the respondents, 4.9%, have experienced a low level of stress.

**Table 8.** Summary of the frequency distribution of the level of environmental stress

Levels of environmental stress	Frequency	Percent	Valid percent	Cumulative Percent
Lower	6	4.90	4.90	4.90
Moderate	66	53.70	53.70	58.50
Higher	51	41.50	41.50	100.00
Total	123	100.00	100.00	100.00

As presented in Table 9 , it was found that item two - lack of electric supply (66.7%), item nine - lack of well-functioning latrines and showers (62.6%), item seven -water supply problem (61.8%), item four - computer and internet access problem (46.3%) and item one - lack of recreational centres (36.6%), item eight - lack of quality health service (31.7%), and item ten - lack of adequate study rooms (30.9%) were found to cause high level of stress among the students.

**Table 9.** Summary of the frequency distribution for environmental stressors (for each item)

Environmental stressors	Never (%)	Rarely (%)	Sometimes (%)	Frequency (%)
1. Lack of recreational centres in the campus.	10.60	21.10	31.70	36.60
2. Lack of electricity in the campus	4.10	9.70	19.50	66.70
3. Lack of well-equipped dormitory	27.60	19.50	34.10	18.80
4. Difficulty in computer and internet access	14.60	14.60	24.40	46.40
5. Discomfort quality of the classroom settings	20.30	27.60	25.20	26.90
6. Unable to enjoy the institution's cafeteria service	25.20	20.30	31.70	22.80
7. Water supply problem in the institution	2.40	10.60	25.20	61.80
8. Low quality health service in the institution.	23.60	19.50	25.20	31.70
9. Terrible problem in latrine and shower service of the institution.	9.70	10.60	17.10	62.60
10. Disappointment due to the inadequate study rooms	21.10	18.70	29.30	30.90

### *Psychological Stressors*

As presented in Table 10, 70.7% of the participants have experienced a low level of stress, 26.8% moderate and only 2.40% high level of stress as a result of psychological stressors.

**Table 10.** Summary of the frequency distribution of the level of psychological stress

Levels of psychological stress	Frequency	Percent	Valid percent	Cumulative Percent
Lower	87	70.70	70.70	70.70
Moderate	33	26.80	26.80	97.60
Higher	3	2.40	2.40	100.00
Total	123	100.00	100.00	100.00

As indicated in the Table 11, the results revealed that item seven – pessimism or negative thoughts (73.2%), item five – low self-esteem and self-concept (70.7%), item three- I feel that lack of a clear vision, item one – feeling of inferiority (67.5%), item four – feeling of incompetence (62.6%), were found having the least contribution to the high level of stress of the students. On the hand, item ten – irrational thoughts (53.7%) was found the most stressful item causing high level of stress among the students. Besides, it was reported that item two – a feeling that everything done is an effort (21.1%) and item nine - dissatisfaction with one's college & department (19.5%) were found causing a high level of stress among the students.

**Table 11.** Summary of the frequency distribution for psychological stressors (for each item)

Psychological stressors	Never (%)	Rarely (%)	Sometimes (%)	Frequently (%)
1. Feeling of inferiority	67.50	17.10	11.30	4.10
2. Everything done is an effort	25.20	31.70	22.00	21.10
3. Lack of clear vision	70.70	11.40	12.20	5.70
4. Feeling of incompetence	62.60	26.80	6.50	4.10
5. Low self-esteem and self-concept	70.70	18.70	8.10	2.50

6. Poor memory power and concentration	52.80	27.60	14.70	4.90
7. Pessimistic or negative thoughts.	73.20	17.10	6.40	3.30
8. Lack of motivated	55.30	27.60	13.80	3.30
9. Dissatisfaction with college	43.10	18.70	18.70	19.50
10. Irrational thinking	18.70	13.00	14.60	53.70

### *Level of Stress (Overall)*

The research also determined the general level of stress of the students as a result of the five components of stress taken in the present study. Table 12 depicted that that most of the students 78 (63.4%) have a moderate level of overall stress. The rest of the students 43 (35%) and 2 (1.6%) have experienced a lower and higher level of stress respectively.

**Table 12.** Summary of the Overall frequency distribution of the level of stress

Overall stress levels	Frequency	Percent	Valid percent	Cumulative Percent
Lower	43	35.0	35.0	35.0
Moderate	78	63.4	63.4	98.4
Higher	2	1.6	1.6	100.0
Total	123	100.0	100.0	100.0

### *Level of stress and demographic factors*

#### **Association between the level of overall stress and gender**

As presented in Table 13, the result revealed that the majority of the male participants 37 (58.7%) out of 63 were found experiencing a moderate level of stress. The rest of male participants 26 (41.3%) were found having lower stress level. However, there was no any male student who experienced a high level of stress. Regarding the female participants, the majority of them, 41 (68.3%) out of 60 experienced moderate, 17 (28.3%) lower and 2 (1.6%) higher levels of stress. The frequency distributions of male and female indicated that they more or less had a similar level of stress even though female students a bit seemed more prone to stress than their counterparts. To test whether the association between the level of stress and gender was statistically significant, a Chi-Square test for independence was run. The chi-square test result indicated that there was no statistically significant difference in stress scores between male and female students  $\chi^2(2, N = 123) = 4.01, p = 0.13$ .

