RELATIONSHIP AMONG DEPRESSION, ANXIETY AND ACADEMIC ACHIEVEMENT OF UNDERGRADUATE UNIVERSITY STUDENTS

AGNES OKORIE
Nigerian Defence Academy (NDA), Kaduna
aookorie@nda.edu.ng

&

JUMMAI GARBA
Nigerian Defence Academy (NDA), Kaduna
piruwa@yahoo.com, **jumaigarba@nda.edu.ng**

&

HAFSAT LAWAL KONTAGORA
National Teachers' Institute (NTI), Kaduna
hafsatlkontagora@gmail.com

Abstract

This study investigated the relationship among depression, anxiety and academic achievement of undergraduate university students. Two (2) Objectives were formulated to guide this study, and two (2) null hypotheses were tested. Survey design was used in carrying out the research. A total of 200 undergraduate students were selected in a randomized cluster sample. The Beck depression inventory (BDI) and The Spielberger trait anxiety inventory (TAI) was used to measure anxiety in this study. Findings revealed that that significant relationship exists between anxiety and academic achievement among undergraduate students (p = 0.000 and r = 0.957) and that significant relationship also exists between depression and academic achievement among undergraduate science education students. (p = 0.001, r = 0.837). It was recommended that school counsellors and psychologists should be encouraged to address the menace of anxiety and depression among students so as to enhance their academic achievement.

Keywords: Relationship, depression, anxiety, academic achievement, undergraduate students.

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 achievements. 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, selfblame, 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 counselling 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, the idea of this study emerged, and is going to answer the following questions:

1.   Is there any significant relationship between depression and academic achievement among university students?
2.   Is there any significant relationship between anxiety and academic achievement among university students?

Research hypotheses
1   There is no significant relationship between depression and academic achievement among university students
2   There is no significant relationship between anxiety and academic achievement among university students

Methods
This study investigated the relationship among depression, anxiety and academic achievement among undergraduate university students. Two (2) Objectives were formulated to guide this study, and two (2) null hypotheses were tested. Survey design was used in carrying out the research. A total of 200 undergraduate students were selected in a randomized cluster sample (115 females and 85 males) at the Nigerian Defence Academy (NDA), Kaduna, participated in this study. Participants were between 18 and 25 years of age. The Beck depression inventory (BDI)is the most commonly used depression inventory in both research and clinical practice. Questions on the 35-item BDI assess various cognitive, physiological, and effect-related symptoms of depression such as sadness, feelings about the future, irritability; loss of pleasure, fatigue, and changes in appetite. For assurance of the measurement tool, the experiment was reported on a pilot sample of 50 male and female students. These were selected from outside the sample. The tool was applied twice on students

with a time gap of two weeks. 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 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).

Results

Question one: Is there any significant relationship between depression and academic achievement among university students?

Table 1: Correlation statistics on the relationship between depression and academic achievement among university students

Variables	N	Mean	Std.Dev	Df	Correlation index r
Academic Achievement	25	2.6828	0.5570		
				23	-0.837**
Depression	25	6.0000	1.4534		

Table 1: shows that relationship exists between depression and Academic achievement among undergraduate students. The relationship is denoted by the correlation index r level of -0.837 which is in the negative implying that there is a negative or inverse relationship between Academic achievement and depression , meaning that the higher the students level of depression, the lower their academic achievement and the lower their depression, the higher their academic achievement.

Question Two: Is there any relationship between anxiety and Academic achievement among undergraduate students?

Table 2: Correlation statistics on the relationship between anxiety and Academic achievement among undergraduate students

Variables	N	Mean	Std.Dev	Df	Correlation index r
Academic achievement	25	2.6828	0.5570		
				23	-0.632**
Anxiety	25	4.3200	3.2109		

Table 2: shows that relationship exists between anxiety and Academic achievement among undergraduate students. The relationship is denoted by the correlation index r level of -0.632 which is in the negative implying that there is a negative or inverse relationship between Academic achievement and anxiety, meaning that the higher the students level of stress , the lower their academic achievement and the lower their stress, the higher their academic achievement.

Hypotheses Testing'

Hypothesis One: The null hypothesis states that there is no significant relationship between Anxiety and Academic achievement among undergraduate students.

Table 3: Pearson Product Moment Correlation (PPMC) statistics on the relationship between Anxiety and Academic achievement among undergraduate students

Variables	N	Mean	Std.Dev	Df	Correlation index r	Critical r	P
Academic Outcomes	25	2.6828	0.5570				
				23	-0.954**	0.413	0.000
Anxiety	25	5.5600	0.4138				

correlation is significant at the 0.05 level
P < 0.05,

Results of the Pearson Product Moment Correlation (PPMC) statistics in table 3 above showed that significant relationship exist between Anxiety and Academic achievement among undergraduate students (p = 0.000 and r = 0.957), implying that there is a negative or inverse relationship between Academic achievement and Anxiety, meaning that the higher the students' level of Anxiety, the lower their academic achievement and the lower their Anxiety, the higher their academic achievement. Therefore the null hypothesis which states that there is no significant relationship between Anxiety and Academic achievement among undergraduate students, is hereby rejected.

Hypothesis Two: The null hypothesis states that there is no significant relationship between depression and Academic achievement among undergraduate students

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

Variables	N	Mean	Std.Dev	Df	Correlation index r	Critical r	P
Academic Outcomes	25	2.6828	0.5570				
				23	-0.837**	0.413	0.001
Depression	25	6.0000	1.4534				

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

Results of the Pearson Product Moment Correlation (PPMC) statistics in table 4 above showed that significant relationship exists between depression and academic outcomes among undergraduate science education students. (p = 0.001, r = 0.837), implying that there is a negative or inverse relationship between academic achievement and depression, meaning that the higher the students' level of depression, the lower their academic achievement and the lower their depression, the higher their academic achievement Therefore the null

hypothesis which state that there is no significant relationship   between depression and Academic outcomes among undergraduate science education students, is hereby rejected.

Discussion

Results of this study indicate that there is a negative relationship between depression and academic achievement of university undergraduate students, and this indicates that the higher the depression among students, the lower their level of achievement. This finding agrees with that of Suresh, Mathews, & Coyne, (2013) where they found similar results to support this result. Also, the study indicates that there is a positive relationship between anxiety and academic achievement of students, and this suggests that whenever the students have a medium level of concern, the higher their academic achievement will be.

Some previous studies, that investigated mental distress among university or college students using other survey methods and rating scales, found higher levels of depression among female students. A Nigerian study, using the Mini International Neuropsychiatric Interview, found depression to be two times more prevalent among male university students (Ahmed, & Julius, 2015).Another study using the Higher Education Stress Inventory and Major Depression Inventory showed that male students gave higher ratings than females for depression and stress (Dahlin et al., 2005). Studies on samples of Turkish students using the General Health Questionnaire-12 and Beck Depression Inventory instruments found higher depression rates among male students (Ö zdemir and Rezaki, 2007). Edwards and Holden (2001) obtained the same results that male students gave higher ratings than females for depression, the female students gave higher ratings than males for anxiety. However, there are also studies that found no differences according to gender in terms of depression or depressive mood. Generally, the transition to adulthood represents a period with high risk for the onset of depression (Clark, Nguyen, & Barbosa-Leiker, 2014).

Conclusion

Based on the finding of this study, it is concluded that there is a negative or inverse relationship between Academic achievement and anxiety, meaning that the higher the students' level of anxiety, the lower their academic achievement and the lower their Anxiety, the higher their academic achievement. It is therefore recommended that school counsellors and psychologists should be encouraged to address the menace of anxiety and depression among students so as to enhance their academic achievement.

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