ISSN No:-2456-2165

Correlations Between Anxiety, Depression and Academic Achievements Among New Students in a Nursing Programme in South – South Nigeria

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Abstract:- The objective of the research was to study the relationship between Anxiety, Depression and Academic Achievements among new students in a diploma nursing program in South – south Nigeria. The study adopted the triangulation of prospective cohorts study and cross sectional survey. The entire 107 new students were proposed as the population for the study; while census constituted the sample size. But due to anxiety, seven (7) students left the class before the examination when part of the data was collected while two (2) students were advised to leave on account of indiscipline. So, 98 respondents were eventually utilized as the population for the study. The research instrument was Anxiety and Depression Scale; it was adapted and revalidated to ensure culture-fairness. The instrument was administered in the class before the examination. The scores generated were then triangulated with their examination performance using the Pair wise correlation with JMP statistical Discovery Software. The results showed that the mean ± SD of academic performance for the female students was 56.11±7.04; while that of the males was 62.31±5.55 at significant p-value of 0.001. But the female depression index was found to be 48.70± 8.23 at test statistics p-value of 0.069. So the academic achievement correlates with the depression index at 0.1826. On the other hand, the mean± SD of the female anxiety index was 46.64± 10.89, while that of the males was 44.17±10.93 at test statistics at p-value of 0.337. And the anxiety index negatively correlates with the academic performance at - 0.1644. On the whole, 51 students (52%) finally passed, while 47 students (48%) did not pass the examination.

Keywords: *New Students, Academic Achievements, Anxiety & Depression.*

I. INTRODUCTION

The issue of students mental health is a global problem that covers all developed and developing societies, both modern and traditional (Bayra & Bilgel, 2008, Faeq, 2016). During their academic life, students face many contradictions and obligations to succeed, especially at the tertiary institutions (Arslan, Ayranci, Unsal & Arslants, 2009, Faeq, 2016). Some students find the transition from adolescence to adulthood stressful. At universities, students begin to become responsible for their own life decisions and lifestyle, healthy or otherwise. First-year students need to adapt to a new learning environment and cope with academic and social demands of professional training (Uehara, Takeuchi, Kubola, Oshima & Ishikawa, 2010, cited in Cheung, Wong, Wong, Law, Ng, Tong, Wong, Ng and Yip, 2016). These come with high academic expectations which are stressful and can pose risk to the mental health of students (Shamsuddin, Fadzil, Ismail, Shah, Omar, Muhammad, Jaffar, Ismail, Mahadevan, 2013, Cheung, Wong, Wong, Law, Ng, Tong, Wong, Ng and Yip, 2016).

To Ginwright and James (2002) cited in Faeq (2016), learners of higher institutions of learning should make the efforts to embrace new experiences and changes in the social aspects of their lives, and in behavioural, emotional, academic and economic situations. All these contribute to the difficulties students of tertiary institutions encounter during their stay in schools which in turn could result in some psychological challenges and which have been widely studied at different levels of learning, such as colleges and universities (Bayram & Bilgel, 2008;Faeq, 2016).

Anxiety and depressive moods are some of the types of mental health problems, and co-morbidity is also very common with these two disorders. Many students with depression also have anxiety and vice versa. These two mental health conditions have been found to be more prevalent among higher institutions students than the general population, (Beiter, Nash, McCrady, Rhoades, Linscomb,

Clarahan, & Sammut 2015; Holliday, Anderson, Williams, Bird, Matloc, Ali, & Suris, 2016, Bisson, 2017). For this reason many higher institutions have therefore started programs in higher institutions of learning that are specifically designed to help to address the psychological challenges of their students. For instance, at Abilene Christian University (ACU), a private Christian university in Abilene, Texas, USA, "Save our Students" (SOS) program was created after seeing a need for more student support in this direction.

A significant group of the learners recommended to this program, self-disclosed that they have symptoms of excitements or depressive moods or both; or that they have been associated with the disorder before being admitted into the institution. Frequently, these learners are struggling with their academic work because of maladaptive coping. Some examples of these problems are issues of punctuality (like being absent and lateness to classes), failing to turn in assignments, low quality of work, and failing class tests. Some repercussions of these are failing or withdrawing from courses, academic probation, academic suspension, or withdrawal from school. The direct impact of failing to address anxiety and depression can have a negative impact on the students academically, and in other spheres of their endeavors, (Bisson, 2017).

Ude and Ofoke (2012) states that learners with high anxiety index have difficulty in making progress in learning (or performing task that are important or necessary) if they are to meet their basic needs adequately: and are to grow toward emotional, social and intellectual maturity. Students in such anxiety state may develop different behaviour that is not in their best interests. Students who take examination in a state of high anxiety are likely to misinterpret or misread the test questions, and produce responses that do not reflect their true levels of competence or ability (Ude & Ofoke, 2012; Afolayan, Bitrus, Onasoga, Adeyanju & Agama, 2013).

Depression on the other hand has been described as a serious mental health problem among students population (Ibrahim, Kelly, Adams & Glazebrook, 2013, Faeq, 2016). Moreover, it has a significant impact on academic performance, academic satisfaction and academic achievements (Jack-Ide, 2016 & Arslan 2009, Faeq, 2016). A study by Faeq (2016) has it that learners with the clinical manifestations of low mood perform poorly in academics and are not usually active in the classroom in relation to learners without any manifestation of any degree of depressive mood. This shows that depressive mood is a grievous challenge that calls for some form of psychotherapy for the vast majority of learners. Depression is one of the most frequent in the psychological health of learners at different educational levels, such as high school, college and the university (Arslan 2009, cited in Faeq, 2016). Previous studies have noted that psychological ill health, particularly depression, is a common disorder among students (Adewuya, Ola, Olutayo, Mapayi & Oginni, 2006; Dahlin 2005, Faeq, 2016). Again Rathnayake and Ekanayaka (2016), asserted that nursing being one of the most difficult profession in the world, for new students to adjust to this stressful profession, many of them have to be anxious and depressed: this accounted for the high prevalence rate (50%) of depression and anxiety in most studies.

In Bayelsa State, Afolayan, Bitrus, Onasoga, Adeyanju and Agama (2013) also reported a high prevalence rate (50%) of anxiety amongst the 200 level nursing students of the Niger Delta University. The Bayelsa State School of Nursing (BYSSON) which exists within the geographical confines of Bayelsa State is a higher institution of learning involved in the training of nurses. According to McFubara, Edoni and Ezonbodo- Akwagbe (2016), the main objective for the establishment of BYSSON was to mitigate the acute shortage of nurses in the state by producing at least 400 nurses within 10 years period. But unfortunately, between 1999 when the school was established and 2012, the school was able to produce only 175 nurses; and that the school was not able to present candidates for the final qualifying examination of the nursing and midwifery council of Nigeria in some of the years. This means that the school cannot be said to be an exception to all these problems. It is for this reason that the researchers became interested in carrying out this study which is directed at exploring the correlations between anxiety, depression and academic achievements in the new students of the Bayelsa State School of Nursing, Tombia Nigeria.

Statement of Problem

In 1996 when Bayelsa State was created, the state had only 306 nurses working in General Hospitals, 15 cottage Hospitals and 100 Primary Health Centres scattered round the State. This was quite inadequate to take care of the nursing needs of a population of 1,703,358 people and under 5 mortality rates of 197 per 1000, (McFubara, Edoni and Ezobodei- Okwagbe, 2013). BYSSON was therefore established to increase the nursing strength by 400 nurses in 10 years. But unfortunately, it has been observed that for more 20 years now after its establishment, only 437 nurses have been produced. Some researchers have noted that anxiety and depression are common among new students of higher institutions of learning of which the Bayelsa nursing school cannot be an exception. Right from its inception, it was noted that more than 50% of admitted students leave the school within the first six month of training on account of academic failure. Some even leave voluntarily before the commencement of examination out of fear. Many factors could be responsible for this development including mental health problems. According to Edwards and Holden (2001) as cited in Al-Qaisy (2011), among students of higher institutions of learning seeking counseling services, anxiety and depression were ranked 1st and 3rd respectively; while academic and work related problems, were ranked 2nd as the presenting problems. It is for this reason that the researchers sought to study the correlations between anxiety, depression and academic achievements amongst new students of the Bayelsa State School of Nursing (BYSSON) Tombia Nigeria.

ISSN No:-2456-2165

Purpose of the Study

This study was to critically examine the relationship between anxiety, depression and academic performance among new students.

Objectives of the study

The specific objectives were to:

1. Examine the relationship between anxiety and academic achievements amongst students.
2. Examine the relationship between depression, and academic achievements amongst students.
3. Critically examine the relationship between depressive mood and sex (male/female) amongst students.
4. Examine the link between anxiety and sex (male/female) among new students.

Research Questions

1. Is there any relationship between anxiety and academic achievement among new students?
2. Is there any link between depressive mood and examination performance among new students?
3. Is there any relationship between depression and sex (male/female) among new student?
4. Is there any link between anxiety and gender among new student?

