



# Too Much Academic Stress: Implications on Interpersonal Relationships and Psychological Well-being among Final Year University of Ghana Students

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## **Authors' contributions**

*This work was carried out in collaboration between all authors. Author INO designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript.*

*Authors PA and MGQ managed the analyses of the study. Author JA managed the literature searches. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Academic stress is endemic in tertiary institutions. It has the propensity to affect well-being and interpersonal relationships of students. The study adopted the cross-sectional survey design to assess the influence of academic stress on interpersonal relationships and psychological well-being among final year students at the University of Ghana. Two hundred final year students participated in the study through the use of the convenient sampling technique. The Student Academic Stress Questionnaire, Ryff Psychological Well-Being Scale and the Interpersonal Solidarity Scale were used in data collection. The multivariate analysis of variance [MANOVA] was used in data analysis.

The results indicated that students who perceived lower levels of academic stress had good interpersonal relationships and higher levels of psychological well-being than students who perceived higher levels of academic stress. There were no significant gender differences in levels of interpersonal relationships and psychological well-being. The findings imply that to improve the well-being and levels of interpersonal relationships among students, academic stress must be reduced to the barest minimum.

*Keywords: Gender; academic stress; interpersonal relationships; psychological well-being.*

## 1. INTRODUCTION

Poor psychological well-being and interpersonal relationships are becoming increasingly conspicuous issues among university students. Psychological well-being and interpersonal relationships are very important concepts because of the extended impacts on other areas of students' lives such as cognitive functional and physical health [1,2].

Psychological well-being is a state of mind anticipated for all and sundry. As indicated by [3], psychological well-being focuses on the effective functioning of individuals. Psychological well-being encompasses an extensive range of life including health, social, physical, mental, emotional and spiritual domains [4]. Poor psychological well-being is a great worry to students because it has a significant bearing on the daily lives and academic performance of students.

Aside from psychological well-being, the relationship students form with others shapes their mindset and motivates them to perform effectively. Interpersonal relationships deal with the perceived responsiveness of another to emotionally self-relevant disclosures that reflect key aspects of one's core psychological self [5]. The primary functional argument of interpersonal relationships is that they serve as social supports and affect people's mental and physical health [4].

The experience of positive well-being and good interpersonal relationships is related to more creative thinking and higher academic performance [6]. Research on poor psychological well-being and interpersonal relationships among university students proves the effect of low levels of psychological well-being and interpersonal relationships on students' academic performance and future success [5]. It is therefore imperative to assess the factors that decrease psychological well-being and lead to poor interpersonal relationships among university students.

Students are confronted with a variety of problems that have negative consequences on their psychological well-being and interpersonal relationships [4]. One of these problems is escalated levels of academic stress. Stress is a subjective phenomenon, distinct to everyone and to each unique setting. Irrespective of a student's level of study, relentlessly dealing with stress can have an enormous influence on their psychological well-being and interpersonal relationships [5]. Academic stress refers to a situation where students feel that everything seems to have become overloaded with their academic work and wonder whether they can cope with the pressures placed upon them [6]. While the academic load obliges that students face a sequence of peak eras such as midterms and end of semesters, there is a somewhat persistent underlying pressure to finish an imminent assignment especially during the final years in the university [7,8].

Extant studies [9,10] have indicated a significant impact of academic stress on psychological well-being among students. Other researchers [11], [12] have also indicated that academic stress negatively affects students' interpersonal relationships. Another study revealed that there was a significant negative impact of academic stress on students' psychological well-being [13]. Similarly, a study [5] examined the impact of academic stress on the well-being of students in Ghana. The findings indicated a negative relationship between academic stress and psychological well-being. Moreover, [13] found that university students who experience stressful academic life report poor interpersonal relationships.

The impact of gender on interpersonal relationships and psychological well-being has also been reported by earlier researchers. A study by [14] revealed higher levels of psychological well-being among males compared to females. Another study [4] however found no gender variances in psychological well-being. Similarly, [15] indicated no gender significant

difference in psychological well-being. Moreover, [16] also reported no gender differences in interpersonal relationships.

From the literature thus far reviewed, there is evidence of the significant impact of academic stress on psychological well-being and interpersonal relationships among students. Despite the significant impact of academic stress on well-being and interpersonal relationships among students, to date, only a handful of studies have been conducted among university students in Ghana [5]. A researcher [5] noted that most of the studies on academic stress were conducted in Europe. This is startling, given that students in Africa encounter hefty levels of academic stress due to the lack of infrastructure and facilities for academic work. It is based on this that the current study sought to investigate if academic stress has a significant impact on students' interpersonal relationships and psychological well-being among Ghanaian students. The study also assesses whether males and females differ in levels of interpersonal relationships and psychological well-being.

Accordingly, the researchers predicted that:

1. Students who perceived higher academic stress will have lower psychological well-being than students who perceived lower academic stress.
2. Students with lower levels of academic stress are more likely to have better interpersonal relationships than students with higher levels of academic stress
3. There will be higher levels of interpersonal relationship and psychological well-being among male students than among female students.

