Psychological Distress and Students' Academic Achievement in the Colleges of Education: Does Gender Matter?

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Abstract

Background: Students are exposed to a wide range of potentially stressful situations which could negatively affect their academic achievement and their health. The study examined the influence of psychological distress on students' academic achievement in the Colleges of Education (CoE) in Ghana.

Methods: Using descriptive cross-sectional survey design, 325 students were selected from six CoE using a multi-stage sampling procedure. Primary data was gathered using DASS-21 and analysed via SEM, Moderation analysis and independent sample t-test.

Results: The study discovered that psychological distress (i.e., depression, anxiety, and stress) negatively significantly predicted the academic achievement of college students. Specifically, academic anxiety and stress has a negative influence on students' academic achievement. However, gender does not moderate the relationship between psychological distress and academic achievement of the students. There was a significant gender difference in the psychological distress of students. Female students experienced a high level of anxiety and stress compared to male students. There was no gender difference in depression among students. '

Conclusion: School officials and teachers should intensify their academic interventions, workshops, and counselling to help reduce the psychological distress among students to improve mental health for academic excellence.

Novelty: Study found that psychological distress, including depression, anxiety, and stress, negatively predicts the academic achievement of college students in Ghana, highlighting the need for academic interventions and counseling to improve students' mental health and academic performance.

Keywords: academic, achievement, anxiety, depression, stress

Introduction

The mental health of university students has been a growing concern in recent years (Milojevich & Lukowski, 2016). Various studies have demonstrated the high frequency of psychological symptoms associated with this stage of education (Kim et al., 2015), with stress, depression and anxiety being one of the psychosocial problems that have become prevalent (Deasy et al., 2014). In their daily lives, college students must face a wide variety of demands, both academic and non-academic, that could affect their well-being. Academic demands include adaptation to a new context, overwork, insufficient time to do their academic tasks, preparation for and doing of exams, and the pressure to perform (Beiter et al., 2015; Erschens et al., 2018; Vizoso & Arias, 2016; Webber et al., 2019). Non-academic demands include change of where they live; the need to create new social relationships; conflicts with partners, family, or friends; money worries; and concerns about future work (Beiter et al., 2015; DeRosier et al., 2013; Galatzer-Levy et al., 2012). Consequences of poor mental health or psychological distress can include academic underperformance and dropping out of university, and thus these trends have implications for individuals, their families, the higher education sector, and the public health community.

Given the clash between our demands and the realities of our environment and its relationships, stress is unavoidable in human life. Stress is a problem that affects everyone, but it is especially prevalent among College of Education (CoE) students (Suleyiman, & Zewdu, 2018). Stress is defined as a negative emotional, cognitive, behavioural, and physiological reaction that occurs

when a person attempts to cope with or adjust to stresses (Bernstein et al., 2008). Academic stress is caused by the demands of college life. Wilks (2008) feels that "academic stress is the result of a combination of academic-related pressures that surpass an individual's adaptive resources" (p. 107). Stress can bring with it significant harm to the student's academic performance (e.g., reduced ability to pay attention or to memorize, less dedication to study, and more absences from class) (Chou et al., 2011; Turner et al., 2015), as well as to the student's physical and psychological health (e.g., substance abuse, insomnia, anxiety, and physical and emotional exhaustion) (Waqas et al., 2015; Schönfeld et al., 2016). A plethora of studies were conducted on stress and their effect on academic achievement among students (Edjah et al., 2020). For example, Oketch-Oboth and Okunya (2018) examined the effect of stress on academic achievement and established that most students experienced a moderate to high levels of stress. The study further found that there was statistically significant negative association between stress and academic performance. Lin et al. (2020) discovered that academic stress score and academic performance among students were significantly negatively correlated. Elias et al. (2011) also established that college students experienced moderate levels of stress and there was a significant but weak negative relationship between students' stress level and their academic achievement. Extant researchers have discovered gender difference in academic stress of students with female students prone to higher academic stress than their male counterparts (Chaplin et al., 2008; Cheung et al., 2016; Mahmoud et al., 2012; Mazumdar et al., 2012; Rayle & Chung, 2008; Sani et al., 2012) while other studies found that male students reported higher level of stress (Chen et al., 2009; Bhosale, 2014; Omoniyi & Ogunsanmi, 2012). However, Gao et al. (2020) observed no significant gender difference in students' average stress levels. The inconsistent findings about gender difference were most likely explained by biological as well as socio-cultural factors. This explain that females and males responded to stress differently because of their differential sensitivity to events.