Research Hypotheses

1. There is no significant relationship between anxiety and academic achievements amongst students.
2. There is no significant relationship between depression and academic achievements amongst students.
3. There is no significant relationship between depression and gender of new student?
4. There is no significant relationship between anxiety and gender of new student?

It would enable educational technologists to develop techniques in the teaching-learning transactions that are friendly to the adolescents and young adults (new students) in the school.

Scope of the Study

The research was delimited to the Preliminary Training Session (PTS) students i.e. the 1st six months of training. The respondents started their academic programs in November, 2017. The scores of the respondents on anxiety and depression were related to their achievement scores at the end of the PTS session.

Operational Definition of Terms

- Academic achievement: the capacity to pass all the courses in the Preliminary Training Session (PTS) for promotion to the post P.T.S. Any score below 50% is considered a fail while any score from 50% and above is considered to be a pass mark.
- Anxiety- a state of being overwhelmed with tension and stress as a result of the new environment, new academic workload (i.e. clinical and classrooms) and new rules and regulations of the school.
- Depression- a state of the inability of students to participate effectively in clinical and classroom learning activities due to anxiety: this could lead to low scores in the PTS examinations
- New students: students within the first six months of training in the Bayelsa State School of Nursing Tombia.

II. THE CONCEPT OF ANXIETY, DEPRESSION AND ACADEMIC ACHIEVEMENT

Some people tend to see anxiety as the same thing as depression. However in the real sense, even if they are closely linked, there still exist marked differences between these two mental disorders. The link between anxiety and depression is that co-morbidity exists between them. This means that most people with anxiety usually have depression. In the same vein, most people who are depressive are usually anxious at the same time.

The Concept of Anxiety

Anxiety is a biochemical and emotional state characterized by physical, cognitive and behavioral component; in either present or absence of psychological stress, anxiety can create a feeling of fear, worry, uneasiness and dread, (Afolayan, Bitrus, Onasoga, Adeyanju & Agama, 2013). According to the national institute of mental health (2008), Afolayan, Bitrus, Onasoga, Adeyanjuand Agama (2013), anxiety is a normal response to stress which may help an individual to cope with the demands of life but when it is too severe, it may be considered as an anxiety disorder. As a disorder, it makes the students mind to go blank, their hands go numb and they start having memory problems.

The Concept of Depression

According to Jack-Ide (2016), depression is a mental health disorder characterized by a profound and persistent sadness or despair and or loss of interest in things that once were pleasurable; it can lead to problems in study. NIMH (2012) cited in Khurshid, Parveen, Yousuf, and Chaudhry (2015) asserted that it is during college life that most students experience their first episode of depression i.e. feeling sad and reducing academic achievements. According to Ibrahim, Kelly, Adams and Glazebrook, (2013), the basic characteristics of depression is a loss of position affect which manifests itself in range of symptoms including sleep disturbance, lack of self-care, poor concentration, anxiety and a lack of interest in every day experiences,

The Concept of Academic Achievement

The meaning of Academic achievement can be considered from many dimensions. It comprises different domains of learning: that is the extent to which a person has accomplished specific goals that were the focus of academic activities (Stein Mayr, Meibner, Weidinger and Wirthwein, 2017). Academic achievement can be used interchangeably with academic performance. On its own it is the degree to which a learner, teacher or institution of learning has been evaluated to achieve their short or long-term educational goals. Academic performance is usually measured through examinations, tests or assignments, but there is no consensus on how it is best assessed or which aspects are most important — procedural knowledge such as skills or

declarative knowledge such as facts (Ward, Stoker & Murray-Ward as cited in Wikipedia, 2018).

A student that is highly anxious and or depressed is most likely going to score low in any assessment. On the contrast, if this student is moderately anxious and or he is not depressed, he is most likely going to do well in his academics. There are many criteria used in evaluating academic achievements but in nursing, the evaluation is based on the three main domains of learning i.e. the cognitive, affective and the psychomotor components. The evaluation and assessment after the first 6 months of training is either (0-49%) fail or (50-100%) pass (Nursing &Midwifery Council of Nigeria, 2016).

Anxiety and Depression among Nursing Students

Bayoumi, Elbasuny, Mofereh, Assiri and Al-Fesal (2012), opined that stress has been identified as a 21st century problem: and it has been viewed as a complex and dynamic transaction between individuals and their environments. Stress is a subjective construct that can be caused by anything that one feels distorts the harmony of life.

According to Bayoumi, Elbasuny, Mofereh, Assiri and Al-Fesal (2012), a student nurse's first year of professional experience often lays the foundation for what will hopefully be long-term career satisfaction. While transition to professional practice can be exciting and challenging; it could be a period of high expectations and depressive mood particularly when the truth about the professional practice do not match with ones expectations due to feelings of burnout or isolation. Duchsche as cited in Wedgeworth (2016) has conducted extensive research surrounding role and transition shock in nursing, describing it as the person "jumped into the deep end of the pool" while not being prepared for the reality of the transition effects on their personal and professional life. Again, Bayoumi, Elbasuny, Mofereh, Assiri and Al-Fesal (2012), asserted that many nurses agreed that nursing school and the transition to professional practice was one of their most challenging, often frustrating, and perhaps disillusioning life experiences.

Causes of Anxiety and Depression in Year One Nursing Students

According to Bayoumi, Elbasuny, Mofereh, Assiri and Al-Fesal (2012), for year one students in schools of nursing, the hospital setting in particular is an environment that may make them to experience stress and anxiety, with initial clinical practice being perhaps the most stressful period in a student's education. The reasons that are cited for the increased stress associated with this aspect of the nursing training include: the gap between the principles and practice, poor preparation for practice, fear of making a mistake, issues related to death and dying, the sight of blood in the hospital, witnessing pain and suffering, problematic interpersonal relationships with doctors and other professionals, being observed and evaluated, and lack of familiarity with the clinical environment.

Academic challenges outside the hospital as a learning environment include exams and workload. "Worrying about grades" is cited as a top source of stress for some learners (Shaban et al., 2012). Failure, not achieving their desired grades or meeting family expectations in this regard, can leave students feeling inadequate and at risk for depression. Perceived heavy workloads associated with course requirements combined with personal responsibilities add a further dimension to the stress experienced by some students (Magnussen & Amundson, 2003). Personal sources of stress include finances and limited free time (Jimenez, 2010; Lo, 2002; Moscaritolo cited in Bayoumi, Elbasuny, Mofereh, Assiri & Al fesal (2012). The demands of moving between studies and employment, family life, and other multiple roles interfere with students' abilities to receive the needed social support and relaxation that interpersonal connections provide. According to Cheung, Wong, Law Ng, Tong, Wong, Ng and Yip (2016), the rigors of progressing through intense academic and clinical programs, additional work, home obligations, and entering into a field of professional practice that continually evolves may invoke significant life changes leading to feelings of distress and being anxious. Concurrently, the clinical setting is charged with giving technologically advanced high quality patient care while hiring and retaining a competent nursing workforce. Nursing students and particularly those in their year one of training have been identified as a population with an elevated level of stress. The impact of stress on nursing students includes physical anxiety, psychological anxiety, moody symptoms, cognitive symptoms, and negatively impacts on academic success. Clinical experience has been an integral part of nursing education.

According to Beck and Srivastava, (1991) as cited in Cheromas and Shapiro (2015), the psychomotor domain of nursing education was identified by nursing students as more stressful than principles and cognitive aspects of the programme. For student nurses, these "real life" simulations are stressful due to the fact that patients can be affected negatively or positively. The idea of causing harm, even death to a patient, is a fear for nursing students. Initial clinical experiences (providing care, giving injections, communicating with patients, and engaging in physical exams) was reported as stressful. Practical engagement is a significant learning environment that presents challenges and may make nursing student to experience anxiety. It is one of the most anxiety producing components of the nursing program which has been identified by nursing students. Lack of clinical experience, unfamiliar areas, difficult patients, fear of making mistakes and being evaluated by faculty members were expressed and this concomitantly could lead to depression (Rathnayake & Ekanayaka, 2016).

Prevention of Anxiety and Depression on Student Nurses

Studies report that some students have to work to support themselves, thus further reducing their free time, Magnussen and Amundson, (2003) as cited in Rathnayake and Ekanayaka (2016). For those students who are also parents, they could be concerned about access to adequate childcare arrangements: this can be a source of personal

ISSN No:-2456-2165

stress (Pryjmachuk & Richards, 2007 as cited in Rathnayake & Ekanayaka 2016).Another important issue for attention in the literature is a look at the measures that could be instituted as a way of assisting students to cope or as a support and a variety of interventions that can be helpful in mitigating students' distress. Stress and coping frameworks, in particular, Lazarus and Folkman's framework, are commonly used to understand the process by which students face, cognitively process, and attempt to manage their stress (Gibbons, Dempster, & Moutray, 2010; Jimenez et al., 2010; Sawatzky, 1998 as cited in Rathnayake & Ekanayaka, 2016).Coping strategies have been examined to indicate, generally, that problem-solving and other direct ways of managing stress are associated with lower stress levels, while avoidance coping and emotion-oriented strategies are associated with emotional exhaustion and anxiety, respectively, (Rathnayake & Ekanayaka, 2016).

