



**Advances in Research**  
6(2): 1-5, 2016, Article no.AIR.15052  
ISSN: 2348-0394, NLM ID: 101666096



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# Influence of Self Concept and Anxiety on the Academic Excellence of Undergraduate Students

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## Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

## Article Information

DOI: 10.9734/AIR/2016/15052

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Complete Peer review History: <http://sciencedomain.org/review-history/12083>

Original Research Article

Received 3<sup>rd</sup> November 2014  
Accepted 23<sup>rd</sup> December 2014  
Published 3<sup>rd</sup> November 2015

## ABSTRACT

The focus of this study was on the influence of Self Concept and Anxiety on the Academic Excellence of Undergraduate Students. 190 students were randomly selected in the process of simple random sampling for the study. The scales used for the measurement of Self Concept and Anxiety were [1] self esteem scale and [2] test Anxiety Scale. A 2x2 factorial design was adopted while a two way analysis of variance (ANOVA) for unequal sample sizes was used for data analysis. The results showed that Anxiety had a significant influence on the academic excellence of the students, i.e. students with low anxiety performed better than those with high anxiety [F (1,189) = 19.22, p<.05]. Self Concept of students did not have any significant influence on the academic excellence of the students [F (1,189) = 0.66, p>.05]. Likewise, there was no significant interaction of self concept and anxiety on academic excellence of the students [F (1,189) = 0.1, p>.05]. There is an imperative need to use psychological techniques to calm students down and deal with anxiety before any examination in order to guarantee reliable results.

*Keywords: Academic performance; self concept; self esteem; anxiety.*

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## 1. INTRODUCTION

Psychological factors have been at the background of trying to understand why academic excellence has been on the decline over the years in Nigeria. Two out of the numerous psychological factors that have affected academic excellence has been Test Anxiety and Self Concept. [3] observed that among the diversity of academic experiences associated with emotions, test anxiety has a very long educational history that warrants cognitive attention today.

Ndirangu et al. [4] described test anxiety as 'the hyper-arousal condition that results in physiological, emotional and intellectual changes that prevents the use of the previously learned information, while taking an examination'. On the other hand, self concept refers to the perception of oneself about strength, weakness, value, belief and attitude from environment or social interaction [5,6].

Baumeister [7] defined Self Concept as the individual's belief about himself or herself, including the person's attributes and who and what the self is.

However, [8] believes that the self concept has three different components: The view you have on yourself (self image), how much value you place on yourself (self esteem or self worth) and what you wish you were really like (ideal self). Also, Pastorino and [9] defined self concept as one's perception or image of one's abilities, and one's uniqueness. To them, this very concept is very general and changeable at first, and as one grows older, these self perceptions become much more organized, detailed and specific.

## 2. LITERATURE REVIEW

Several studies have been carried out on how anxiety and self concept influences academic excellence of students. [10] according to his study observed that test anxiety is a multidimensional concept that can be described as a group of phenomenological, physiological and behavioural reactions that appear with possible negative consequences or failure in an examination or similar evaluative situation.

Eysenck [11] found out that test anxiety, especially worry has impact on academic performance and working memory. [12] found that test anxiety decreases attention span,

memory and concentration, and then leads to low academic performance.

Furthermore, [13] found that high school students with high test anxiety had a poor school performance. Thus, test anxiety contributed to poor academic performance because of vulnerability to distraction and interference experienced by students.

Furthermore, based on literature, test anxiety is related to lower academic performance and it is estimated that about 25.0% of primary and secondary school students in America, and around 10 million students suffered lower academic performance as a result of test anxiety [14,15].

Chapel [16] carried out a study among 5,551 undergraduate and graduate students in Pennsylvania and Illinois and found a significant difference of academic achievement among three different levels (low, moderate and high) on test anxiety. For instance, students with low test anxiety had higher academic achievement than students with moderate and higher test anxiety. Similarly, students with moderate test anxiety had higher academic performance than student with higher test anxiety. Also, [17] found that test anxiety impaired the concentration, attention and memory of students and these become the factors that influenced academic performance.

In relation to Self Concept, [18] reported that students who scored low on a measure of self concept saw themselves as less competent and also learned to read with greater difficulty than other children.

In addition, it was discovered that the person who has positive self concept frequently succeeds in activities but those who have negative self concept easily fails in activities [19,20].