Depression is another psychological distress variable that affect students' academic achievement. Depression is one of the most common psychological and emotional issues that college students face throughout their academic careers. According to the World Mental Health Survey (2012), 350 million people worldwide suffer from depression. According to several studies, depression is prevalent among college students, ranging from a moderate to a high level (Algarni, 2020; Kumar et al., 2017; Puthran et al., 2016; Shi et al., 2016). Previous studies have demonstrated that college students experienced a high level of depressive symptoms, and this negatively influence academic performance (Hope & Henderson, 2014; Javadi & Shafikhani, 2019; Wahed & Hassan, 2017; Youssef, 2016). Reduced academic success, decreased time spent studying, weight increase or loss owing to changes in appetite, slowed thinking, lack of interest in activities, difficulty sleeping, loss of concentration, and indecisiveness are all symptoms of depression among students (Bassols et al., 2014; Yusoff et al., 2013). Extant research has found that significant negative association between depression and students' academic performance. Muhammad et al., (2018) using Beck's Depression Inventory revealed a strong negative link between depression and academic achievement among students. Licayan (2009) indicated that depression and graduate students' academic

performance had a strong association. Gender difference in depression among students have been observed by several researchers. According to Oluwakemi (2012), major depressive illness is twice as common in women (12.0%) as it is in men (6.6 %). Several scholars have discovered that females reported more depressive symptoms compared to male students. Accordingly, female students experienced a higher prevalence rate of depression than male students (Algarni, 2020; Boggiano & Barrett, 1991; Calvarese, 2015; Liu et al., 2019; Sun et al., 2017; Tung et al., 2018). Conversely, other researchers insisted that male students were more likely to experience depressive disorders than female students (Al-Qaisy, 2011; Wong et al., 2006). Further, no significant gender difference in students' average depression score was observed (Gao et al., 2020; Seminario, 2022). The inconsistent findings about gender difference were most likely explained by biological as well as socio-cultural factors. This explain that females and males responded to stress differently because of their differential sensitivity to events.

Another significant psychological consequence that negatively affect students' academic performance is academic anxiety. Students in the colleges are transitioning from adolescence to adulthood (Buchanan, 2012). One of the most difficult times in a person's life is when they are transitioning. As a result, due to the constant pressure they faced as they transitioned into adulthood, these individuals are more prone to experience anxiety disorder. Anxiety, on the other hand, is a psychological and physiological condition that includes physical, emotional, cognitive, and behavioral aspects. Anxiety is defined as the presence or absence of psychological stress that causes fear, concern, uneasiness, and dread (Bouras & Holt, 2017). Spielberger and Vagg (1995) divided anxiety into two categories: state anxiety and trait anxiety. State anxiety is a transient emotional state that reflects one's assessment of a difficult situation at a specific point in time. Trait anxiety, on the other hand, is a set of persisting personality traits that refers to relatively constant individual differences that describe people's anxiety or general anxiety. Individuals with an anxiety characteristic have an attitude that reflects their assessment of specific environmental stimuli and events as hazardous or threatening, whereas those with state anxiety experience tension, worry, or restlessness. In such situations, the individual may feel uptight and respond quickly or overly to external stimuli (Kaplan & Sacuezzo, 2005). Previous studies have established a moderate to high a level of academic anxiety among college students (Algarni, 2020). Anxiety disorders have been shown to have a negative impact on students' academic performance (e.g., Amponsah & Owolabi, 2011; Samaha & Hawi, 2016; Van Hoek et al, 2019). Adeoye-Agboola and Hala (2015) found that academic anxiety was negatively and strongly linked to academic achievement. Vitasaria et al. (2010) investigated the link between study anxiety and academic performance in students and established substantial link between excessive anxiety and poor academic performance among engineering students. Gender of students has been identified to predict their academic anxiety. Female students significantly suffered more anxiety than male (Bayram & Bilgel, 2008; Chaplin et al., 2008; Eisenberg et al., 2007; Mahmoud et al., 2012). A recent study further discovered that female students were more likely to experience moderate and severe anxiety

levels compared to male students when reacting to stress or stressors (Algarni, 2020; Calvarese, 2015; Gao et al., 2020).

Statement of the Problem

The most prevalent mental disorders are stress, depression, and anxiety, and comorbidity is highly common with these three disorders. Many people who are stressed also suffer from depression and anxiety, and vice versa. College students have been found to have higher rates of stress, despair, and anxiety (Beiter et al., 2015; Holliday et al., 2016). The Ghanaian educational system, which has undergone several educational reforms, is clustered into three major phases: 9 years of basic education [i.e., early childhood education (kindergarten), primary, and junior high school], 3 years of secondary education (i.e., senior high school/vocational and technical schools), and 3–4 years of tertiary education (i.e., academic university, technical university, colleges of education, and nursing training colleges). In Ghana, CoEs are tertiary institution that are well-known for training students to become future teachers. Before a student may enter the teaching area, he or she must complete a significant amount of academic work. This then necessitates students passing their exams before being issued a teaching certificate. Based on our conversations with some of the students, it appears that they have a lot of academic responsibilities, a lack of time management skills, and a lot of stress, which has led to some CoE students becoming depressed and experiencing anxiety at predictable times throughout the semester. Students' stress, depression, and anxiety levels during the school day can have a direct impact on their academic progress. According to Amponsah and Owolabi (2011), the number of students in Ghanaian higher education has steadily increased. Accordingly, the rapid changes in the lives of students, some of which are adolescents and particular challenges associated with education at this level may expose them to depression, anxiety, and stress.