Meanwhile nursing education is at a crossroad, where programmes are turning away thousands of qualified candidates, yet a nursing shortage persists. In order to ensure the future of the profession, nurse educators, staff development nurses, administrators, and policy makers must become aware of and respond to mental health issues associated with nursing education that may affect the transition of students and newly qualified registered Nurses (RNs) to skillful practitioners. Student nurses are a vital workplace resource, however those in professional development, education, and administration may not be aware or do not acknowledge that anxiety among nursing is higher than that of the students of other departments in the university, or that the anxiety experienced in nursing school may continue through role transition into professional practice. Nursing students also have higher levels of anxiety and depression than students in other health related disciplines including medicine, pharmacy, and social work. The admission into the school is through competitive examination on one hand, while the while the programme of study itself is very rigorous and challenging through frequent exams, hours of challenging experiences, caring for terminally ill clients, and lack of support from tutors and more experienced clinical staff are a few of the unique stressors reported by students and newly qualified nurses.

This excessive anxiety may result to poor role transition, burnout, poor job performance, or student nurses leaving the school either due to poor academic failure or out of their own volition. Of particular concern to nurse educators is that the greatest source of anxiety in students is the clinical experiences and client interactions that are unique to nursing education. In the contemporary clinical setting, it is important for the nurse lecturers to go beyond only teaching content and facilitating the learning environments that nurture and build resilience in future nurse practitioners. In doing this, the educators and other nurse leaders must be aware of the fact that during the program of study high levels of anxiety are occurring in students. Retaining nurses in service is important as the work force ages towards retirement and healthcare resources become increasingly limited. Nurses report that they are faced daily with emotionally and physically demanding work. The RN are often expected to "hit the ground running", and research suggests that younger nurses experience the most distress in the practice setting. And the transition to professional practice is described as challenging, confusing, and sometimes shocking: not surprisingly, 91% of new graduate nurses report of anxiety and depression, (Rathnayake & Ekanayaka, 2016).

III. THEORETICAL/CONCEPTUAL FRAMEWORK

There are many theories of anxiety and depression but the most appropriate ones underpinning this study are the Yerkes-Dodson law of anxiety and the Becks theory of depression. These theories were further adapted, evolved and developed into a new theoretical model called the Lawrence Iruo (Anxiety, Frustration and Depression) model. See figures 2.1, 2.2 and 2.3 respectively.

Yerkes-Dodson Law of Anxiety

In her article "The Yerkes-Dodson Law and Performance", Cherry (2017), gave an insight into the Yerkes-Dodson Law otherwise known as the inverted "U" model which was first described in 1908 by the psychologists, Robert Yerkes and John Dillingham Dodson. In this article, Cherry stated that, Yerkes and Dodson in developing this law, observed that very little electrical shocks could be used to motivate rats to complete a maze, but when the electrical shock becomes too high, the rat would move slowly around in an attempt to escape. This experiment demonstrates that increasing stress and arousal levels could help focus motivation and attention on the task at hand, but only up to a certain point.

The principles espoused by these scholars draw a line between ones performance and anxiety indices. Minimal anxiety index according to Yerkes Dodson principle is necessary for optimal productivity. In the short run, the rate of increase in anxiety is directly proportional to the increase in productivity until up to a point called the point of maximum performance (M.P.) (see figure 2.2 i.e. the inverted "U" theoretical model). Beyond the M.P. the rate of increase of anxiety becomes inversely proportional to productivity. When the performance graph starts falling as a result of increase anxiety, frustration sets in (see figure 2.3 i.e. Lawrence Iruo Anxiety, Frustration and Depression theoretical Model: adapted from Syokwaa, Aloka and Ndunge , 2014). From the frustration point, depression sets in. At the frustration point, when anxiety is further increased, depression increases correspondently (i.e. the rate of increase of anxiety is directly proportional to the increase in depression).

Beck's Theory of Depression

According to Mcleod (2015), Aaron Beck, a cognitive theorist studied some clients in his research and found out that they interpret events in a negative way. Beck (1967) as cited by Mcleod (2015) discovered three inter connected mechanisms which he believes can cause depression. Beck calls it the cognitive triad. The tripartite mechanisms are interconnected in a triangular fashion with three surfaces

(see figure 2.1). The three surfaces are (1) the negative view of the world (2) the negative view of self and (3) the negative view of the future. They view these three factors in very unrealistic way. For instance, the world is hostile and full of obstacles that are insurmountable. They view themselves as inadequate, worthless and incapable of facing the "insurmountable obstacles" in the world. And they see the future as hopeless and nothing in stock for them. According to Beck (1967) in Mcleod (2015), it is this negative interpretation of the cognitive triad that further pushes them down the depression ladder that in extreme cases can lead to suicide. This Beck's theory of depression by Alloy (1999) cited in Mcleod (2015) wasBoury (2011) in Ude and Ofoke (2012) as true.

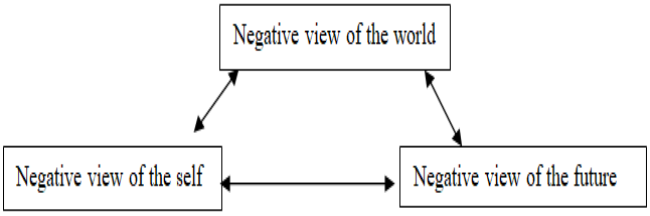

Fig 2.1 Beck's Cognitive triad. Adopted from Ude and Ofoke (2011)

Key
a = inadequate arousal
b = optimal arousal
c = over arousal

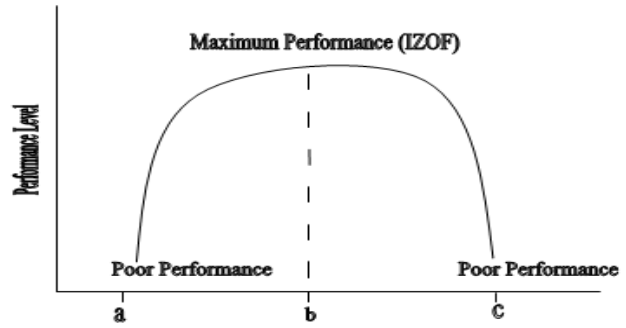

Fig 2.2 Inverted 'U' Theoretical Model Adopted from Syokwaa, Aloka and Ndunge (2014)

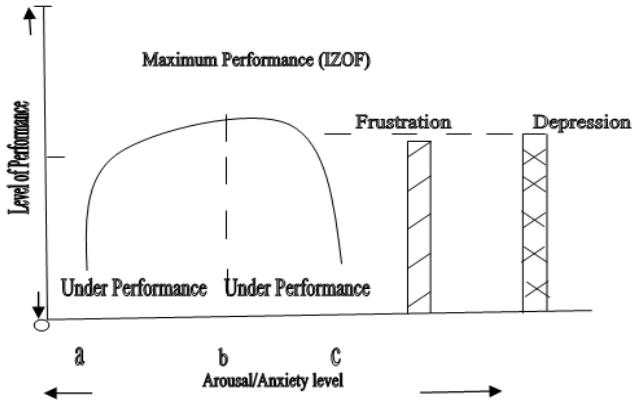

Fig 2.3: Lawrence Iruo (Anxiety, Frustration and Depression) theoretical Model: adapted from Syokwaa, Aloka and Ndunge (2014)

Relationship between Anxiety and Gender

Females have repeatedly been found to report higher levels of overall test anxiety than males (Bandalos, et al., 1995; Hembree, 1988; Volkmer & Feather, 1991; Zeidner, 1990, cited in Cassady & Johnson, 2002). However, there is no common ground among researchers regarding the locus of these gender differences. Three explanations have dominated the thinking on this issue. One explanation for the gender difference in test anxiety is that males and females experience similar levels of test worry, but females have higher level of the part that deals with emotion, producing higher general test anxiety scores (Deffenbacher, 1980; Mueller, 1980, cited in Cassady & Johnson, 2002). This supposition was greeted with limited support from research revealing that differences between males' and females' reported anxiety levels were greatest in the emotionality component. However, females also consistently report higher levels of cognitive test anxiety than males (Hembree, 1988; Zeidner; 1990, cited in Cassady & Johnson, 2002). Zeidner (1990) cited in Cassady and Johnson (2002) found that when statistically controlling for the influence of academic aptitude (as measured by a composite scholastic aptitude test given to Israeli college students), the influence of gender on test anxiety was minimal. This led to the believe that the differences observed between males and females in test anxiety were ''due, in large part, to gender difference in scholastic ability'' (Zeidner, 1990, cited in Cassady & Johnson, 2002). However, Hembree (1988) cited in Cassady and Johnson (2002) revealed that the heightened levels of test anxiety re-ported by females are not generally accompanied by lower performance scores.

