



Stress, Anxiety and Depression, as Predictors of Academic Performance among Undergraduate University Students in North Western Nigeria

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Abstract. This study investigated stress, anxiety and depression, as predictors of academic performance among undergraduate university students. Three (3) Objectives were formulated to guide this study, and three (3) hypotheses were tested. Survey design was used in carrying out the research. A total of 300 undergraduate students were selected in a randomized cluster sample from 3 universities in the North Western Nigeria. Stress Symptom Checklist (SSC) was used to measure stress, Beck Depression Inventory (BDI) measured depression and Spielberger Trait Anxiety Inventory (TAI) was used to measure anxiety while first semester examination result for general courses (GST) of the sampled students was used to measure academic performance. Findings revealed that significant negative relationship existed between and among all the independent variables (stress, anxiety, depression) and the dependent variable (academic performance) of university students. Stress and academic performance ($p=0.002$ and $r=0.632$) anxiety and academic performance ($p = 0.000$ and $r = 0.957$) and depression and academic performance ($p = 0.001$, $r = 0.837$). It was recommended that school counsellors and psychologists should be encouraged to address the issues of stress, anxiety and depression especially among hundred level students so as to enhance their adjustment and academic performance.

Keywords: Predictors, stress, depression, anxiety, academic performance

1. Introduction

Psychological distress including stress, anxiety, and depression are current global problems (Bilgel & Bayram, 2014). Psychological distress can be viewed as an emotional disturbance that may affect the lives of the individuals on a daily basis. College students

experience high levels of stress, anxiety, and depression compared with the general population (Besser & Zeigler-Hill, 2014; Bewick, Koutsopoulou, Miles, Slaa, & Barkham, (2010) are of the opinion that lifetime prevalence of stress, anxiety, and depression among adolescents and young adults range from 5% to 70% globally. The American College Health Association (2011) and Yamashita, Saito, and Takao (2012) noted that anxiety is the most common mental health problem reported by college students. Most undergraduate students transitioning to adulthood encounter stressful situations that may be responsible for a high rate of depression and anxiety among them (Amarasuriya, Jorm, & Reavley, 2015; Bilgel & Bayram, 2008). Excessive and prolonged stress can be harmful to students' academic performance and physical and psychological well-being (Beiter et al., 2015). Students who perceive high levels of stress may often become depressed. Students suffering from anxiety and depression may also be at risk of poor academic performance. Likewise, data from the American College Health Association (2013) reveal that high levels of stress among students interfere with the academic performance and performances. Conversely, Stupnisky, Perry, Renaud, and Hladkyj (2013) stated that students who exhibit a low level of stress do well academically. During the transition from adolescence to adulthood, the failure to use adaptive coping strategies may further result in stress, anxiety, and depression.

The most common psychological problems of adolescence are depression and anxiety. While depression is less common during childhood, it increases during the onset of adolescence. During adolescence, depression is experienced mostly short and depending on the certain conditions. Adolescents suffering from depression are sad and broken down.

They feel loneliness, but can continue doing their daily chores. However, in deeper cases of depression, adolescents show the symptoms of low self-esteem, self-blame, hopelessness, suicide thoughts, anger, and peevishness. From the bulk of research, it can be inferred that depression and anxiety may be experienced at the same time. It has been declared that depression and anxiety are accompanied with 12 to 75% of the surveys conducted by Eckberg, Pidgeon, & Magyar (2017). While entrance to a university or other tertiary education institutions is a joyous time, it can be a stressful life event for some students. First-year students are particularly at-risk as they face a number of new stressors during the transitional period of starting a new life in university or college (Wang, 2014). Just as all young adults, undergraduate students need to cope not only with psychological and psychosocial changes that are connected to the development of an autonomous personal life but also with the academic and social demands that they encounter in university studies in their preparation for professional careers. Therefore, the period of undergraduate education is a sensitive period in an individual's life span, and this period is regarded by many as important for developing systems and intervention methods that may prevent or reduce mental problems (Kugbey, Osei-Boadi, & Atefoe, 2015).

Evidence that suggests that university students are vulnerable to mental health problems has generated increased public concern in many societies. Previous studies suggest high rates of psychological morbidity, especially depression and anxiety, among university students all over the world (Adewuya et al., 2006) found that among college students seeking counseling services, anxiety and depression were ranked first and third as presenting problems, respectively; academic and work-related concerns were ranked second as the presenting problem. Brackney and Karabenick (1995) noted that high levels of distress, concomitant with limited coping resources, render students less able to meet academic demands.