In Ghana, a lot of studies have been carried out on depression, anxiety, and stress among tertiary students (e.g., Amponsah & Owolabi, 2011; Glozah, 2013; Azila-Gbettor et al., 2015; Kugbey et al., 2015; Kwaah, & Essilfie, 2017; Dapaah, & Amoako, 2019; Adom et al., 2020; Edjah et al., 2020). Other studies also focused on nursing and midwifery students (e.g., Opoku-Acheampong et al., 2017; Yankey et al., 2017) and senior high school students (e.g., Duncan-Williams, 2015). The gap identified from these studies was that the psychological distress (depression, anxiety, and stress) was examined separately. Their relationships with academic achievement of students have not been explored. The only investigation in Ghana that is close with the current examination was by Edjah et al. (2020). They ascertained the impact of stress on university students' academic performance and social life satisfaction. It is diaphanous from these studies that there is, however, limited information on the influence of depression, anxiety, and stress on academic achievement of students in the CoE in Ghana. What remain unknown from these studies in Ghana is the combine effect of depression, anxiety, and stress on students' academic achievement in CoE in Ghana, the moderating role of gender in the relationship between psychological distress (i.e., depression, anxiety, and stress) and students' academic achievement and the gender difference in the psychological distress. As a result, there is the need to research the influence of psychological distress (depression, anxiety, and stress) on

academic achievement among Ghanaian CoE students. Specifically, the present inquiry (1) examines the effect of psychological distress (depression, anxiety, and stress) on students' academic achievement in the CoE, (2) investigates the moderating role of gender in the relationship between psychological distress (depression, anxiety, and stress) and students' academic achievement in the CoE and (3) ascertains gender difference in psychological distress (depression, anxiety, and stress) of college students.

Based on the literature reviewed, the inquiry proposes association between psychological distress as measured by DASS (Depression, Anxiety and Stress) and students' academic achievement in CoE in Ghana. Figure 1 presents the model depicting relationships between the variables. The psychological distress as measured by DASS was used as a predictor variable, gender as moderating variable and academic achievement as criterion variable. From Figure 1, it is hypothesised that the relationship between students' psychological distress (Depression, Anxiety and Stress) and their level of academic achievement will be moderated by gender. Thus, the direction and strength of the relationship between psychological distress and academic achievement will be determined by male and female students. We also hypothesised that student psychological distress will be sensitive to gender.
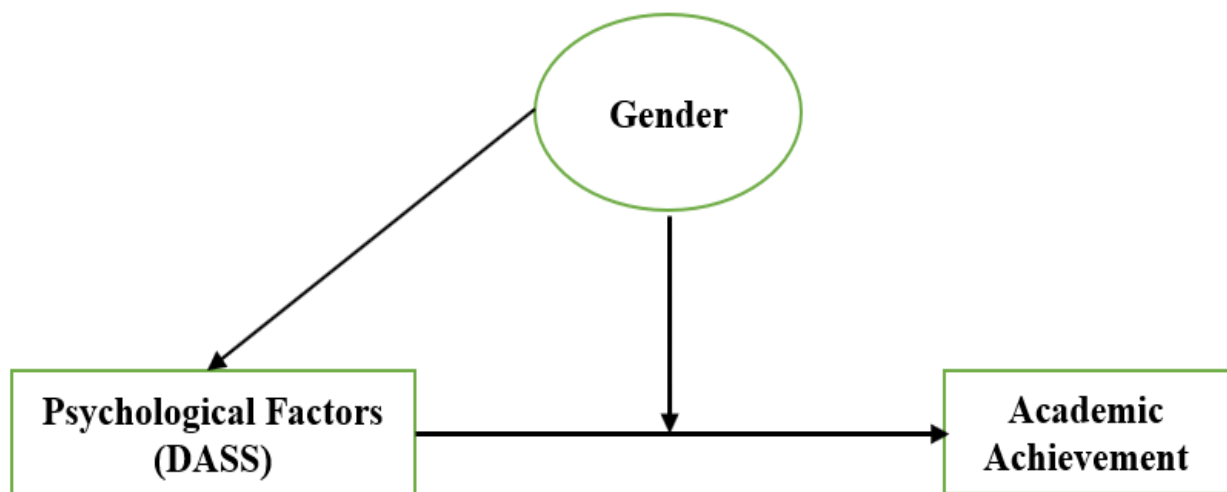

Figure 1: Relationship among psychological distress, gender, and students' academic achievement
Source: Authors' construct, 2021

Research Methods

Research Design

The research is a quantitative study using a cross-sectional survey design, which means the data was collected at a single point in time with the goal of describing correlations between variables (Tate, 1998). According to Williams (2007), descriptive research entails the identification of characteristics of a single phenomenon based on observation or the investigation of correlations between two or more occurrences. The design allows for the

collection of data that aids in testing hypotheses or answering questions about the current status of the phenomenon under study (Amedah, 2002). According to Cohen et al. (2011), generalizing from a sample to a population aid in conclusions about the original group's features, attitudes, and behaviors, hence this approach is appropriate for this study.