A third explanation for gender differences in test anxiety is on the perceptions of threat in evaluative situations. Cassady and Johnson (2002) reported that gender differences in self-reported efficacy, self-esteem, discomfort, and task avoidance were a function of the level of activity evaluation. When performance evaluation was salient, females were more likely to rate themselves as less capable and confident in their abilities, more uncomfortable with the experimental setting, and less willing to perform the task again. However, when the experimental condition did not have a salient evaluative component, females had more positive feelings on all perceptions of the event and their abilities (Cassady & Johnson, 2002). Thus, the pronounced test anxiety levels in females may reflect a tendency to perceive evaluative situations as threatening rather than challenging, which in turn heightens the likelihood of cognitive interference, Cassady & Johnson, 2002).

Relationship between Depression and Gender

Many researchers are of the view that females are prone to depression than males counterparts. The reason for this is not clear. For instance, Jack-Ide (2016) found out that more women 57.5% who attended the outpatient clinic between 2009 and 2012 in the Federal Medical Centre (FMC) Yenagoa had some degree of depression. Furthermore, Kessler (1994) in Nazroo (2001) reported that women in the United States of America are about 75% more

likely to develop depression than males. The female's hormones particularly during childbearing period are likely explanation for this development. According to Nazroo (2001), a psychiatric survey in Britain showed a similar trend i.e. women are more depressed than men when considered from the social perspective.

Application of Framework to the Study

A careful examination of the Yerkes-Dodson Law and the Beck's Theory will reveal that moderate anxiety and or no depression can enhance proficiency in taking care of an assigned task. On the other hand, it can be said of these theories that, going by them, high anxiety and or depression can result in failure in an assigned task. In addition, analyzing the concepts put forward by scholars on the relationship between age and gender and anxiety and depression, females on a general note tend to be more anxious and depressed easily than their male counterparts. Also, older individuals are more prone to anxiety and depression than their younger counterparts. This study has been structured to explore the relationship between anxiety, depression and academic achievement among students in a nursing school and also determining the relationship between age and gender and anxiety and depression among the students. This myriad of theories, models and concepts that form this framework can therefore be said to have created the basis upon which this study is built. It is thus appropriate to be applied in this study.

Empirical Review

There is serious shortage of empirical studies on the correlations of anxiety, depression and academic achievements of new or year one students. For this reason, the work is reviewed on students generally irrespective of their year of study.

Krasniqi (2014) did a research on Anxiety/Depression and Academic Achievements in Adolescents in Prishtina. The main purpose of the study was to investigate the relationship between anxiety, depression and academic achievements in adolescent students in Prishtina. A sample of the population of the school (219) children aged between 10 and 18 years were recruited for the study; 38.8% were males, while 61.2% of the sample population was females. The instrument for the study was: Revised Children Manifest Anxiety scale (RCMAS) and depression self-rating scale for children (DSRSC). The multiple standard regression analysis was the statistics used for the data analysis. The result showed that 15% of the population was anxious, while 22.1% had depression. From this it became clear that anxiety and depression have no relationship with success at school while having significant positive correlation between them (r = .56, p> .00) with great effect size. Non-significantly, students with depression had a poor success and those with anxiety had better success. Also the result showed statistically significant gender differences in the level of anxiety and depression. Females had more anxiety (r = .24, p .00) and depression (r = .20, p.01).

In a related study, Yousefi, Mansour, Juhari, Redzuan and Talib (2010) looked at the relationship between Gender, Age, Depression and Academic Achievement among some adolescents in Iran. The population of the study 400 i.e. 200 boys and 200 girls. The instrument for the data collection was the Beck's Depression inventory. The result showed that 27.5% of the boys and 31.5% of the girls were depressed: that there is significant correlation between depression and academic achievement. There was also a significant correlation between age and academic achievement. Equally important of note was that there was a significant difference of academic achievements between male and female.

Khurshid, Parveen, Yousuf and Chaudhry (2015) investigated the effects of depression on students' Academic performance. The target population was all women in the government colleges in the city of Rawalpindi, Pakistan in their 2nd year of study. The sampling technique was by simple random. Two instruments were used to collect the data: i.e. depression screening test by Ivan Goldberg was used for measuring the level of depression; to find-out the effects of depression on students' academic performance, Academic Performance Rating Scale (APRS) for teachers was administered to take teachers responses about students and their academic records were taken out from their institutions. Data were analyzed using chi-square and paired sample t-test. The result shows that there is negative effect of depression on students' academic performance, where as there is a significant difference between the academic performances of the students having low, medium and high level depression.

Rathnayake and Ekanayaka (2016) investigated on the correlation between anxiety, depression and stress amongst undergraduate nursing students in a public university in the country Sri Lanka. A cross sectional study design was adopted on a sample size of 92 students drawn across the four levels of study in the faculty. The observation was that, there was a prevalence of anxiety depression and stresses amongst the year one students. It was equally noted that the results cannot be generalized to other schools of nursing students because of the sample size. The research concluded that there was a significant positive relationship between anxiety and depression (r = 0.689, p0.001), depression and stress (r = 0.785, p<0.001), and anxiety and stress (r = 0.763, p0.001). The factors associated with depression were age, academic year of the students, satisfaction with the nursing program, physical well-being factors, possible stressors, self-rated physical health and self-rated mental health. The factors associated with anxiety were age, self-rated physical health and self-rated psychological health and the factors associated with stress are possible stressors, self-rated physical health and self-rated mental health. Moodiness, anxiety and stress are very common among undergraduate nursing students and correlations between these variables are positive. Self-rated physical health and self-rated mental health are factors most closely related to negative emotional states.

Dobson (2012) investigated the effects of academic anxiety on the performance of students with and without learning disabilities the conclusion was that student with anxiety tend to have very low grades in examinations.

Khalid, Suman, Rasid, Mohamad and Ghazali (2016), studied the correlations between depression and academic performance. The research sought to study the relationship between students' academic performance with communication skills, age, mental state and tasks assigned to them. Students were sampled from two different universities in Malaysia. It is clear from the result that depression level and age affects student's performance, while gender and financial background do not affect performance. Depression was more prevalent in the students of year one and two. The population for the study was from the social science.

Again, Al-Qaisy (2011) investigated on the relationships between anxiety, depression and academic achievements amongst a group of students in Tafila Technical University. The main objective of the study was to identify the different levels of anxiety and depression in both sexes. The results indicate that males are more depressed than females, while females are more anxious than males. Again, the results show that mild to moderate anxiety brings about good grades, while depression goes with poor scores in academics. The study population was limited to 200 level students from the different faculties in the university. In a similar vein, Jack-Ide (2016) conducted a study on the prevalence of depression among women using the Out Patients Department services of the Federal Medical Centre Yenagoa. The results showed that 57.5% who attended the clinic between 2009 and 2012 had one form of depression or the other. It also showed that depression was more prevalent (31.9%) in women aged 20-30 years.

Again, Cruz, Malos and Marques (2016) looked at the link between anxiety, depression and learning outcome amongst some adolescent students in Portugal. Findings show that females are more anxious than males; and that there is no good link between age and anxiety.

Moreover, Morales, Perez, Leon, Medrano, Aguilar and Guevera-Guzman (2013) researched on the depressive symptoms and academic performance in medical students. The thrust of the research was to identify whether the depressive symptoms presented by 1st year medical students were associated with poor learning behaviour. The study included 774 1st year undergraduate medical students. The percentage of learners with depressive symptoms was 23% with a significant difference in male and female medical students. The conclusion was that depressive symptoms are important risk factor for poor academic achievements.

In Nigeria, Ude and Ofoke (2017) investigated on the effects of anxiety and depression on undergraduate students of Ebonyi State University. The results indicates that high anxiety and depressed undergraduates performed poorly than less anxious and less depressed undergraduates. In Bayelsa State of Nigeria, Afolayan, Onasoga, Adeyanju and Agama (2013) investigated on the link between anxiety and learning outcome of undergraduate nursing students of the Niger Delta University. A descriptive survey was adopted to obtain data from respondents who gave consent to the study. The results indicated generally that students expressed anxiety during examination which is seen as physiological, psychological and behavioural changes. The conclusion was that there are no statistical differences between gender and academic performance of students.

Summary of Reviewed Literature

The literatures that are related to the correlations of anxiety, depression and academic achievements of new students of the Bayelsa State School of Nursing Tombia were reviewed. It was observed that there is a strong relationship between the following variables: Anxiety and Academic Achievements, Depression and academic achievements, Anxiety and Gender and Depression and Gender. The theoretical framework underpinning this research is the Yekes-Dodson law of anxiety and the Becks's theory of depression. While the theoretical models are the inverted 'U' model and the Anxiety, Depression and Performance Theoretical Model. The instruments used by most scholars for data collections were the Beck's anxiety inventory (BAI) and the Beck's depression inventory (BDI). The statistics used for the data analysis were either the Spearman's product moment correlation coefficients or the multiple standard regression analysis. Therefore the research method of this work is expected to follow the pathway that is a little different from the literature reviewed above so as to find out if the results would be the same or not.