**Table 13.** Summary of cross-tabulation for Gender and level of stress

Gender		Level of overall stress			Total
		Lower	Moderate	Higher	
Male	Number	26	37	0	63
	%	41.30%	58.70%	0.00%	100.00%
Female	Number	17	41	2	60
	%	28.30%	68.30%	3.30%	100.00%
Total	Number	43	78	2	123
	%	35.00%	63.40%	1.60%	100.00%

### Association between the level of stress and academic performance

Table 14 revealed that majority of the students with lower CGPA 24 (60%) out of 40 experienced a moderate level of stress and the rest of the 16 (40%) were found having a lower level of stress. However, none of the low performing students was found experiencing a high level of stress. Similarly, the majority of the students with average CGPA 27 (64.3%) out of 42 were found having a moderate level of stress, and 15 (35.7%) have experienced a lower level of stress. 27 (65.9%) out of 41 high performing students have also experienced moderate, 12 (29.3%) lower and 2 (4.9%) higher levels of stress. As per the frequency distribution of level of stress and CGPA, the students seemed to have a similar level of stress regardless of their variation in academic performance. A Chi-Square test was determined to check whether students' level of stress significantly differed across their cumulative grade point average. The chi-square test result revealed no statistically significant difference in the level of stress across the grade point average of the students  $X^2(4, N = 123) = 4.70, p = 0.31$ .

**Table 14.** Summary of crosstabulation for academic performance and level of stress

CGPA		General Level of stress			Total
		Lower	Moderate	Higher	
1.75-2.39 - Lower CGPA	Number	16	24	0	40
	%	40.00%	60.00%	0.00%	100.00%
2.40-2.79 - Average CGPA	Number	15	27	0	42
	%	35.70%	64.30%	0.00%	100.00%
2.80-4.00 - Higher CGPA	Number	12	27	2	41
	%	29.30%	65.90%	4.90%	100.00%
Total	Number	43	78	2	123
	%	35.00%	63.40%	1.60%	100.00%

CGPA – Cumulative Grade Point Average

## Discussion

This research was aimed to examine the levels of academic, social, psychological, physiological, and environmental stress components of stress

among college students. Besides, the study attempted to explore the association of students' overall stress level with their gender and cumulative GPA. The results showed that majority of the students experienced moderate to high levels of academic and environmental stress, but low levels of psychological, social and physiological factors stress. Findings of the present study also discovered that there were no statistically significant association of students' gender and cumulative GPA with their overall stress scores.

With respect to the academic stress component, the present findings delineated that the majority of the participants have moderate academic stress, and some of them have a high level of stress. Studying for long hours and inadequate educational facilities were reported to be the most academic stress causing factors. Parallel to this finding, Abouserie (1994) as cited in Ranjita Misra and Castillo (2004) reported that students experience academic stress at foreseeable times each semester with the highest causes of academic stress resulting from taking and preparing for exams, grade competition, and a large amount of content to master in a small amount of time. Additionally, in concord to our finding, a Bataineh (2013) reported that college students are more stressed with financial problems, inadequate resources like computers, books, lecturers, and overload hours every semester as academic stressors. Apart from this, the majority of the participants reported that they do not bother too much about their lowered CGPA and with the satisfaction of the program of study albeit some participants have asserted that they feel stressed due to low CGPA.

The present finding about the levels of environmental stress pronounced that the majority of the students reported from moderate to high levels of stress as a result of environmental factors. Environmental stressors include electric, and water supply problems, inadequate and poor quality latrines and showers, limited computer and internet access, recreational centers, quality health service, and study rooms were found to be among the high level of stress casing factors among the students. It is not a surprise to observe college students in developing countries experiencing a higher level of stress associated with the low-quality learning environment. Because economic problems usually hamper the countries to provide quality and well-equipped campus infrastructure and essential services such as water and electric supply, internet access and recreational centers. Several previous findings corroborated these findings. For example, in a study conducted in Ghana, environmental factors were found to be the source of high level of stress among students (Azila-Gbettor et al., 2015).

About the physiological component of stress, previous studies such as Walton (2002) reported that college students with poor health habits like poor diet, lack of exercise, and inconsistent sleep patterns inflict high-stress levels. In contrary to these findings, in our study, the majority of the participants reported a lower level of stress as a result of various physiological problems. The low level of physiological stress in our sample might be due to two possible reasons. First, we speculate that the students might not have any physical health problems that can be sources of stress. Second, the students might not have been honest and assertive in their response about the physical health symptoms perhaps due to conservative culture.

