



The Impact of Stress on Students' Academic Performance

Emmanuel Akanpaadgi*, Felicia Binpimbu and Esmond Naalu Kuuyelleh

Department of Secretaryship & Management Studies, Faculty of Business & Management Studies, Bolgatanga Technical University, Bolgatanga-Upper East Region, Ghana

*Corresponding author: Akanpaadgi E, Department of Secretaryship & Management Studies, Faculty of Business & Management Studies, Bolgatanga Technical University, Bolgatanga-Upper East Region, Ghana; E-mail: akanpaadgi@yahoo.com

Abstract

This study assessed the impact of stress on the academic performance of students in the Bolgatanga Technical University. It investigated the sources of stress, the effects of stress and how students can overcome stress. The quantitative research strategy was used for the study. The research data collection was preceded by a thorough literature review to provide an in-depth understanding of the research topic. A structured questionnaire designed in the form of a Likert-Scale was administered to One Hundred and Forty (140) students who were the participants of the study. The data was analysed using the Statistical Package for Social Sciences (SPSS) and the results were presented in the form of descriptive statistics using the Relative Importance Index (RII). The study revealed that several factors namely high cost of living, poor time management, limited facilities, difficult relations and the workload caused stress among students of the Bolgatanga Technical University. It was concluded that stress has a negative impact on the academic performance of students. The study recommends that the guidance and counselling department of the university should be strengthened and be made known to students. In addition, guidance programmes such as seminars and public lectures on stress awareness should be organized periodically for students so that they can be adequately equipped with the needed skills to handle issues related to academic stress better.

Keywords: Academic performance; Emotional intelligence; Pressure; Stress; Tertiary students

Introduction

Stress is an inevitable condition which is widespread and occurs in various aspects of every human endeavour. Posited that stress and its effects are common phenomena which affect all manner of persons regardless of age, sex, socio-economic status, political orientation, ethnicity, faith and career [1]. Nowadays, students in tertiary educational institutions are saddled with stress which can affect their academic performance [2]. Stress among students of higher educational institutions appear to be more prevalent now than ever with some of the causes being poverty, information overload, unrealistic expectations, poor time management and lack of infrastructure for recreation [3]. Students of tertiary institutions may be looking forward to an opportunity to have some excitement since they are no longer under the strict supervision of parents and school authorities because they are considered as adolescents; however, life in tertiary educational institutions can be very stressful due to high cost of living, difficult relationships, lack of

guidance and over indulgence [4]. Besides, there is so much to be done within a short period leaving very little time for extracurricular activities which further exacerbates stress. Stress can be a catalyst to good academic performance if properly managed; but can also be a Waterloo to students when not properly handled as some students have suffered depression, high blood pressure, migraine and stroke. Students' ability to manage stress determines their academic performance [5]. Those who are able to effectively manage stress tend to perform better than those who are not. Stress has generated a lot of interest in recent times especially among members of academia. As a result, some studies have been done on the impact of stress on students' academic performance. study on the effect of stress on students' academic performance at Ramat Polytechnic in Maiduguri, Borno State in Nigeria; study of the impact of stress on the academic performance of secondary school students in the Vehari District of the Punjab Province of Pakistan; research on academic stress among undergraduate students of King Saud University in Riyadh – Saudi Arabia; study

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of the effect of perceived academic stress on students' performance in Lahore in Pakistan; and research on the impact of school stress on students' achievement and emotional stability among remedial students of senior high schools in the Greater Accra Region of Ghana [6-9]. This study sought to assess the impact of stress on the academic performance of university students with particular focus on students of the Bolgatanga Technical University in the Upper East Region of Ghana.