Unfortunately, college counsellors are stretched very thin, thereby providing treatment for anxiety and depression-related complaints. Romano and Hage (2000) suggested the importance of integrative theoretical models that would better allow for the prevention of psychological difficulties. Increasing interest in positive psychology and the factors that constitute wellness fit well with this type of prevention agenda, but comprehensive models describing the psychological resources that protect college students from anxiety and depression are

lacking (Dahlin et al., 2005). Psychological distress may result in withdrawal from study as first-year students were found to be twice as likely to drop out as their counterparts in the second and third years (Curtis and Curtis, 1999). Adlaf et al. (2001) found a prominent inverse relationship between year of study and mental health in university students, those at greatest risk being first-year students. Psychological morbidity in undergraduate students represents a neglected public health problem and holds major implications for campus health services and mental policy-making (Poch et al., 2004; Stewart-Brown et al., 2000). In terms of life quality, understanding the impact of this neglected public health phenomenon on one's educational attainment and prospective occupational success is very important. Related to the increasing number of students, who are dismissed from the university because of the low, cumulative grades, as well as some of them who change their academic fields specialty due to adjustment issues, the idea of this study emerged, and tested the following hypotheses:

1.1 Research Hypotheses

- Stress is not a significant predictor of academic performance among university students
- Anxiety is not a significant predictor of academic performance among university students
- Depression is not a significant predictor of academic performance among university students

2. Research Methods

Quantitative survey design was used in carrying out the research. A total of 300 undergraduate students were selected in a randomized cluster sample. Participants were between 18 and 23 years of age from 100 level students in their second semester from Nigerian Defence Academy, Kaduna (100), Bayero University Kano (100) and Usman Danfodio University, Sokoto (100). Three instruments were used to collect data: The Stress Symptom Checklist (SSCL) was used to measure stress, it comprises of 53 items; 28 items are for physical symptoms and 25 items for psychological symptoms. Schlebusch, 2004, reported that to date the data gathered show that the SSCL is a useful measure of non-pathological stress in the general population. Beck Depression Inventory (BDI) which is the most commonly used depression inventory in both research and clinical practice was used to measure depression. Questions on the 35-item BDI assess

various cognitive, physiological, and affect-related symptoms of depression. According to the correlation between them, the coefficient alpha for the Beck Depression Inventory was .92. Cronbach's alpha for the current study sample was 0.94 (Beck et al., 1988). The Spielberger's Trait Anxiety Inventory (TAI) was used to measure anxiety in this study. It is a 20-item measure of trait anxiety, defined as the relatively

stable tendency of an individual to respond anxiously to a stressful situation. Higher scores indicate a greater degree of trait anxiety. Cronbach's alpha for the current study sample was 0.92 (Spielberger et al., 1984). First semester examination result in general studies (GST) of the 100 level students was used the measure academic performance.

3. Results

3.1 Hypotheses Testing

Hypothesis One: Stress is not a significant predictor of academic performance among university students

Table 1: Pearson Product Moment Correlation (PPMC) statistics on the relationship between stress and academic performance among university students

Variables	N	Mean	Std. Dev	Df	Correlation index r	Critical r	P
Academic Performance	300	2.7228	0.5470	298	-0.632**	0.401	0.000
Stress	300	5.2100	0.4337				

*correlation is significant at the 0.05 level
P < 0.05,*

Results of the PPMC statistics in table 1 above showed that significant relationship exist between stress and academic performance among undergraduate students ($p = 0.000$ and $r = -.632$), implying that there is a negative or inverse relationship between the variables, meaning that the higher the students' level of stress, the lower their academic performance and the lower their stress level, the higher their academic performance. Therefore, the hypothesis which state that stress is not a significant predictor academic performance among undergraduate university students, is hereby rejected.

Hypothesis Two: Anxiety is not a significant predictor of academic performance among university students

Table 2: Pearson Product Moment Correlation (PPMC) statistics on the relationship between anxiety and academic performance among undergraduate students

Variables	N	Mean	Std. Dev	Df	Correlation index r	Critical r	P
Academic Performance	300	2.6828	0.5570	298	-0.954**	0.413	0.000
Anxiety	300	5.5600	0.4138				

*Correlation is significant at the 0.05 level
P < 0.05,*

Table 3 above showed that significant relationship exist between anxiety and academic performance among undergraduate students ($p = 0.000$ and $r = -.954$), this also implies that there is a negative or inverse relationship between academic performance and anxiety, meaning that the higher the students' level of anxiety, the lower their academic performance and the lower their anxiety, the higher their academic performance. Therefore, the hypothesis which state that anxiety is not a significant predictor of academic performance among undergraduate university students does not hold.