Population, Sample and Sampling Procedures

All Ghanaian College of Education students make up the study target population. There are forty-six (46) Colleges of Education in Ghana (Institute of Education, 2021). In Ghana, there are five zones in which public Colleges of Education are located namely, Northern Zone have 10 Colleges of Education, the Ashanti/Brong Ahafo Zone have 13 Colleges of Education, the Volta Zone also have 7 Colleges of Education, the Eastern/Greater Accra Zone have 9 Colleges of Education and the Central/Western Zone which also have 7 Colleges of Education. The accessible population for the study was level 300 students from 6 Colleges of Education in Ghana which amount to 2,160 (Institute of Education, 2021). A multi-stage sampling techniques were used in the selection process. Proportionate sampling technique was used to identify the total number of Colleges of Education to be selected from each of the zones. Thereafter, simple random sampling was used to select the Colleges of Education. Proportionate sampling technique was again used to identify the total number of students to select from the Colleges of Education. Thereafter, simple random sampling specifically, the table of random numbers were used to select the students. In all 325 students which comprised 200 males and 125 females were selected based on Krejcie and Morgan (1970) sampling size determination table.

Data Collection Instruments

The Depression, Anxiety, and Stress Scales (DASS-21) of Lovibond and Lovibond (1994) were utilized. DASS-21 is a shorter version of the original instrument. The original version includes 42-item self-report measure of depression, anxiety, and stress (DASS). The DASS-21 is a 21-item self-report scale that measures three dimensions: depression, anxiety, and stress. The three-dimensional self-reporting scales assess the existence and severity of depressive, anxiety, and stress affective states. The scale consists of three 7-item self-report scales. Items 3, 5, 10, 13, 16, 17, and 21 belongs to the depression scale, items 2, 4, 7, 9, 15, 19 and 20 to the anxiety scale and items 1, 6, 8, 11, 12, 14, and 18 belong to the stress scale. Each item is rated using a 4-point Likert scale ranging from 0 to 3. A score of 0 representing 'did not apply to me at all' and 3 representing 'applied to me very much'. Some of the DASS-21 items that are used to measure anxiety are: "I experienced breathing difficulty" (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion), and "I was worried about situations in which I might panic and make a fool of myself," Some of the statements such as "I couldn't seem to experience any positive feeling at all," "I felt that I had nothing to look forward to," are the items used to assess depression symptoms. Scoring of this scale can indicate normal, mild, moderate, severe, or extremely severe depression and anxiety symptoms. The DASS-21 has been widely used in various studies to measure these three subscales of psychological distress including college students. The DASS-21 has been shown to have adequate construct validity (Henry & Crawford, 2005). A study done by Mahmoud et al. (2010)

examined the reliability and validity of the DASS-21 specifically with college students and the findings supported the reliability and validity of the DASS-21 for the college population. Academic performance was measured using the test scores of the students. The achievement test score composed of formative assessments (Quizzes) and summative assessment (end-of-semester examination). The results of the students' accomplishment tests were obtained from the Institute of Education, University of Cape Coast's.

Data Processing and Analysis Strategy

After data collection, survey data were coded and entered in SPSS version 25.0 and Analysis of Moment Structures (AMOS) software version 21.0 for processing. Prior to the multivariate analysis, multivariate outliers, normality, and singularity assumptions were tested and satisfied. Structural Equation Modeling (SEM) was used to determine the effect of psychological distress (depression, anxiety, and stress) on the academic achievement of students. SEM is a second generational statistical procedure, with several techniques embedded in it. This procedure is more powerful and robust in determining effects and/or relationships among latent variables compared to linear regression. The maximum likelihood estimation procedure was used. Specifically, the covariance-based approach to SEM was used via AMOS. The moderation analysis was performed using Model 1 of PROCESS macro for SPSS by Hayes (2018). The gender difference in psychological distress was performed using independent sample t-test. The analysis was carried out using the bootstrap approach with 5000 bootstrap samples. Bootstrap is a method of resampling with replacement. The use of this approach was efficient in estimating the standard errors and thereby given a better estimate for the confidence intervals

Results and Findings

Influence of psychological distress (depression, anxiety, and stress) on students' academic achievement in the CoE