Literature Review

Stress can be explained as the inevitable result of demands made on the physical and emotional well-being of people [10]. It reflects the general response by individuals to external factors which are not usually pleasant. Described stress as a situation in which individuals often find themselves as a result of an inert desire to pursue an ambition which is challenging but the outcome is rewarding [11]. There are several reasons why individuals suffer stress. The reasons include contesting an election, starting a new project, work related stress, marital problems, unemployment, financial challenges and pursuing an academic programme. Perceived stress in terms of the physical and mental demands placed on students trying to pursue a programme at an institution of higher learning [12]. The pursuit of academic laurels and the zeal to excel is one of the inevitable sources of stress due to the pressure to accomplish so much within a limited period [13]. As a result of the pressure, many university students suffer from fatigue, irritability, loss of appetite, insomnia and sometimes depression [14]. Categorized stress into acute, chronic and traumatic in order to give proper meaning to the concept of stress. According to them, acute stress is very common but not easily recognizable among people as it is often temporal and does not result in physical and mental damage [15]. It emanates from short term setbacks in life such as trying to complete a task before a deadline. Once the stressor is no more, the victim is relieved of the stress. Chronic stress is one that builds up over a period and tends to last longer than acute stress. It is mostly caused by difficult relationships, loss of business opportunity, loss of a dear one, chronic illness, harsh weather conditions and not being able to achieve an ambition. Chronic stress, if not properly managed, can linger on and cause irreparable damage to the body and the brain. Traumatic stress is often related to disasters where a sudden tragic event such as a motor vehicle accident or an explosion leaves people devastated and traumatized. Some victims of such events may recover shortly after; while others are permanently affected by the trauma. Some models and theories have been developed by researchers to explain the impact of stress on students' academic performance; however, the Lazarus Stress Theory and the Transactional Stress Model are better analytical tools for identifying stressors and their effects on students' academic performance [16]. No condition by itself is stressful; it all depends on how an individual reacts to the

situation based his personal feelings. Individuals are likely to respond to situations based on their emotional stability. An emotionally stable person is more likely to perceive stress as a spur to action; while an emotionally unstable person will view stress as an uncomfortable and depressing feeling. In an academic environment, students with low emotional intelligence are more likely to be stressed as assignments and other academic exercises pile up; but those with high emotional intelligence will rise to the occasion and complete all tasks on schedule [17]. One's ability to cope with stress is therefore dependent on his emotional intelligence. Emotionally unintelligent persons may be prone to chronic stress because they are unable to withstand constant pressure. Organizations seeking to recruit chief executives should therefore look out for individuals with high emotional intelligence.

Methodology

This study used a case study design because of its viability and flexibility in terms of data collection and methods of analysis. This design enabled the researchers to discover as much as possible useful insight and an in-depth understanding of the impact of stress on the academic performance of technical university students at the Bolgatanga Technical University. The research adopted the quantitative research approach. A quantitative approach is a type of approach in which quantitative techniques in the form of descriptive and inferential statistics are used to present the primary data of the study [18]. It is therefore suitable for examining the strength and magnitude of relationships; likewise the effect or impact of one variable on another. The study utilized both primary and secondary sources of data. The secondary data used for this study are publications from journals, textbooks and reports. The primary data were collected directly from the respondents through the administration of structured close-ended Likert-scale questionnaires composed by the researchers to full-time students of the School of Business and Management Studies of the Bolgatanga Technical University.

The data was collected from a sample size of One Hundred and Forty (140) purposively selected students for the study due to the homogenous nature of the target population. The questionnaire had four sections: the first section included information regarding respondents' demographic features, the second section covered information regarding causes of stress among technical university students, the third section covered major questions in relation to the impact of stress on academic performance, and the fourth section covered information regarding strategies that can be used to manage stress among technical university students.

After retrieving the questionnaires, the responses were coded and fed into the Statistical Package for Social Sciences (SPSS version 20) for data aggregation and subsequent analysis. The following statistical techniques were employed for the data analysis: Descriptive statistics were used in computing frequencies and

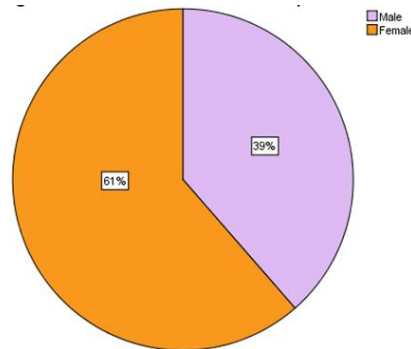
percentages of the demographic data of the respondents; while the Relative Importance Index (RII) = $\Sigma W / (A \times N)$ was used to analyse the Likert-scale questions where ΣW is the summation of weights, A is the highest range (5) and N is the sample size (140).