Thawabieh and Qaisy (2012) found that university students experienced a moderate stress level and the main factor is the social factor, and this may be because students come from different cities and they have new relations. In

contrast, the findings of the present research indicated that the majority of the students experienced a low level of stress inflicted as a result of social stressors such as unhealthy relations with their families and teachers. The present finding concerning a psychological component of stress showed that the majority of the participants experienced a low level of stress as a result of psychological factors. However, Feng (1992) stated that setting high standard goals, being perfectionist, comparing self with others and self-degradation might be sources of students psychological stress.

Following the findings of Bhosale (2014) and Omoniyi and Ogunsanmi (2012), the present study showed that students' stress scores did not show statistically significant difference across their gender. However, it is also important to note that there are several studies which detected a significant difference in stress scores between males and female. For instance, Thawabieh and Qaisy (2012) presented that female students are more vulnerable to stress than males. This could be explained by the fact that females are more subjected to community pressure and they are still under the pressure of cultural habits. On the other hand, Khan et al. (2015) found that male students are more stress than female students which might be due to the high standard parental and social expectations. We guess that the self-contradictory results on the relations between gender and stress might be associated with methodological problems and sample variations. Many studies documented that students' high level of stress is negatively related to their academic performance (Bennett, 2003; Elias et al., 2011; Veena & Shastri, 2016). However, the present study, in line with findings of Jogaratnam and Buchanan (2004) and Azila-Gbetor et al. (2015), failed to detect a statistically significant association between stress and academic achievement. Surprisingly, Siraj et al. (2014) found that there is a positive relationship between stress levels and the academic performances of students. In this study, the respondents with a high and severe stress level were observed to have a higher cumulative grade point average. Finally, in the present study, the students' overall level of stress (i.e., averaged stress level for all the five components of stress) was found to be moderate, and this is parallel to several previous findings (Abouserie, 1994; Bataineh, 2013). This moderate level of stress seems to occur as the students in the college bother from various administrative problems and the college academic demands.

### *Limitations and future research directions*

The present research project endeavored to better understand the context of stress among college students from individual perspective using survey method. However, the self-report data always raise due consideration in interpretation and may have a potential impact on the truthfulness of the findings because of the social-desirability bias of the respondents. Hence, future studies might adopt mixed or multiple research approaches to maintain an accurate understanding of college students' stress. Since the present study surveyed a small sample size, findings and conclusions may not be sufficient to generalize to other college students' population. Therefore, future research may be directed to reproduce the study using large samples to enhance the external validity of the present findings. The current study was limited to quantitatively describe the existing stress condition of the students without establishing a causal relationship between

variables. Thus, researchers might plan to examine the causal relationship between college stressors and stress outcomes. Finally, the expert review of the instrument in the present study might not be enough to establish the validity of the instrument. Hence, future studies might plan to establish the psychometric properties of the instrument using other advanced statistical techniques like factor analysis.

## Conclusion

This research indicates that the majority of the College of Education students have a moderate level of stress. It also showed that environmental and academic components of stress were found to be higher among the students. Explicitly speaking, lack of fair grading system, academic overload, difficulty in dealing with one's academic problems, and poor subject matter and pedagogical competence of instructors were among the academic stressors that inflict high academic stress. In regard to the environmental stressors, lack of electric supply, lack of well-functioning latrines and showers, water supply problem, computer and internet access problem, lack of recreational centers, lack of quality health service, and lack of adequate study rooms were found the most stressful items causing high level of environmental stress among the students.

On the other hand, students reported a low level of social, psychological and physiological components of stress. According to the findings of this study, no statistically significant difference between the level of stress and gender. Both male and female participants were found experiencing a moderate level of stress. Similarly, the study reveals that there is no statistically significant association between the level of stress and CGPA.

## Implications

This study in its part made an effort to analyze the overall level of stress and its constituents among college students, which may enhance the comprehensive understanding of scholars on the area. Practically, the findings of the study can benefit people who deal with college students' life. For instance, the college communities are at the forefront of reducing the stress feelings of their students. With this regard, the college communities can improve the quality of the learning environment. The concerned bodies should work to combat problems related to electricity, water supply, restrooms, and recreational centers. In the academic part, the college should apply measures to improve the subject matter and pedagogical competence of instructors, inadequate educational facilities, and academic overloads. Besides, conducting regular communications and discussions (like seminars, meeting) with their students are remarkable requirements. More importantly, the college should strengthen the provision of guidance and counseling services that deal with the mental health problems of their students and subsequently promote their psychological, social and emotional wellbeing.

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