The aim of this research objective was to determine the individual contribution of depression, anxiety, and stress in predicting students' academic achievement in the CoEs in Ghana. Covariance-based Structural Equation Modeling (SEM) was performed to test data on this hypothesis. The analysis was performed using Analysis of Moment Structures (AMOS) software version 26. Specifically, 5000 bootstrap samples, with bias-corrected and accelerated confidence intervals was performed. Figure 2 presents the model.
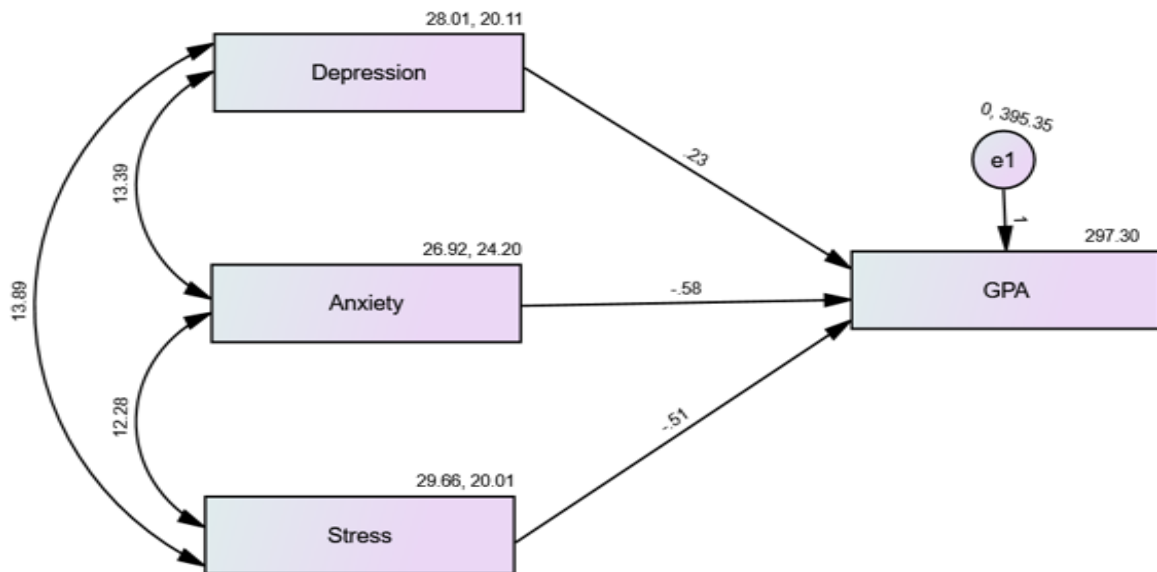
Figure 2: Path model of anxiety, depression, stress, and students' academic achievement

As presented in the path analysis (Figure 2), depression has a positive association with academic achievement (B = .231, SE; .369; CI = 28.01, 20.11). However, anxiety negatively and significantly predicted academic achievement by -.58 with a mean and error variance of (26.92, 24.20) and stress also predicted academic achievement negatively by -.51 with a mean and error variance of (29.66, 20.01) and an intercept of 297.30 for academic achievement. Table 1 presents the significance of the path model.

Table 1: Regression Model for Depression, Anxiety, Stress and Academic Achievement

Model	B	SE	CR	95% Confidence Interval	
				Lower	Upper
(Constant)	297.301	8.015		281.532	313.070
Depression	.231	.369	-2.001	-.495	.957
Anxiety	-.582	.292	.629	-1.158	-.007
Stress	-.512	.354	-1.451	-1.208	.185

Source: Field data, 2021   *Significant, p < .05; R² = .036

From Table 1, the result of the SEM shows that the model was saturated and that the model perfectly fits the data. Anxiety, depression, and stress jointly explained 3.6% of the variations in academic achievement of the students. The results showed that depression [b = .231, *Boot95%CI* (-.495, .957)] and stress [b = -.512, *Boot95%CI* (-1.208, .185)] were not significant predictor of academic achievement of the students. Anxiety [b = -.582, *Boot95%CI* (-1.158, -.007)] was significant predictor of academic achievement of College of Education students. The implication of these results is that depression and stress do not necessarily predict academic achievement of students. The study further proceeded to look at the totality of psychological distress score (depression, anxiety, and stress). Figure 3 present the model.
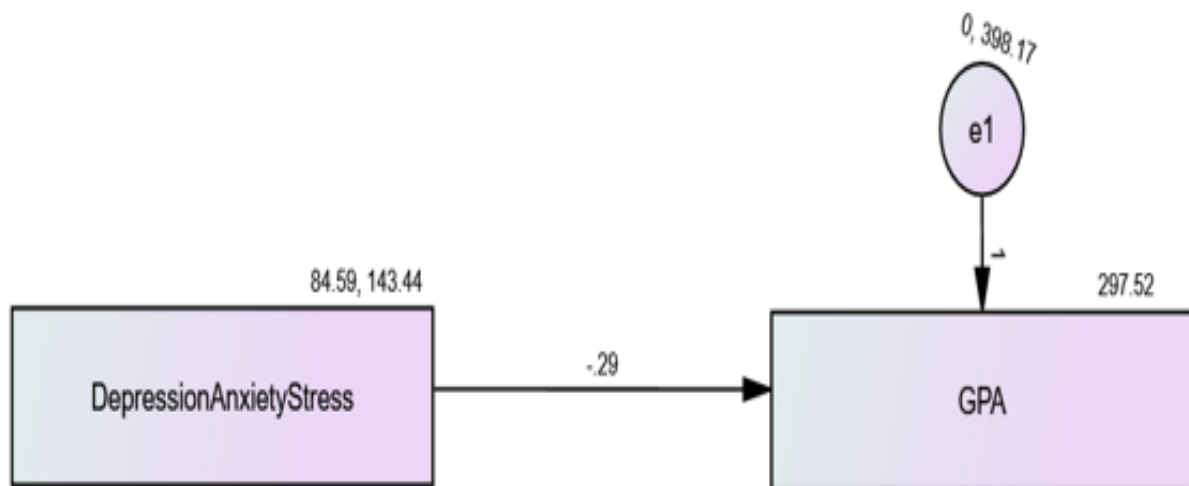
Figure 3: Path model of psychological distress and students' academic achievement