Data Presentation and Analysis

This chapter deals with the analysis and presentation of data collected from the respondents whereby tables and charts showing percentages were used to present the data.

Presentation of demographic data

This section of the data presentation is the preliminary analysis which focuses mainly on the profile of respondents. By this preliminary analysis, inference is made on the respondents' age, gender, and department, level in the university, residential status and marital status. This analysis is very important as it enables the researchers have background information about the participants.



Source: Field Survey (August, 2022)

Figure 1: Gender Distribution of Respondents.

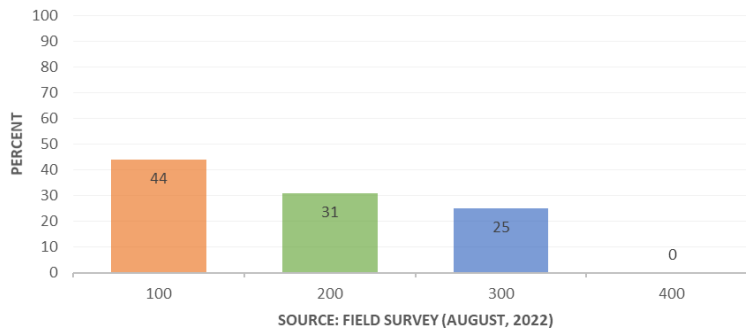
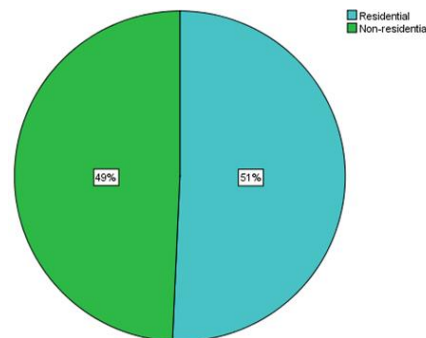
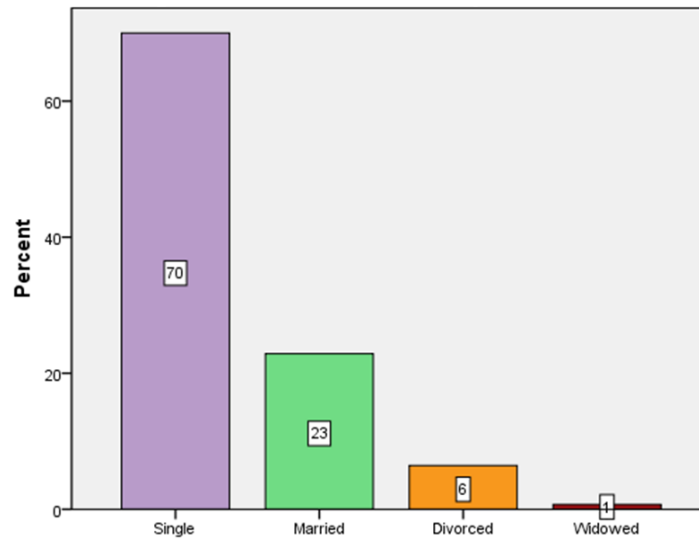


Figure 2: Level of Respondents.



Source: Field Survey (August, 2022)

Figure 3: Residential Status of Respondents.



Source: Field Survey (August, 2022)

Figure 4: Marital Status of Respondents.

Table 1: Age Group of Respondents.

Age Group	Frequency	Percent
18-26	95	68
27-35	44	31
36-44	1	1
Total	140	100

Source: Field Survey (2022)

Table 2: Department Distribution of Respondents.

Department	Frequency	Percentage %
Accounting	47	34
Procurement	54	38
Marketing	10	7
Management	29	21
Total	140	100

Source: Field Survey (2022)

Table 3: Factor Analysis on the Causes or Source of Stress – Stressors.