IV. RESEARCH METHOD

Research Design

The design is the triangulation of (1) Prospective cohort studies and (2) Cross sectional survey. Anxiety and Depression Scale (ADS) is triangulated with test scores. It is prospective because the participants / respondents are studied for a period of about six months. It is also cross sectional because the ADS is administered to all the respondents at the same period of time.

Setting

The setting of the research is the Bayelsa State School of Nursing (BYSSON) located in the Tombia community. Tombia community is one of the communities of the Yenagoa Local Government Area (YELGA) about 15km North – West of the Yenagoa metropolis along the Amassoma road(with a cosmopolitan status) .The institution has a full accreditation status. It has 17 academic staff who are nurses and 10 other academic staff who are not nurses. The institution runs a three year nursing programme that was started in 1999. The class rooms, hostels and staff quarters are all within the school premises. Each student is expected to pass through 5 classes / sessions or blocks before graduation. These are: the Preliminary Training Session (PTS) block of 6 months, Post PTS block of 6 months, the 2nd year block of 12 months, the hospital final block of 6 months and the State Final block of another 6 months. As a matter of policy, there are no carry – over of courses. No student repeats the PTS or Post PTS classes;

this makes the PTS the most critical session in the school. If a student fails any paper in 2nd year, the student is expected to repeat the class only once. The same thing is applicable to the hospital final block. For the state finals, a student is permitted to attempt the examination only 3 times. All through the PTS and state finals training, the students are exposed to clinical activities in some of the major health care facilities within Bayelsa and in the neighboring states.

Population of the Study

The target and accessible population for the study was the entire population of new students of the school which is 107.

Sample and Sampling Techniques

The total population sample of the entire 107(i.e. 82 females and 25 males) new students were used. According to Polit and Becks (2012), this is otherwise known as purposive sampling technique.

Instrument for Data Collection

The instrument for data collection was adapted. It is called the Anxiety and Depression Scale (ADS) - see appendix. The instrument is a hybrid of Beck's Anxiety Inventory BAI (Halfaker & Wundalick 2018) and Beck's Depression Inventory BDI (Zhu, Zhang, Sheng & Wang, 2018). The ADS consists of 3 sections, A, B and C: Section A has gender and age as the only variables for the research; Section B measures depressive traits and consists of 21 items from the BDI. And section C consists of another21 items gotten from BAI. Section C of the scale measures the degree of anxiety symptoms present in a respondent. Therefore there are altogether 44 items in ADS for the collection of data on Anxiety, Depression, Gender and Age; while the data for Academic Achievement was generated by the PTS result. The 42 items of sections B, and C were in the Likert Scale format of Strongly Agree (SA = 1), Agree (A = 2), Disagree (D = 3) and Strongly Disagree (SD = 4). For the calculation of both Anxiety and Depression indices, if the aggregate scores for Depression or Anxiety (i.e. sections B & C of the ADS), falls between 21-29 (it is severe), 30-37 (moderate), 38-47(mild), 48-84(minimal).

Validity of the Instrument

The instrument was presented to a Professor in educational psychology in University of Port-Harcourt who gave some advice on how to recast some questions in the instruments to reflect the face validity. A Consultant Psychiatrist in the Federal Medical Centre Yenagoa also made some suggestions on the content of the instrument. It was finally presented to the supervisor for expert guidance. The supervisor then approved the instrument.

Reliability of the Instrument

Both the Depression and the Anxiety Scales are standardized instruments. But a pilot study was still carried out since they were adapted. The pilot study was conducted in School of Nursing (SON) Itigidi, Cross River State. SON Itigidi was chosen as the site for the test of reliability of the instrument because it has similar features with BYSSON. A test retest method was adopted in a two week interval. The first test was administered on 15th January, 2018 while the second test was done on 29th January, 2018 on the same students, (the same set of students were able to be tract because they were all given pseudonyms at the first instance). Twenty-one (21) copies of the instrument were administered to twenty-one (21) PTS students of SON Itigidi selected in a stratified fashion (from the class of 96 students). The students in the class had already been ranked based on their performance in a test: so based on the ranking, 7 students were selected from the high achievers, 7 students from the average achievers and another 7 students from the low academic achievers. This was done to ensure homogeneity and to give a true reflection of the class. The scores of the two tests were computed using Pearson Product Moment Correlation Co-efficient (PPMCC). The result was found to be 0.8 (i.e. rho = 0.8). For this reason, the instruments was accepted to be reliable since the rho >0.7: according to Bolarinwa (2016), if rho ≥ 0.7, it should be accepted as reliable.

Procedure for Data Collection

The ADS was administered in the class by a Research Assistant. It was explained to the students that it is not an examination or test but just for the purpose of research. They were guided to complete the ADS and the instrument was then retrieved at their own time within 48 hours. The students that were absent were given theirs the following day. The 2nd set of data for the research was collected when the result of the PTS block was published. The students were told that there was no right or wrong response. All the 107 students voluntarily responded to the ADS instrument, while 98 students wrote the exams.

Method of Data Analysis

Both descriptive and inferential statistics were used in the data analysis. Simple percentages and frequencies were the descriptive statistics used for the demographic data and for objectives 3 and 4. Microsoft excel was the software used for the descriptive statistics. The pair-wise correlation was the inferential statistics used in the data analysis for objectives 1 and 2. The software was the JMP Statistical Discovery Version 12.0. The Pair-wise correlation was done in the following order:

1. Objective I – the relationship between anxiety and academic achievements: i.e. the data generated from section C and the respondents results
2. Objective II – relationship between depression and academic achievements: i.e. data generated from section B and respondents results; while the descriptive statistics was done in the following order,
3. Objective III – Relationship between Depression and Gender i.e. data generated from sections A and B
4. Objective VI – Relationship between Anxiety and Gender i.e. the data from sections A and C.

Ethical Considerations

The procedure was explained to the respondents and assured that it was neither a test nor exams, that it is voluntary and they could opt – out at any point in time. And that their names will not be mentioned in any part of the research report since it is purely for academic purpose. The

students were given opportunity to ask questions in order to seek clarifications and dispel myths /and misconceptions. They were told that they were free not to participate in the data collection procedure by not accepting the research instrument. As they collected it they were told that they were free to return the completed questionnaire at their own time within 48 hours from the time of collection. But they all willingly returned it within the day. Willingly collecting, completing and returning the questionnaire implied consent. An application letter and a letter of introduction from the Dean of the faculty were presented to the Head of the School. The ethical approval from the Head of the School was gotten on the 13th of March, 2019 (BYS/SON/AD/77/VOL. 1/22).

V. DATA PRESENTATION AND ANALYSES

All the data were generated by administering the instrument (ADS) and the examination. The data were analyzed using both the descriptive (simple percentages and frequencies) and inferential statistics (pair wise correlation). Microsoft excel was used for the descriptive statistics, while the JMP Statistical Discovery software version 12.0 (SAS institute, Kary, NC, USA) was used for the inferential statistics. For all tests performed, the probability value of 0.05 was used as threshold for determining the statistical significant level. Abbreviation: X^2 (df): Chi-Square value (degree of freedom); Percentages may not add up to 100 due to rounding-off.

Significant level: ****=p<0.0001; ns=Not Significant (p>0.05). The results were presented in Tables or graphs or both.

Table 4.1: Demographic Performance of the students (section A of ADS)

Characteristic	N (%)	Final Grade		Test Statistics P-value
		Passed n (%)	Failed n (%)	
Sex				
Female	74 (75.51)	31 (60.78)	43 (91.49)	0.0001****
Male	24 (24.49)	20 (39.22)	4 (8.51)	
Age Category (Years)				
18-21	58 (59.18)	28 (54.90)	30 (63.83)	
22-25	30 (30.61)	17 (33.30)	13 (27.66)	0.840 ns
26-29	5 (5.10)	3 (5.88)	2 (4.26)	
30-33	5 (5.10)	3 (5.88	2 (4.26)	
Total	98 (100)	51 (52.04)	47 (47.96)	

Fig: 4. 1 Graph Showing the Demographic Distribution of the Respondents in Terms of Sex and Age Ranges