From Figure 3, DASS construct as whole predict academic achievement of College of Education students by -.291, with a mean and error variances of (84.59, 143.44) and an intercept of 398.17 for academic achievement. Table 2 presents results of test of significance prediction.

Table 2: Regression Model of Psychological Distress and Students' Academic Achievement

				95% Confidence Interval	
Model	*B*	*SE*	*CR*	Lower	Upper
Psychological distress (PD)	-.291	.093	-4.142	-.473	-.108

Source: Field data, 2021 \hfill *Significant, p < .05; R² = .030

Path analysis was conducted to examine the effect of psychological distress (i.e., combine effect of depression, anxiety, and stress) on academic achievement of CoE students. The results are presented in Table 2. The results, as indicated in Table 2, show a significant impact of psychological distress (total score of depression, anxiety, and stress) on academic achievement of students, *b* = -.291, *Boot95%CI* (-.473, -.108). Psychological distress explained 3% of the variations in academic achievement of the student.

Moderating role of gender in the relationship between psychological distress (depression, anxiety, and stress) and students' academic achievement in the CoE

This research objective examined whether gender moderate the link between psychological distress as measured by DASS scale and academic achievement among students. The data was analysed using Hayes PROCESS Macro. The results are presented in Table 3.

Table 3: Moderating Role of Gender in the Relationship between Psychological Distress and Students' Academic Achievement

Variable	B	SE	t-value	p-value	BootLL	BootUL
Constant	294.87	9.30	31.7237	.0000	276.5816	313.1548
PD	-.20	.11	-1.8063	.0718	-.4155	.0177
Gender	-5.55	15.98	-.3471	.7288	-36.9779	25.8871
PD*Gender	-.09	.19	-.4853	.6278	-.4550	.2749
R = .3604		R^2 = .1299		F = 15.9686		df(3, 321)

Source: Field data, 2021   *Significant, p < .05

In Table 3, there was statistically significant influence of psychological distress (PD) and gender on the academic achievement of students in the CoE, $F(3, 321) = 15.9686$, $R^2 = .1299$. These predictors explained 12% of the variance in the academic achievement among students. However, it was found that gender of respondents does not moderate the relationship between physiological distress and students' academic achievement ($b = -.09$; $SE = .19$; $t = -.4853$; $p = .6278$, $Boot95\%CI$ (-.4550, .2749). It is concluded that gender is a not significant factor that affect the strength and direction of the association between psychological distress and academic achievement of students.

Gender difference in psychological distress (depression, anxiety, and stress) of college students.

This research objective sought to examine gender difference in depression, anxiety, and stress of CoE students in Ghana. The results are presented in Table 4.

As shown in Table 4, the difference in the psychological distress (depression, anxiety, and stress) of students based on gender was examined using independent sample t-test. The results of Levene's Test for Equality of Variances revealed that there were equal variances assumed in the scores depression ($F = .012$; $p = .91$), anxiety ($F = .034$; $p = .85$) and stress ($F = 3.558$; $p = .060$). This evidence suggests that the assumption of homogeneity of variance has been met. The results of the independent sample t-test revealed that there was statistically significant difference in the mean score of psychological distress for male students ($M = 83.53$; $SD = 12.24$) and female students [$M = 86.29$; $SD = 11.44$; $t(323) = -2.026$, $p = .044$).