NO.	Factor	Frequency					Weighting	RII Value	Ranking
		SA 1	A 2	NC 3	D 4	SD 5			
i.	Inadequate facilities	44	78	75	96	40	333	0.476	5 th
ii.	Frequent assignments	22	108	42	160	50	382	0.546	4 th
iii.	Unfriendly staff/lecturers	21	90	45	192	55	403	0.576	3 rd
iv.	Financial problems	12	56	30	160	250	508	0.726	1 st
v.	Lack of interest in the course	34	168	12	40	40	294	0.420	6 th
vi.	Irritating classmates	21	66	48	176	130	441	0.630	2 nd

Source: Field Survey (2022)

Table 4: Factor Analysis on the Signs or Symptoms of Stress.

NO.	Factor	Frequency					Weighting	RII Value	Ranking
		SA 1	A 2	NC 3	D 4	SD 5			
i.	Frequent headaches	33	114	30	68	115	360	0.514	4 th
ii.	Nervousness	16	148	90	68	15	337	0.481	7 th
iii.	Fatigue	24	120	78	100	25	347	0.496	6 th
iv.	Inability to to concentrate in class	29	114	30	148	35	356	0.509	5 th
v.	Prone to making errors	33	140	30	96	15	314	0.449	8 th
vi.	Loss of appetite	20	94	54	172	60	400	0.571	1 st
vii.	Easily get irritated	19	96	99	124	45	383	0.547	3 rd
viii.	Sleepless nights	18	116	39	156	60	389	0.556	2 nd

Source: Field Survey (2022)

Table 5: Factor Analysis on the Effects of Stress on Students.

NO.	Factor	Frequency					Weighting	RII Value	Ranking
		SA 1	A 2	NC 3	D 4	SD 5			
i.	Forgetfulness	40	114	36	124	5	319	0.456	7 th
ii.	Less appetite for learning	17	136	24	176	15	368	0.526	4 th
iii.	Reduces class attendance	22	120	24	164	45	375	0.536	3 rd
iv.	Inability to submit assignments on time	32	82	21	184	70	389	0.556	2 nd
v.	Sleepless nights	24	124	36	156	15	355	0.507	5 th
vi.	Poor performance in exams	32	106	39	148	25	350	0.5	6 th
vii.	Lack of interest in extra-curricular activities	22	94	21	152	130	419	0.599	1 st

Source: Field Survey (2022)

Table 6: Factor Analysis on How to Manage Stress.

NO.	Factor	Frequency					Weighting	RII Value	Ranking
		SA 1	A 2	NC 3	D 4	SD 5			
i.	Regular exercise	21	202	18	32	20	293	0.419	3 rd
ii.	Making time to rest	21	90	129	44	100	384	0.549	1 st
iii.	Submitting assignments on time	30	186	15	44	5	280	0.400	4 th
iv.	Learning from the beginning to the end of the semester	28	176	9	40	55	308	0.440	2 nd
v.	Limiting attendance to functions	24	168	45	56	15	308	0.440	2 nd
vi.	Attendance of guidance and counseling sessions	32	192	18	20	5	267	0.381	5 th

Source: Field Survey (2022)

Age distribution of respondents

Table 1 below depicts the age group distribution of respondents obtained from the questionnaire administered. (Table 1) above

shows that 95 respondents representing 68% of the sampled population are between 18 and 26 years of age while 44 respondents representing 31% are between 27-35 years of age with

only 1 respondent representing 1% is between 36 and 44 years of age.

Gender distribution of respondents

Figure 1 below depicts the gender distribution of respondents obtained from the questionnaires administered. From (Figure 1) above, 54 respondents representing 39% of the sampled population are male's while the remaining 86 respondents representing 61% of the sampled population are females.

Department distribution of respondents

Table 2 below depicts the department distribution of respondents obtained from the questionnaires administered. (Table 2) above shows that 47 respondents representing 34% of the sampled population were surveyed from the Accounting department, 54 respondents representing 38% from the Procurement department, 10 respondents representing 7% from the Marketing department while the remaining 29 respondents representing 21% from the Management department.