Furthermore, [21] found that self concept, i.e, efficacy to pass examinations and assignments first time significantly correlated ( $r = .24$ ) with mean performance over 12 modules with a two weeks period between when self concept i.e. efficacy measures were assessed and performance.

Aniloff [22] conducted a research using 69 pairs of 9th grade pupils of junior high school. He concluded that self concept of the 9th grade urban business students ended up to be more

positive than that of 9th grade females. Nevertheless, the overall impact implies that positive self concept led to positive academic performance.

### 3. RESEARCH QUESTION

1. Will there be a significant influence of self concept on the academic excellence of students?
2. Will there be a significant influence of anxiety on the academic excellence of students

### 4. HYPOTHESES

1. Students with high self concept will show a higher level of academic excellence than those with low self concept.
2. Students with low anxiety will show a higher level of academic excellence than students with high anxiety.

### 5. METHODOLOGY

#### 5.1 Participants

The subjects used for this study were Nigerian University students who took part in the General Studies Examination (GST 111). The sample size was 190 made up of 120 males and 70 females. The mean age of the subject was 24 years.

#### 5.2 Instruments

Hudson [1] Self Esteem scale was used to measure self concept. It has a reliability data of alpha .93 and test retest coefficient of .92. The scoring format is from 1-5, containing 25- items on the scale. Scores of 32.04 and below indicate high self concept, while scores above 32.04 indicate low self concept.

Anxiety was measured with [2] Test Anxiety scale. This is a 21-item scale with a scoring format of 1-4. Scores of 41-80 means high anxiety while scores of 0-40 mean low anxiety.

The scale has a test – retest reliability of  $r = .80$  and  $.60$ . the examination scores of the students were used as a basis of their academic excellence.

#### 5.3 Procedure

The tests were administered to the students, after conducting a simple raandom sampling. Their performances in the exams were obtained and matched with the questionnaires they filled.

#### 5.4 Design

A 2x2 factorial design was adopted for the study.

#### 5.5 Statistics

A two way analysis of variance (2-way ANOVA) for unequal sample sizes was used for the data analysis, while the F-test was used to test the significance of the resultts and the hypothesis.

### 6. RESULTS

The result of the study as reflected in Table 1. showed that self concept did not have any significant influence on academic excellence,  $[F (1,189) = 0.66, p>.05]$ . In other words, students with high self concept did not show a higher academic excellence than students with low self concept. The first hypothesis which stated that there will be a significant influence of self concept was therefore rejected.

The result from Table 1 further showed that anxiety had a signficaant influence on academic excellence,  $[F (1,189) = 19.22, p<.05]$ . The second hypothesis was therefore accepted, meaning that students with low anxiety had a higher academic excellence than students with high anxiety.

It was also found that there was no interaction of self concept and anxiety on academic excellence  $[F (1,189) = 0.1, p>.05]$ .

**Table 1. 2 x 2 Anova summary table of the influence of self concept and anxiety on academic excellence**

	SOV	SS	DF	MS	F-ratio	P
A: Self concept	A	31.63	1	31.63	.66	$p>.05$
B: Anxiety	B	921.73	1	921.73	19.22	$P<.05$
	AB	4.73	1	4.73	0.1	$p>.05$
	S/AB	8918.12	186	47.95		
	Total	9876.21	189			

## 7. DISCUSSION

The findings of this study have shown that self concept has no influence on academic excellence. So whether students have high or low self concept, has nothing to do with their academic excellence. These findings are however contrary to the findings of [19,20], who both found out that self concept influenced academic performance. One spectacular reason for the findings of this study could be that at primary and secondary levels, low self concept hinders academic excellence, but by the time students enter into the university, they had become more matured and confident and so their academic excellence is not hampered by low or high self concept. This is however in line with the observations of [9] on self concept.

Another finding in this work have shown that anxiety influences academic excellence. So students with low anxiety did better than those with high anxiety in academic excellence. This finding is in agreement with several previous studies [11,13,16]. This findings goes to reinforce the fact that anxiety is a major predicament to learners each time their excellence is being assessed.

The challenge of psychologists the world over should be what strategies are to be adopted to bring the issue of anxiety to the barest minimum during assessment. Due to the issue of anxiety, many had advocated for the use of other methods of assessment apart from exams arguing that examination is not the true test of excellence. Nevertheless, there is a need to use psychological techniques and psychotherapy to calm learners down and deal with anxiety before any assessment exercise is conducted to guarantee good and reliable results.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

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