Table 4: Gender Difference in Depression, Anxiety and Stress of Students

Variable	Gender	N	M	SD	t-value	df	p-value	η2
Depression	Male	200	27.95	4.52	-.326	323	.745	.0003
	Female	125	28.11	4.46				
Anxiety	Male	200	26.45	4.87	-2.197	323	.029	.015
	Female	125	27.67	4.95				
Stress	Male	200	29.14	4.73	-2.696	323	.007	.022

	Female	125	30.50	3.93				
Psychological distress (PD)	Male	200	83.53	12.24	-2.026	323	.044	.013
	Female	125	86.29	11.44				

Source: Field survey, 2021

The magnitude of the differences in the mean scores was very small ($\eta2$ = .013). However, the proportion of variance in the psychological distress (depression, anxiety, and stress) that is explained by gender was small according to the guidelines proposed by Cohen (1988). This overall significant difference in the psychological distress among male and female students is characterised within their anxiety, $t(323) = -2.197$, $p = .029$ and stress level, $t(323) = -2.696$, $p = .007$.

Discussion

The study was conducted to ascertain the influence of psychological distress (as measured by depression, anxiety, and stress) on academic performance of students in the CoE in Ghana. The study explored the moderating role of gender in this relation and well as the gender difference in the psychological distress of students. The study revealed that the depression has a positive effect on students' academic achievement. Thus, a unit increase in students' depression because of stressful events in schools will lead to positive increase in academic performance. This result appears very strange in the sense that, generally, it is perceived that depression has a negative influence on life. This assertion may not always be the case. A study by Elfering et al. (2006) suggests that psychological distress in academic institutions can have both positive and negative consequences if not well managed. Regarding this result, the college students perceived depression symptoms as positive emotions. This finding does not support the results of previous researchers who have found significant negative association between depression and students' academic performance (Licayan, 2009; Muhammad et al., 2018). This variation in finding could be attributed to study context, students' awareness of stressful events, coping strategies and measurement of the variable. In this current study, we used DASS-21 to measure depression while previous studies used Beck's Depression Inventory to assess depression among college students (Muhammad et al., 2018). The study further discovered that anxiety and stress negatively predicted students' academic achievement. This result implies that as students experienced a higher level of academic anxiety and stress, their level of academic performance decreases. We further established that psychological distress (i.e., total score of depression, anxiety, and stress) predicted academic achievement of students. These discoveries agree with previous studies that academic stress and anxiety negatively influence students' academic achievement (Adeoye-Agboola & Hala, 2015; Amponsah & Owolabi, 2011; Elias et al., 2011;). For example, Lin et al. (2020) discovered that academic stress score and academic performance among students were significantly negatively correlated. However, our findings disagreed with the study of Edjah et al. (2020) who discovered that stress had a significant

positive impact on the academic and social life of students. The possible explanation to this variation is the participants used in the study and the measurement of stress and anxiety among students. In the present study, we used students from the CoEs while undergraduate students from a university was used by the previous studies (Edjah et al., 2020). The environment in which the students found themselves may create academic and social stressors if adequate support and interventions are not provided for these students. Accordingly, we speculate that students from the CoE may experience higher psychological distress than the students from the university because they might not receive necessary support and interventions needed to reduce their psychological distress as compared to the students from the university. This may be due to infrastructure divide among the CoEs and university in Ghana. Further, we measured psychological distress using DASS-21 while stress was measured using Perceived Stress Scale by Cohen et al. (1983). Students suffering from depression, anxiety, and stress have trouble concentrating in class, spend less time doing activities, are restless, lack interest in activities, tired, irritable, and have muscle tightness. Excessive melancholy, worry, and stress make it difficult for students to complete tasks properly and on time. The time and energy spent being unhappy or worried would leave less time for studying, which would have a negative impact on many other aspects of a person's life, including academic accomplishment.

The result again, revealed that gender does not moderate the relationship between psychological distress and academic achievement of the students. The implication of this result is that the direction and strength of the link between psychological distress and students' academic factors does not depend on gender. Implying that psychological distress does not have influence on academic achievement regardless of gender. Further, we observed that gender influence psychological distress (depression, anxiety, and stress) among college students. Specifically, we found that there was statistically significant difference between male and females colleges students' academic stress and anxiety. Female students experienced a moderate level of academic stress and anxiety than the male students. Thus, the female students were more stressed and anxious in their academic activities. This result explains that females and males responded to stress differently because of their differential sensitivity to events. The moderate to high levels of academic stress and anxiety experienced by the students is indication of lack self-esteem and confidence. This may affect their academic achievement as already established, academic efficacy and school satisfaction. This may lead to school dropout intentions among students. The findings of the current examination agree with the prior researchers who have found gender difference in academic stress and anxiety of students with female students prone to higher academic stress and anxiety than their male counterparts (Algarni, 2020; Bayram & Bilgel, 2008; Calvarese, 2015; Chaplin et al., 2008). However, our findings disconfirmed the results of other researchers who have found that male students reported higher level of stress (Chen et al., 2009; Bhosale, 2014). Gao et al. (2020) observed no significant gender difference in students' average stress levels. We further established that there was no statistically significant difference in the depression level of students based on gender. This result implies that depression of students is not sensitive to their gender. Thus, both male and female college students have equal level of depression. Based on this result, we

therefore argue that the students will experience the same level of academic achievement. The findings of the current research confirmed the results of prior researchers who have discovered that that gender of students does not predict their depression level (Gao et al., 2020; Seminario, 2022). However, the finding is not consistent with the results of previous studies that female students experienced a higher prevalence rate of depression than male students (Algarni, 2020; Boggiano & Barrett, 1991; Calvarese, 2015) and male students were more likely to experience depressive disorders than female students (Al-Qaisy, 2011; Wong et al., 2006). The inconsistent findings about gender difference were most likely explained by study context, measurement of variables, biological, and socio-cultural factors.