Level of respondents

Figure 2 depicts the level of respondents as obtained from the questionnaire during the survey. The statistics from (Figure 2) shows that 62 respondents representing 44% of the sampled population are level 100 students, 43 respondents representing 31% are level 200 students and 35 respondents representing 25% are level 300 students. There was a zero response for level 400 and this is as a result of the fact that the Bolgatanga Technical University is yet to have level 400 students.

Residential status of respondents

Figure 3 presents the residential status of respondents in the university as obtained from the questionnaires in the survey. Above depicts that out of the 140 respondents sampled for this survey, 71 representing 51% are resident (residential) in the university's main campus while the remaining 69 representing 49% are resident outside (non-residential) the university's main campus.

Marital status of respondents

Figure 4 below presents the marital status of respondents as obtained from the questionnaires in the survey. above depicts that out of the 140 respondents sampled for the survey, 98 respondents representing 70% are single, 32 representing 23% are married and 9 respondents representing 6% are divorced while 1 respondent representing 1% is widowed.

Causes of Stress

One of the objectives of this study is to identify the causes of stress among students in the Bolgatanga Technical University. The table

below represents participants' opinions on the causes of stress among students in the university. Respondents were asked to indicate their level of agreement using a Likert scale where SA = Strongly Agree, A = Agree, NC= Not Certain, D = Disagree, and SD = Strongly Disagree. Their responses are presented in the table below. (Table 3) above shows a summary of the rankings of the causes or sources (stressors) among students in the Bolgatanga Technical University using the Relative Importance Index (RII). A critical observation of the ranked causes of stress revealed the following results; "financial problems" was ranked first on the causes of stress with an RII of 0.726. Again, "irritating classmates" was ranked second among the causes of stress with a corresponding RII of 0.630. "Unfriendly Staff/lecturers" was ranked third with an RII of 0.576. "Frequent assignments" was ranked fourth on the causes of stress among students in the university with a corresponding RII of 0.546; while "inadequate facilities" was ranked fifth with an RII of 0.476. "Lack of interest" in the course was ranked sixth with an RII of 0.420.

Signs or Symptoms of Stress

One of the objectives of this study is to identify the specific areas of stress in the lives of students in the Bolgatanga Technical University. The table below represents participants' opinions on the signs or symptoms of stress among students in the university. Respondents were asked to indicate their level of agreement using a Likert scale where SA = Strongly Agree, A = Agree, NC= Not Certain, D = Disagree, and SD = Strongly Disagree. Their responses are presented in the table below. (Table 4) above shows a summary of the rankings of the causes or sources of stress (stressors) among students in the Bolgatanga Technical University using the Relative Importance Index (RII). A critical observation of the ranked causes of stress revealed the following results: "Loss of appetite" was ranked first with a corresponding RII of 0.571 as being the first sign they experience when stressed; "sleepless nights" was ranked second with an RII of 0.556 as being a sign they feel when stressed; "easily irritated" ranked as the third sign of stress with an RII of 0.547; "frequent headaches" was ranked fourth with an RII of 0.514 while "inability to concentrate in class" was ranked fifth with an RII of 0.509. "Fatigue" was the sixth ranked sign of stress experienced by students with a corresponding RII of 0.496; "nervousness" was ranked seventh with an RII of 0.481 and the eighth ranked factor with a corresponding RII of 0.449 is "prone to making errors".

Effects of stress on the academic performance of students

One of the objectives of this study is to identify the effects or impact of stress on the academic performance of students in the Bolgatanga Technical University. The table below represents participants' opinions on the effects of stress. Respondents were asked to indicate their level of agreement using a Likert scale



where SA = Strongly Agree, A = Agree, NC= Not Certain, D = Disagree, and SD = Strongly Disagree. Their responses are presented in the table below. (Table 5) above shows a summary of the rankings of the effects of stress on students in the Bolgatanga Technical University using the Relative Importance Index (RII). A critical observation of the ranked causes of stress revealed the following results: “Lack of interest in extra-curricular activities” was ranked first with a corresponding RII of 0.599; Second ranked on the list of effects is “inability to submit assignments on time” with an RII of 0.556; “reduces class attendance” was ranked third with an RII of 0.536; “less appetite for learning” was ranked fourth with a corresponding RII of 0.526; the fifth ranked was “sleepless nights” with a corresponding RII of 0.507; while “poor performance in exams” was the sixth ranked effect with an RII of 0.5.