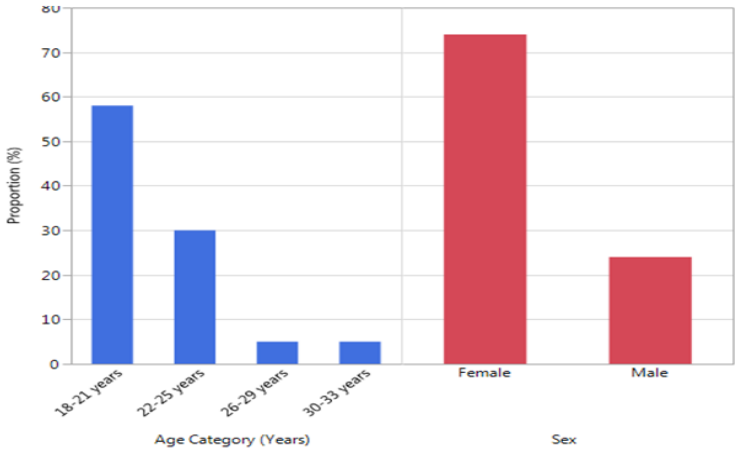

Table 4.1 and figure 4.1 above are demographic representative features of the respondents. The year one students were originally 107 in the class. Seven (7) students voluntarily withdrew from the programmes of study, while the results of (two) students were with-held and the affected students were subsequently advised to withdraw from training on account of examination malpractice. Three out of the seven students that withdraw voluntarily disclosed that they withdrew out of fear. The two students that indulged in malpractice said that they did what they did because of the fear of failure. Ninety –eight (98) respondents were finally used for the research (i.e75.51% females and 24.49% males). 52.04% of the students presented in the examination had a 50% pass and above in all the nine (9) subjects; while 47.96% failed. 59.18 fell between 18 and 21 years of age; 30.61% were between 22-25 years while 26-29 years and 30-33 years had the least percentage of students falling within those age brackets i.e. 5.1% and 5.1% respectively

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ISSN No:-2456-2165

Table 4.2 Data Generated by Section C (Anxiety Symptoms) of ADS

Anxiety Symptoms	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
I feel hot	23 (23.96)	26 (27.08)	32 (33.33)	15 (15.63
I feel muscle numbness or tingling sensation	15 (15.46)	24 (24.74)	38 (39.18)	20 (20.62)
Feeling unable to relax	15 (15.63)	30 (31.25)	35 (36.46)	16 (16.67)
I feel dizzy or light headed	14 (14.29)	28 (28.57)	36 (36.74)	20 (20.41)
Feel wobbly in the legs	12 (12.25)	15 (15.31)	50 (51.02)	21 (21.43)
Feeling unsteady	17 (17.35)	26 (26.53)	40 (40.82)	15 (15.31)
Heart racing or pounding	20 (20.62)	28 (28.87)	33 (34.02)	16 (16.50)
I feel very nervous	19 (19.39)	30 (30.61)	37 (37.76)	12 (12.25)
I do have choking feelings	10 (10.20)	27 (27.55)	36 (36.74)	25 (25.51)
My hands use to tremble	6 (6.12)	24 (24.49)	44 (44.90)	24 (24.49)
Unsteadiness or tremor	6 (6.12)	20 (20.41)	42 (42.86)	30 (30.61)
Terror or fear feelings	10 (10.20)	24 (24.49)	39 (39.80)	25 (25.51)
Afraid of losing control	12 (12.25)	22 (22.45)	41 (41.84)	23 (23.47)
I do have indigestion	10 (10.20)	14 (14.29)	47 (47.96)	27 (27.55)
My face do flush	7 (7.37)	9 (9.47)	50 (52.63)	29 (30.53)
Hot or cold sweat	11 (11.22)	32 (32.65)	33 (33.67)	22 (22.45)
Feeling scared	12 (12.25)	26 (26.53)	35 (35.71)	25 (25.51)
Having laborious breathing	6 (6.12)	19 (19.39)	38 (38.78)	35 (35.71)
Feeling the fear of dying	5 (5.10)	7 (7.14)	40 (40.82)	46 (46.94)
Feeling like the worst is happening	7 (7.14)	15 (15.31)	39 (39.80)	37 (37.76)
Feeling like fainting	3 (3.06)	10 (10.20)	45 (45.92)	40 (40.82)

Data Analyses in Respect to Objective I:
Objective 1: to examine the relationship between anxiety and academic achievements among students.

Table 4.2 above was used in detecting the degree of presence or absence of anxiety in the respondents. It contains 21 items measuring different variables of anxiety. The table is hereby summarized below.

From the table above majority of the respondents i.e. 33.3% disagreed about "feeling hot", while 15.6% strongly disagreed with it. On "feeling muscle numbness or tingling sensation", 15.5% strongly agreed to having it, while majority of the respondents 39.2% disagreed to its presence in them. On the variable of "feeling unable to relax", minority of the respondents constituting 15.6% strongly agreed to it, while the majority of the students i.e. 36.6% disagreed to it. On being "light headed", 14.3% strongly agree to the variable, while majority of 36.7% disagree to it. In the same manner, only 12.3% of the respondents strongly agree that they have "wobbly feelings in the legs", while a majority of 51% disagree to it. Finally, on feeling that the "worst is about to happen", minority of the respondents i.e 7.1% strongly agree to it, while a majority of 39.8% disagree to experiencing it. On "having a fainting feeling", 3.1% of them strongly agree to it, while a majority of 49.5% disagree that they are having it.

Table 4.3 pair-wise correlations of anxiety and various subject variables

Variable	By Variable	Correlation	Count	Lower 95%	Upper 95%	SignifProb	Graph of Correlationship
Anxiety	FON	-0.0258	98	-0.2231	0.1735	0.8007	
Anxiety	Science	0.0136	98	-0.1854	0.2114	0.8946	
Anxiety	Hum. Bio	-0.1484	98	-0.3369	0.0516	0.1449	
Anxiety	Sociology	-0.1323	98	-0.3223	0.0679	0.1939	
Anxiety	English	-0.0754	98	-0.2698	0.1249	0.4606	
Anxiety	Nutrition	-0.0608	98	-0.2561	0.1393	0.5521	
Anxiety	ICT	-0.1208	98	-0.3117	0.0795	0.2361	
Anxiety	Practical	-0.2418	98	-0.4200	-0.0455	0.0165**	
Anxiety	Seminar	-0.0814	98	-0.2754	0.1190	0.4256	
Anxiety	Total	-0.1661	98	-0.3529	0.0334	0.1022	
Anxiety	Average	-0.1644	98	-0.3514	0.0352	0.1057	
Anxiety	Depression	0.6239	98	0.4855	0.7317	<.0001****	

Table 4.3 above was the pair-wise correlations of anxiety with the nine (9) subjects that were done in the examination. It is seen from the table that the correlation between anxiety and foundations of nursing (FON) is – 0.0258 (i.e. a slightly negative correlation) while that between anxiety and science is about zero. Anxiety correlations with the total score at – 0.1661; it

correlates with the average at – 0.1664 but positively correlates with depression at 0.6239 at <0.0001 (significant probability level).

Table 4.4 Data Generated by Section B (Depression Symptoms) of ADS

Depression Symptoms	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
I feel sad	2 (2.01)	24 (24.74)	45 (46.39)	26 (26.80)
I feel discouraged about the future	3 (3.10)	10 (10.20)	37 (37.76)	48 (48.98)
I feel I have failed more than average person	4 (4.12)	12 (12.37)	43 (44.33)	38 (39.18)
I don't enjoy things the way I used to	15 (15.63)	39 (40.63)	30 (31.25)	12 (12.50)
I feel guilty a good part of the time	5 (5.16)	26 (26.80)	44 (45.36)	22 (22.68)
I feel I may be punished	6 (6.12)	13 (13.27)	49 (50.00)	30 (30.61)
I am disappointed in myself	6 (6.12)	13 (13.27)	32 (32.65)	47 (47.96)
I am critical of myself for my weaknesses or mistakes	14 (14.29)	36 (36.74)	30 (30.61)	18 (18.37)
I have thoughts of killing myself, but I would not carry them out	7 (7.22)	4 (4.12)	28 (28.87)	58 (59.79)
I cry now more than I used to	6 (6.12)	17 (17.35)	43 (43.88)	32 (32.65)
I am slightly more irritated now than usual	8 (8.25)	25 (25.77)	38 (39.18)	26 (26.80)
I am less interested in other people than I used to be	9 (9.18)	27 (27.55)	37 (37.76)	25 (25.51)
I put off making decisions more than I used to	8 (8.16)	32 (32.65)	30 (30.61)	28 (28.57)
I am worried that I am looking old or unattractive	7 (7.14)	15 (15.31)	33 (33.67)	43 (43.88)
It takes an extra effort to get started at doing something	26 (26.80)	42 (43.30	20 (20.62	9 (9.28)
I don't sleep as well as I used to	40 (26.60)	37 (37.76)	14 (14.29)	7 (7.14)
I get tired more easily than I used to	19 (19.39)	40 (40.82)	27 (27.55)	12(12.25)
My appetite is not as it used to be	24 (24.49	42 (42.86)	22 (22.45)	10 (10.20)
I have lost more than five pounds	27 (28.13)	28 (29.17)	27 (28.13)	14 (14.58)
I am worried about physical problems like aches, pains, upset Stomach or constipation	21 (21.65)	33 (34.02)	29 (29.90)	14 (14.43)
I am less interested in sex than I used to be	35 (36.08)	26 (26.80)	25 (25.77)	11 (1.13)

Table 4.4 above presents the data generated from the section B of the ADS. It generated the data for the degree of presence or/absence of depression in the respondents. It contain 21 items of strongly agree, agree, disagree and strongly disagree. The respective degree of freedom (df) and the p-value are reflected at the end of the scale.