Based on our findings, the proposed conceptual model partially fits the data collected. The model was saturated and showed slightly discrepancy between the hypothesised model and the predicted model. Accordingly, we present our final model in Figure 4.
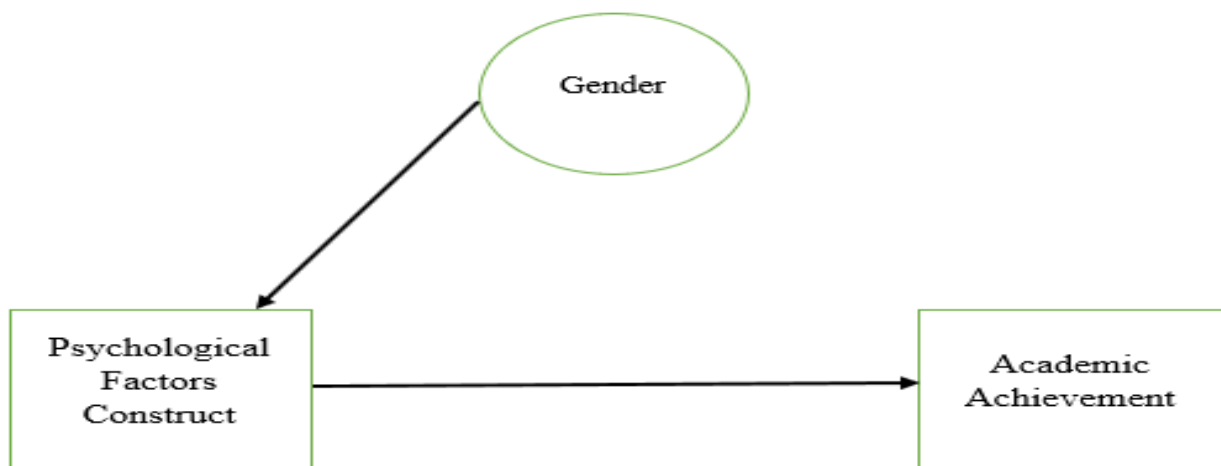

Figure 4: Final observed conceptual model

Conclusion and Recommendations

The study adduced that college students experience a moderate to a high level of academic depression, anxiety, and stress during their study. This is an indication of low self-esteem, confidence, and efficacy. The psychological distress has significant influence on students' academic achievement. As a result, it may be stated that as academic stress levels rise, there is a high likelihood that the college students would be depressed and anxious about their academic activities. When this happens, students' ability to concentrate in class and carry out their everyday tasks is harmed, which has a severe impact on their academic achievement. Again, female students who encounter some level of stress may suffer from poor health and are more prone to become depressed and anxiety can risk such female students to perform poorly in class. According to the findings, school officials and teachers should expand the number of workshops offered to students, particularly at the start of each semester. Students should learn how to cope with depression, anxiety, and stress, as well as how to manage them, so that they can lessen the harmful impacts of depression, anxiety, and stress on their health and

performance. Again, education stakeholders should assist students in developing coping methods to employ during stressful situations, which can improve body image and self-esteem, academic achievement, reduce the risk of depression and suicide, and improve overall quality of life. Teachers in Colleges of Education are encouraged to help students manage their academic depression, anxiety, and stress through counseling and behavioural techniques. Teachers and academic boards of directors in Colleges of Education should also assist in identifying variables that lead female students to be more stressed than male students and develop approaches and tactics to help females minimize stress.

Strengths and Limitations

The use of statistical analyses, a larger sample size (n = 300), and standardized instruments make it possible to verify the results through further statistical computations, generalize the findings to the population, and replicate the study in a different setting using different samples are the strengths of this study. The study acknowledges certain limitations. First, the descriptive nature of the study does not call for a cause-and-effect relationship among the variables. Generalization the implications from the findings cannot be generalized to all college students in Ghana because the data was gathered from only six (6) colleges. Furthermore, caution should be taken in making causal inferences and generalizing the findings to all the college students, since areas of specialization or programs of study and level of study could make a difference in their psychological distress (depression, anxiety, and stress). Again, the use of questionnaires might have introduced respondents' recall biases and other social desirability concerns (e.g., under or over-reporting). Moreover, as self-reported questionnaires were used to collect data from the participants simultaneously, common method variance or bias may be a concern. However, efforts were made to avoid these biases.

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