Hypothesis Three: Depression is not a significant predictor of academic performance among university students

Table 4: Pearson Product Moment Correlation (PPMC) statistics on the relationship between depression and Academic performance among undergraduate students

Variables	N	Mean	Std. Dev	Df	Correlation index r	Critical r	P
Academic Performance	300	2.6828	0.5570	228	-0.837**	0.413	0.001
Depression	300	6.0000	1.4534				

*** correlation is significant at the 0.05 level
P < 0.05,*

Table 3 above showed that significant relationship exist between depression and academic performance among undergraduate students ($p = 0.001$, $r = -.837$), implying that there is a negative inverse relationship between academic performance and depression, meaning that the higher the students' symptoms of depression, the lower their academic performance and the lower their depression symptoms, the higher their academic performance. Therefore, the hypothesis which state that depression is not a significant predictor of academic performance among university students, is hereby rejected.

4. Discussion on the findings

Results of this study indicate that there is a negative significant relationship between stress and academic performance of university students, and this implies that the higher the level of stress among students, the lower their level of their academic performance. A number of studies have also found a relationship between stress and poor academic performance (Clark & Rieker, 1986; Linn & Zeppa, 1984, Struthers, Perry & Menec, 2000). Felsten & Wilcox (1992) found significant negative correlations between the stress levels of college students and their academic performance. In a similar study, Blumberg and Flaherty (1985) found an inverse relationship between self-reported stress level and academic performance. Struthers et al. (2000) also reported that a high level of academic stress was associated with lower course grades. This implies that students experience a high level of academic stress due to exams, assignments, time pressure, grade pressure, and uncertainty.

The study also found negative relationship between anxiety and academic performance among university students. The finding is in line with other studies which demonstrated that students with higher level of anxiety tend to obtain lower marks in their end-of-semester examination (Hamzah, 2007, McCraty, 2007, Luigi et al., 2007, and Sena et al., 2007). On the other hand, some studies have found a significant positive relationship between academic achievement and anxiety (Diaz et al. in El-Anzi, 2005). This implies that although anxiety can affective students' academic performance, there also students who better even when they are anxious.

Result of the study found significant negative correlation between depression and academic performance among university students. Similarly, some previous studies reported to have found higher levels of depression among university students. Fine & Carlson, (1992). Surtees, Wainright, & Pharoah

(2002), found conditions that reduced the likelihood of achieving a first-class degree among first-year students. Similarly, Zaid, Chan, and Ho (2007) found an inverse relationship between academic achievement and depression. Also, a study on emotional disorders among medical students in one of the Malaysian private colleges found that students who experienced depression had a lower academic performance. Eisenberg, Golberstein, & Hunt (2009) showed that depression is a significant predictor of lower GPA (Grade Point Average) and co-occurring anxiety and depression have an additional negative association with GPA. Students who experience mild or moderate symptoms of depression or anxiety also demonstrate more academic difficulties and lower GPA than non-depressed students (Locke, 2009; Deroma, Leach, and Leverett, 2009). Many clinical descriptive reports suggested that depression may be a contributing factor to poor academic performance (Fine & Carlson, 1994). It is noteworthy that other researchers have found no connections between internalizing symptoms and poor academic performance (e.g., Reinherz et al., 1993). The implication is that adolescents with depression are at increased risk for impairment in school and educational attainment (Asarnow, Jaycox, Duan, LaBorde, et al., 2005). Many depressed individuals may be unable to perform well in academic life because they do not have courage in what they are doing (Sindhu, 2016). They may feel that they are not reaching the standard of performance set for them. As a result, they continuously feel disappointed and despairing. They perceive things negatively and consider themselves as failures. This condition can definitely contribute too many serious problems in their academic life such as poor grades (Sindhu, 2016).

5. Conclusion

Base on the finding of this study, it is concluded that there is a negative or inverse relationship between academic performance and stress, anxiety and depression, meaning that the higher the students' level of stress, anxiety, and depression, the lower the academic performance. Generally, the transition to adulthood represents a period with high risk for the onset of stress, anxiety depression (Clark, Nguyen, & Barbosa-Leiker, 2014).

6. Recommendations

- University students should regularly check their stress, anxiety and depression symptoms. High level of stress and anxiety

can be reduced by participating in relaxation activities.

- The university management should provide the services of qualified psychologists and guidance counsellors in the campuses that will take care of students who present symptoms of stress, anxiety and depression.
- University management should provide recreational facilities in the campuses to help students make out some times to relax with such recreational activities.
- In severe cases referrals should be made for proper medication.

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