## 2. METHODS

### 2.1 Participants

The population for this study consisted of University of Ghana final year students. The University of Ghana was preferred because it is the biggest university in Ghana and it is also comprised of students from other regions with diverse backgrounds. Only final year students were used because of the heavy academic burden students in their final years encounter.

The convenience sampling technique was used to recruit a total of 200 respondents consisting of 100 males and 100 females for the study. The

use of convenient sampling technique helped in getting adequate respondents who were readily available and also willing to take part in the study.

### 2.2 Design

Since this study was interested in obtaining self-report data on academic stress, interpersonal relationships and psychological well-being of University of Ghana final year students, the most fitting design adopted for the study was the cross-sectional survey. The cross-sectional design helped in soliciting information from respondents in a comparatively short period.

### 2.3 Measures

Three scales were used in measuring the underlying variables of interest. They included measures of academic stress, psychological well-being and interpersonal relationships among the students. A measure was also self-developed to assess demographic characteristics of the respondents including gender, age, and faculty of study. The scales used are categorically described below.

#### 2.3.1 Student-Life Stress Inventory [SLSI]

The Student-Life Stress Inventory (SLSI; 17) was used to measure academic stress. The SLSI is a 51-item inventory consisting of two sections. The first section measures academic stressors and the second section measures reactions to stressors. Only the first section consisting of 23 items was used because it measured academic stressors. The general SLSI has a Cronbach alpha of .81 and the academic stressors subsection has a Cronbach alpha of .79 [17]. Scores to each item are awarded based on 5-point Likert responses ranging from 1 [never] to 5 [most of the time]. Total scores ranged from 23 to 115 with scores of 23 – 65 classified as a low level of academic stress whilst a score of 66 – 115 was classified as a high level of academic stress.

#### 2.3.2 Ryff Psychological Well-being Scale [RPWS]

The psychological well-being of the respondents was measured using the Ryff Psychological Well-Being Scale (RPWS; [18]) which measures multiple facets of psychological well-being. These facets include social, emotional, intellectual and physical wellness. The short version of RPWS (20 items) was used. The scale has a reliability of .89. Response to each item on

the scale is on a 5-point Likert ranging from strongly agree to strongly disagree. Total scores ranged from 20 to 100 with higher scores indicating higher levels of psychological well-being.

### **2.3.3 Interpersonal Solidarity Scale [ISS]**

Interpersonal relationships were also measured using the 30-item Interpersonal Solidarity Scale [ISS; 19]. The ISS measures the feeling of intimacy between people that develop as a result of shared thoughts, similarities, and intimacy. The scale has a Cronbach alpha of .90 [19]. Each item is scored based on the responses on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Total scores ranged from 0 to 120 with higher scores reflecting higher levels of interpersonal relationships.

## **2.4 Procedure**

Before data collection commenced, ethicality of the study was sought from the head of the Psychology Department of the University of Ghana. The questionnaires were filled by the respondents in their lecture rooms. The purpose of the study was explained to the students before administering the questionnaires. It took approximately 25 minutes for each respondent to complete the questionnaire. The data were collected over a period of 1 week.

## **3. RESULTS**

### **3.1 Demographic Characteristics**

Two hundred students consisting of an equal number of males (100) and females (100) between the ages of 20 and 25 with a mean age of 22.8 years participated in the study. The respondents were selected from 5 faculties namely: Arts ( $n=49$ ), Science ( $n=44$ ), Social Studies ( $n=61$ ), Business School ( $n=34$ ) and Engineering ( $n=12$ ). (Table 1).

### **3.2 Data Analysis**

Three hypotheses were tested using the SPSS v20. All the hypotheses were analyzed using the multivariate analysis of variance [MANOVA]. This is because the study was interested in discovering the effect of one factor that is academic stress or gender on more than one outcome variable [interpersonal relationships and psychological well-being]. These outcome variables were measured on an interval scale.

The differences in psychological well-being and interpersonal relationship between students with high academic stress and those with low academic stress [hypotheses 1 and 2] were analyzed using the MANOVA [see Table 2]. The MANOVA was again used to compute the significant differences in scores on psychological well-being and interpersonal relationships between males and females [hypotheses 3 and 4] [see Table 3].

The results of the study presented in Table 2 indicate a significant impact of academic stress on psychological well-being [ $F_{[1, 196]} = 16.454, p < 0.01$ ] and interpersonal relationships [ $F_{(1, 196)} = 5.197, p < 0.05$ ]. This means that students who perceived low levels of academic stress had higher levels of psychological well-being [ $M=41.90, SD=14.55$ ] and stronger interpersonal relationships [ $M=27.03, SD=6.68$ ] than the levels of psychological well-being [ $M=34.32, SD=10.59$ ] and interpersonal relationships [ $M=24.93, SD=6.08$ ] of students who perceived high levels of academic stress.

Conversely, there was no significant gender difference in psychological well-being [ $F_{[1, 196]} = .287, p > 0.05$ ] and interpersonal relationships [ $F_{(1, 196)} = .159, p > 0.05$ ]. This means that the levels of psychological well-being [ $M=39.61, SD=14.95$ ] and interpersonal relationships [ $M=25.70, SD=6.50$ ] of males were not significantly different from the levels of psychological well-being [ $M=37.93, SD=11.96$ ] and interpersonal relationships [ $M=25.94, SD=6.34$ ] of females [See Table 3].