Managing stress among students

One of the objectives of this study is to offer solutions that will help students overcome stress situations in the Bolgatanga Technical University. The table below represents participants’ opinions on how they manage stress which would eventually provide the researcher with proper knowledge to suggest appropriate solutions to help students overcome stress situations. Respondents were asked to indicate their level of agreement using a Likert scale where SA = Strongly Agree, A = Agree, NC= Not Certain, D = Disagree, and SD = Strongly Disagree. Their responses are presented in the table below. (Table 6) above shows a summary of the rankings of the effects of stress on students in the Bolgatanga Technical University using the Relative Importance Index (RII). A critical observation of the ranked analysis of how to manage stress revealed the following results: “making time to rest” is ranked first on how students in the Bolgatanga Technical University manage stress with a corresponding RII of 0.549; “limiting attendance to functions” and “learning from the beginning to the end of the semester” were both ranked second with their corresponding RII value being 0.440; “regular exercise” was ranked third with an RII value of 0.419; “submitting assignments on time” was ranked fourth with an RII value of 0.400; while the fifth ranked on the list of factors of managing stress in the university by students is “attendance of guidance and counselling sessions” with a corresponding RII of 0.381.

Discussion

The study revealed that majority of students in the School of Business and Management studies are within the age group of 18-26 (67.9%). The demographic data also revealed that the female population dominated the sample. Furthermore, it was revealed that the various departments in the School were fairly represented in the sample. The number of student’s resident within and outside campus were evenly spread (50.7% residential and 49.3% non-

residential). The inference could be that both residential and non-residential students experience some form of stress that may have an impact on their academic performance. The causes of academic stress in the School were ranked in a descending order: financial problems, irritating classmates, unfriendly attitude of staff/lecturers, frequent assignments for students, inadequate facilities and lack of interest in course last. The findings confirm that the factors which cause stress among students can be found in the Bolgatanga Technical University. The results obtained from the analyses of the data on the symptoms of stress revealed that the following signs; loss of appetite, sleeplessness, irritability, frequent headaches, inability to concentrate in class, fatigue, nervousness and prone to making errors with an average RII value of 0.5 were all experienced by the respondents. This confirms the assertion by that due to pressure many university students suffer from fatigue, irritability, loss of appetite, insomnia and sometimes depression. The study further revealed that academic stress affects students’ performance. Some identified effects of stress by the respondents during the survey were poor performance in exams, weak memory, lack of appetite for learning, low attendance in class, sleepless nights, and lack of interest in extra-curricular activities. The findings buttress claim that stress is a product of the physical and mental demands placed on students trying to pursue a programme at a university. On how to manage stress, it was found out that students consciously or unconsciously adopted the following ways; making time to rest, making time to exercise, minimizing the rate at which they attend functions, completing and submitting assignments on time, not waiting until when it is getting to the end of the semester before they start learning and attending guidance and counselling sessions. To ameliorate the negative effects of stress on students, the researchers believed that the guidance and counselling department of the university should be strengthened and be made known to students. Besides, seminars and public lectures on stress awareness should be organized periodically for students so that they can be adequately equipped with the needed skills to handle issues related to academic stress. Lecturers and other academic staff of the university must have cordial interactions with students. The central government should also work towards improving the facilities on campus. Finally the university authorities and the Students’ Representative Council should collaborate in providing sporting facilities and activities for students.

Conclusion

The researchers observed that that stress has a moderate but significant association with academic performance. Higher levels of stress result in poor academic performance. Students who suffer from acute stress may experience negative physical and mental health outcomes which could affect their academic performance. Even though stress can sometimes have a positive impact on

students' academic performance, the findings show that to a large extent, it affects students negatively. The inability of students to cope with stress often leads to poor academic performance. The extent to which the level of study influences the relationship between stress and academic performance was not part of this study. This could be a topic for research by researchers in this area in subsequent studies.

Conflict of Interest

The authors hereby declare that there is no conflict of interest with regards to the publication of this research article.

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