For the first variable of feeling sad, majority (46.4%) of the respondents disagreed on feeling sad, while only 2% constituting the minority strongly agreed to it. On the other hand, majority of the students strongly disagreed with the presence of the following variables "I am worried that I am looking old or unattractive" (43.9%), :I have the thoughts of killing myself" (59.8%) "I am disappointed in myself" (48%), "I feel that I have failed more than an average person" (39.2%), "I feel discouraged about the future" (49%).

In the same vein, very few respondents agreed in the presence of the following variables in them: "I am worried that I am looking old and unattractive" (7.2%), "I put off making decisions" (8.2%), "I am easily irritated" (8.3%), "I cry too often" (6.2%), "I have the thoughts of killing myself" (7.2%),"I feel I may be published" (6.2%), "I am disappointed in myself" (6.2%), "I feel guilty" (5.2%) etc.

Data Analyses for objective 2;
Objective II: to examine the relationship between depression and academic achievements among students.

Table 4.5 Pairwise Correlation of Depression and Related Subject Variables.

Variable	By Variable	Correlation	Count	Lower 95%	Upper 95%	SignifProb	Graph of Correlationship
Depression	FON	-0.0450	98	-0.2412	0.1548	0.6601	
Depression	Science	-0.0002	98	-0.1986	0.1982	0.9982	
Depression	Hum. Bio	-0.1888	98	-0.3732	0.0100	0.0626	
Depression	Sociology	-0.2096	98	-0.3918	-0.0117	0.0383*	
Depression	English	0.0133	98	-0.1856	0.2112	0.8967	
Depression	NUT	-0.1704	98	-0.3567	0.0290	0.0935	
Depression	ICT	-0.0766	98	-0.2709	0.1237	0.4537	
Depression	Practicals	-0.2265	98	-0.4066	-0.0294	0.0249*	
Depression	Seminar	-0.0600	98	-0.2554	0.1401	0.5572	

ISSN No:-2456-2165

Depression	Total	-0.1681	98	-0.3547	0.0314	0.0980	
Depression	Average	-0.1826	98	-0.3677	0.0164	0.0719	

Table 4.5 is a pair-wise correlation of depression and related subject variables. Significant probability levels and a corresponding graph are attached at the last and second to the last columns. Apart from the Science and English which correlates with depression at almost zero points, the rest of the subjects correlates negatively with depression. Finally, depression correlates with the total score at – 0.1681 and with the average score at – 0.1826.

Table 4.6 Anxiety and Depression Index (Gender based)

Subject	Female (n=74) Mean ± SD	Male (n=24) Mean ± SD	Test Statistic P-value
Fundamentals of Nursing (FON)	63.81±8.09	70.45±6.90	0.001***
Science	57.43±8.31	55.25±9.62	0.898^{ns}
Human Biology	57.80±10.25	66.50±8.75	0.001***
Sociology	53.23±12.19	62.83±12.47	0.001***
English	57.01±10.62	60.15±9.42	0.200^{ns}
Nutrition	54.57±6.64	55.11±7.88	0.968^{ns}
ICT	61.82±9.90	66.81±8.87	0.030*
Practical	61.71±6.60	64.39±5.15	0.072^{ns}
Seminar	59.67±4.42	61.44±4.71	0.099^{ns}
Total	505.52±62.75	570.91±66.39	<0.0001****
Average	56.11±7.04	62.31±5.51	0.001***
Depression Index	48.70±8.23	45.13±8.49	0.069^{ns}
Anxiety Index	46.64±10.89	44.17±10.93	0.337^{ns}

Table 4.6 is used in addressing the anxiety and depression indices of the male and female respondents. From the table, it is seen that the overall depression and anxiety indices for the female students are 48.70 ± 8.23 and 46.64±10.89 respectively. For the male respondents, the anxiety and depression indices were 44.17±10.93 and 45.13±8.49 respectively.

Data Presentation for objective 3;

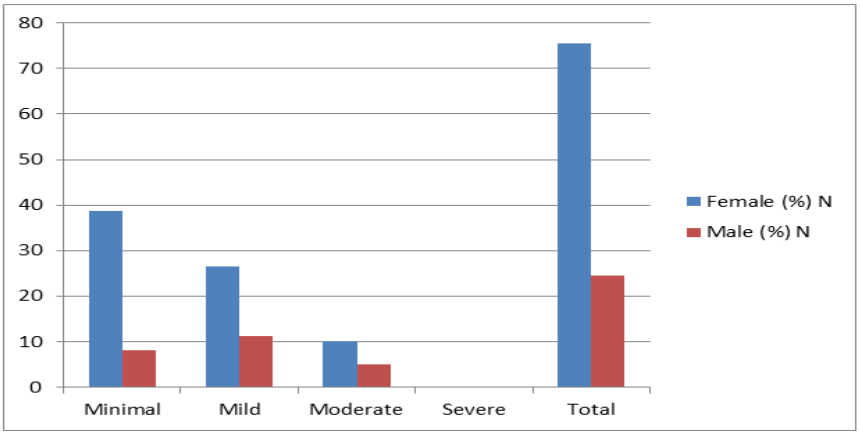
Table 4.7 the Depression Indices of the Respondents

Depression Index	Female (%) N	Male (%) N	Total
Minimal	(38.8) 38	(8.2) 8	(47) 46
Mild	(26.5) 26	(11.2) 11	(38) 37
Moderate	(10.2) 10	(5.1) 5	(15) 15
Severe	(1) 0	(1) 0	(0) 0
Total	(75.5) 74	(24.5) 24	(100) 98

Objective III: to examine the relationship between gender and depression among students.

Table 4.7 above, presents the depression indices of the respondents; it was observed that 47% i.e majority of the respondents had minimal depression. None of the students had severe depression. On the whole, the depression indices of the female (75.5%) are more than their male counterparts of 24.5%. The bar chart graph (figure 4.2) makes it even clearer.

Figure 4.2: graphical representation of the relationship between depression and gender of students of BYSSON

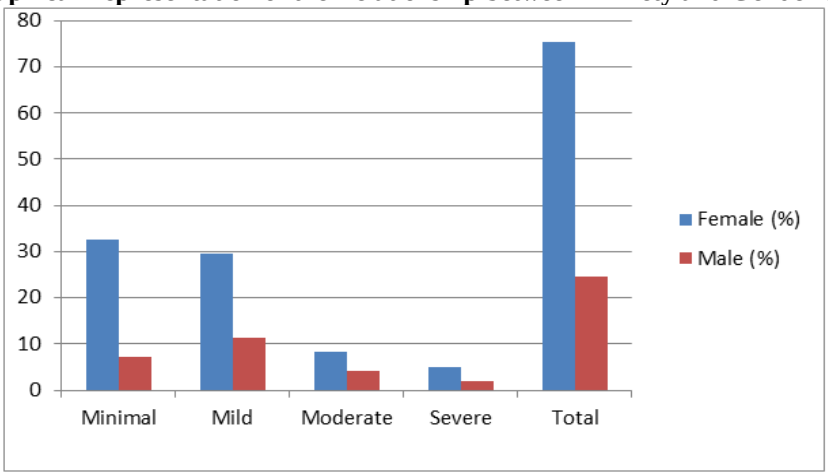


ISSN No:-2456-2165

Table 4.8 the Anxiety Indices of the Respondents

Anxiety Index	Female (%) N	Male (%) N	Total
Minimal	(32.7) 32	(7.1) 7	(39.8) 39
Mild	(29.6) 29	(11.2) 11	(40.8) 40
Moderate	(8.2) 8	(4.1) 4	(12.2) 12
Severe	(5.1) 5	(2.0) 2	(7.1) 7
Total	(75.5) 75	(24.5) 24	(100) 98

Figure 4.3: Graphical Representation of the Relationship between Anxiety and Gender of Respondents



Data Presentation for objective 4

Objective IV: to examine the relationship between anxiety and gender among students.

Table 4.8 and figure 4.3 above looks at the relationship between anxiety and the gender of the respondents. Majority (40.8%) of the respondents had mild anxiety. But the females had more anxiety (75.5%) than their male (24.5%) counterparts.

VI. DISCUSSION OF FINDINGS

This chapter highlights the information related to the purpose of the study to critically examine the correlations between anxiety, depression and academic achievements among new students. Firstly, ensuring exhaustive description of the relationship between anxiety and academic achievements and secondly, to explore the relationship between depression and academic achievements amongst students. Discussions about the validated findings were presented alongside topics related to the outcomes of the data analyzed. For readability, each of the findings in Chapter 4 was discussed followed by conclusion, recommendation and nursing implications.