## **4. DISCUSSION**

The results of the study indicated that low levels of academic stress increases the development of psychological well-being and augments good interpersonal relationships. As observed in the study, the respondents' scores on the RPWS and the ISS were higher among students with low academic stress indicating higher levels of psychological well-being and interpersonal relationships than those who perceived high academic stress. This confirmed the researchers' first and second predictions that students who perceived low academic stress would also perceive themselves to have good psychological well-being and better interpersonal relationships than students who perceived themselves to have low academic stress.

**Table 1. Demographic distribution of respondents**

Demographic Variables	Males N=100 Mean [SD]	Females N=100 Mean [SD]	Total N=200 Mean [SD]
Age	23.05 [1.04]	22.49 [.87]	22.78 [.96]
<b>Academic faculties</b>			
Arts	22	27	49
Science	18	26	44
Social studies	36	25	61
Business	16	18	34
Engineering	8	4	12

**Table 2. Impact of academic stress on psychological well-being and interpersonal relationships**

Variable	Low stress n=116 Mean [SD]	High stress n=84 Mean [SD]	F	df	P
Psychological well-being	41.90 [14.55]	34.32 [10.59]	16.454	[1, 196]	.000*
Interpersonal relationship	27.03 [6.68]	24.93 [6.08]	5.197	[1, 196]	.024**

\*  $P < 0.01$  level, \*\*  $P < 0.0$  level [1-tailed test]

**Table 3. Gender differences in psychological well-being and interpersonal relationships**

Variable	Males (n=100) Mean (SD)	Females (n=100) Mean (SD)	F	df	P
Psychological well-being	39.61 (14.95)	37.83 (11.96)	.287	(1, 196)	.593
Interpersonal relationship	25.70 (6.50)	25.94 (6.34)	.159	(1, 196)	.691

$P > 0.05$

The perception of poor psychological well-being among students who perceived higher levels of academic stress corroborates with extant studies which indicated that higher levels of academic stress predict lower levels of psychological well-being [5,10,20]. According to [9] students with higher levels of academic stress tend to have lower levels of depression and anxiety, as well as lower levels of psychological well-being. The significantly negative impact of academic stress on the psychological well-being of students could be due to the fact that stress suppresses students' immune systems, which causes increased susceptibility to bugs and viruses, as well as chronic health problems like headaches. The suppressing of the immune system leads to poor health and psychological well-being. Stress can also cause disease and affects the academic progress of students making it difficult for them to function psychologically [21].

The poor interpersonal relationships among students who perceived higher levels of academic stress also agree with previous studies [12,13] that found that higher academic stress decreases interpersonal relationships among

students. Researchers [11] have offered support to this finding by explaining that high academic stress increases the depression level of students and disrupts relationships with others. According to the stimulus-based psychological model of stress [22], high levels of stress affect the self-worth of the individual which negatively affects their interpersonal relationships. Moreover, [13] proffered that higher academic burdens take a majority of students' time making it difficult for them to have time to relate with others.

Finally, the study found no significant difference in the levels of psychological well-being and interpersonal relationships between males and females. In other words, the prediction that there will be higher levels of interpersonal relationships and psychological well-being among male students than among female students was not supported by the results of the study. This finding is congruent with previous findings that found a non-significant difference between males and females on levels of psychological well-being [4], [14] and perceived interpersonal relationships [16].

A possible explanation in relation to the non-significant difference between males and females on scores of psychological well-being and interpersonal relationships is because of the high level of education of the respondents. Education helps build an individual's level of self-image, well-being, and interpersonal relationships. As explained by [16], given similar circumstances, males and females would not differ in their levels of well-being and interpersonal relationships. It can be inferred that males and females in the present study were exposed to similar risk factors that led to their equal perceptions of their levels of psychological well-being and interpersonal relationships.

## 5. LIMITATION

Though the present study took all possible steps to provide the findings in a holistic way, the study had some limitations. The findings of this study should be interpreted in light of its limitations. First, this study relied purely on quantitative methods. The quantitative method is limiting and does not allow respondents to provide information that is not captured by the questionnaire. Moreover, this empirical study confined itself to a correlational survey, which leaves room for speculation with regard to causality among the variables.

## 6. CONCLUSION

The findings of this study have established that students who perceived higher levels of academic stress perceived themselves to experience poorer interpersonal relationships and lower psychological well-being. However, no significant difference was found between males and females on interpersonal relationships and psychological well-being. The findings imply that the sources of stress students encounter from their academic work threaten the well-being and good interpersonal relationships of students. The lack of gender differences in levels of psychological well-being and interpersonal relationships illustrate the equal benefits of higher education to both males and females.

Based on the findings, the researchers recommend the need for the university authorities to reconsider the level of academic load they expect of students. Future research should continue to examine how academic stress may be related to low levels of psychological well-being and unhealthy relationships.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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