The demographic data reveals that 8.4% of the study participants were overwhelmed with academic workload before the commencement of examination. The finding was similar to astudy in Kenya bySyokwaa, et al (2014) that revealed high personality anxiety levels (79%) among secondary school students. Also, Ude and Ofoke (2011) reported high level of anxiety in their study sample.Thus, students with high level anxiety are likely to be low academic achievers.

Objective 1: to examine the relationship between anxiety and academic achievements among students.

So from the data analyses, the anxiety index was found to negatively correlate with the mean of the examination scores (i.e. 0.1644). This implies that the higher the level of anxiety, the lower the academic performance, while the lower the anxiety index the higher the academic performance. This observation is equally true when anxiety is extrapolated with the various individual subjects. Although anxiety is observed to have a very weak negative correlation with foundations of Nursing (-0.0258), there was almost no correlations with the science (0.0136). For the total performance of the class, anxiety correlated at -0.1661, while it correlated on the average of -0.1644. Therefore, there was a negative relationship between anxiety and academic achievements among the students. The H_o is rejected in favour of the H_1; there was a negative relationship between anxiety and academic achievements among students.

In terms of prevalence of anxiety among nursing students, this research agrees substantially with those of Rathnayake and Ekanayaka (2016), Dobson(2012), Afolayan, Onasoga, Adeyanju and Agama (2013), Cruz, Malos, and Ofoke(2017) and Al-Qaisy (2011). These researches agreed that students usually show some degree of anxiety when examination is approaching: that anxiety can affect the outcome of the results. But the result is at variance with that of Krasniqi (2014). In the conclusion of Krasniqi (2014), students who had anxiety had better result. The difference observed in Krasniqi (2014) conclusion could be due to the difference in location, culture etc. But the present study agrees substantially with Cherry (2017) Yerkes – Dodson theory of performance ie the theory that guided the present study. It was also observed that there was a positive relationship between anxiety and depression, but there was no significant correlation between the two variables. This agrees

with Beck (1967) as cited in McLeod (2015) on the cognitive triad theory that guided this study.

Objective II: to examine the relationship between depression and academic achievements among students.

The result shows that the mean ± SD of academic performance for the female students was 56.11±7.04; while that of the males was 62.31±5.55. So from the analyzed data in table 4.5, the correlation of depression index and the mean of the examination is (- 0.1826). This was a weak negative correlation between depression and academic achievements. This implies that the more depressed a student becomes, the lower the grade the student would make. Apart from the science, this was true of all the other eight (8) subjects that were written in the examination. Depression correlates with the science at -0.0002 (approximately = 0): the reason for the exception is not clear.

While there was a negative relationship between depression and academic achievements among the students under this study: there was no significant relationship between their level of depression and their academic achievement.

This result agreed with those of Khurshid, Parveen, Yousuf and Chaudhry (2015), Krasniqi (2014), Ude, Yousefi, Mansour, Juhari, Redzuan, and Talib(2016), Khalid, Suman, Rasid, Mohamad, and Ghazali(2016), Morales, Perez, Leon, Medrano, Aguilar, Guevera, Guzman(2016) and Ofoke (2017). The finding also supports the position of Al – Qaisy (2011) that there was a negative relationship between depression and academic achievements and that depression impacts negatively with academic performance.

Objective III: to examine the relationship between gender and depression among students.

The females had more minimal depression (38.8%) than the males (8.2%). On mild depression, the males were less depressed (11.2%) than the females (26.5%). On moderate depression, the females were even more depressed (10.2%) than the males (5.1%). On the whole, the female respondents had a total of 75.5% depression index as against their male counterparts of 24.5%. The conclusion here is that a relationship has been established between depression and gender among students. i.e. the female students are more depressed than the males. This agrees with Krasniqi (2014) that females are more depressed than the in male new students.

The result also showed that depression and gender were positively correlated, (0.069), but the correlation was not statistically significant. This result did not agree with that of Al-Qaisy (2011). The methodology and statistics used could have accounted for the difference. Al-Qaisy (2011) asserted that there was a negative relationship between depression and gender of students. It equally agrees with Krasniqi (2014) and Jack-Ide (2016), that females were more depressed than their male counterparts. It also agrees with Yousefi, Mansour, Juhari, Redzuan and Talib (2010) that there was a significant difference between depression and academic performance.

Objective IV: to examine the relationship between anxiety and gender among students.

At the minimal level of anxiety, the females were more anxious (32.7%) than the male respondents of 7.1%. On mild anxiety, the females had 29.6%; still higher than the males of 11.2%. For moderate anxiety, the scores were 8.2% and 4.1% respectively. While for the severe, it became 5.1% for the females and 2% for the males. For females being more anxious than males agreed with Cassady and Johnson (2002). The report did not agree with Krasniqi (2014). To Krasniqi (2014),there was no significant difference between anxiety and gender. This could be so because of the differences in the location of the researches.

VII. CONCLUSION

Average anxiety is needed for higher academic achievements. But too much anxiety leads to lower academic performance. Lower academic achievement leads to frustration. Frustration leads to depression and depression its self leads further to lower academic achievements. Out of the 98 students that actually wrote the examination, 51 (ie 52%) of them passed and were promoted to the next class; while 47 (ie 48%) of them failed and were advised to withdraw from the programmes. 60.8% of those that passed were females, while 91.5% of those that failed were equally females.

Females are prone to higher level of anxiety than their male counterparts. Too much anxiety leads to frustration and subsequently to depression and lower academic achievements. The males performed better during examination because, they maintained average level of anxiety (ie they were more confident), that was why they maintained higher academic performance. The males were also less depressed than their female counterparts.

Implications for Mental Health and Psychiatric Nursing

- This would enable schools of nursing to set-up programmes and units (eg Guidance and counseling) to cater for the psychological needs of new students so as to mitigate such problems.
- It would enable schools to identify new students that are prone to anxiety and depression and to manage them accordingly.
- It would enable curriculum and educational technology experts to meet the learning needs of such students without over stressing them.

Recommendations

- The instrument (Anxiety &Depression Scale for BYSSON new students) should be adopted and used for all Schools of Nursing in Nigeria in identifying new students that are prone to anxiety and depression. When such students have been identified, they should be recommended for some sessions of group counseling.
- Guidance and Counseling units should be set-up in all Schools of Nursing in Nigeria (including the Bayelsa state S.O.N. Tombia) to cater for the psychological needs of students e.g. anxiety and depression

- All nurse educators should be equipped with practical counseling skills so as to complement the few professional guidance-counselors that would be engaged
- More psychologists/guidance-counselors should be employed to mount the guidance and counseling units that would be established in the schools of nursing.

Knowledge Gap Filled by the Research

The research has filled-up the existing gap by researching on the correlations between Anxiety, Depression and Academic Achievements on new students of Bayelsa State School of Nursing (BYSSON), Tombia.

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APPENDIX I

Anxiety and Depression Scale (AADS) for Students of the Bayelsa State School of Nursing, (BAYSSON), Tombia

Section A (Demographic Data)

1. Sex = ☐
2. Age =

18-21 = ☐ 22 – 25 = ☐
26 - 29 = ☐ 30 – 33 = ☐

In sections B &C tick ☐ against the boxes provided whether you Strongly Disagree (SD), Disagree (D), Agree (A) or Strongly Agree (SA)

Section B. Depression

	SA	A	D	SD
1. I feel sad	☐	☐	☐	☐
2. I feel discouraged about the future	☐	☐	☐	☐
3. feel I have failed more than average person	☐	☐	☐	☐
4. I don't enjoy things the way I used to	☐	☐	☐	☐
5. I feel guilty a good part of the time	☐	☐	☐	☐

6. I feel I may be punished
7. I am disappointed in myself
8. I am critical of myself for my weaknesses or mistakes
9. I have thoughts of killing myself, but I would not carry them out
10. I cry now more than I used to
11. I am slightly more irritated now than usual
12. I am less interested in other people than I used to be
13. I put off making decisions more than I used to
14. I am worried that I am looking old or unattractive
15. It takes an extra effort to get started at doing something
16. I don't sleep as well as I used to
17. I get tired more easily than I used to
18. My appetite is not as it used to be
19. I have lost more than five pounds
20. I am worried about physical problems like aches, pains, upset Stomach or constipation.
21. I am less interested in sex than I used to be

Section C Anxiety

1. I feel hot
2. I feel muscle numbness or tingling sensation
3. Feeling unable to relax
4. I feel dizzy or light headed
5. I feel wobbly in the legs
6. Feeling unsteady
7. Heart racing or pounding
8. I feel very nervous
9. I do have choking feelings

10. My hands use to tremble
11. Unsteadiness or tremor
12. Terror or fear feelings
13. Afraid of losing control
14. I do have indigestion
15. My face do flush
16. Hot or cold sweat
17. Feeling scared
18. Having laborious breathing
19. Feeling the fear of dying
20. Feeling like the worst is happening
21. Feeling like fainting