



INFLUENCE OF SELF EFFICACY, LOCUS OF CONTROL AND GENDER ON EXAM ANXIETY AMONG UTME, POST UTME AND DISTANCE LEARNING STUDENTS IN IBADAN OYO STATE, NIGERIA

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ABSTRACT

Most time one wonders why students who performed well during class interaction failed to meet up the expected performance required of him/her during exam. Exam anxiety is an important outcome variable among students which affects various facets of after-school life. However, there is a dearth of literature on this outcome variable, hence the need for this study which examined the influence of self-efficacy, locus of control and gender on exam anxiety among students across three exam categories such as the University tertiary matriculation examination (UTME), post-UTME and Distance learning centre examinations (DLC) in Ibadan. This study adopted the ex post facto design where a total of six (596) participants (297 males and 299 females) were sampled. Convenience sampling technique was used to sample respondents in the study. The learning deficit model and Social learning theory provided the theoretical framework for this study and also provided explanations on the variable linkages. A structured questionnaire consisting of demographics and scales measuring self-efficacy, locus of control and exam anxiety were used to collect the data. Two hypotheses were tested using Zero Order Correlation and simple multiple regression analysis, at 0.05 level of significance. Initial results showed that there was a significant positive relationship between self-efficacy and test anxiety ($r=.31$; $p<.01$) and between self-efficacy and locus of control ($r=.26$; $p<.01$). This implies that the more students perceived themselves as being capable of doing something, the higher their anxiety for exam. The other implies that locus of control and self-efficacy goes in the same direction. However, locus of control and test anxiety did not significantly correlate ($r=-.07$; $p>.05$). Further results showed that there was a significant joint influence of self-efficacy and locus of control on test anxiety ($F(2, 597)=40.69$; $p<.01$). The variables jointly contributed about 12% of the variance observed in the dependent variable. Furthermore, self-efficacy ($\beta=-.35$; $t=8.83$; $p<.01$) and locus of control ($\beta=-.16$; $t=-4.09$; $p<.01$) had a significant independent prediction of exam anxiety. Self-efficacy contributed about 35% of the variance observed in the dependent variable, while locus of control contributed about 16% in the variance seen in the dependent variable. Self-efficacy, locus of control and socio-demographic factors were important factors that influence exam anxiety among UTME, post-UTME and DLC University of Ibadan students in Ibadan. Therefore it is recommended that stakeholders put up programmes to enhance self-efficacy and appropriate intervention to develop adequate locus of control among students across the studies population.

Keyword: Self-efficacy, locus of control, Exam anxiety and UTME, POST UTME AND DLC

BACKGROUND

Overtime, one marvels why students who were of good performance during class interface failed to meet up the expected performance required of them during exam. Such outcome may be due to excessive worry, depression, feeling of nervousness and irrelevant thinking. This psychological problem/factor refers to exam anxiety. Exam anxiety is a physiological state in which students experience extreme stress, anxiety and discomfort during and/or before taking a test or an exam. These responses can drastically hinder an individual's ability to perform well and negatively affect his social, emotional and behavioural development and feelings about himself and school. Zeidner (1998) defined exam anxiety as a set of phenomenological, physiological and behavioural responses that accompany concern about possible negative consequences or failure on an examination or similar evaluative situation. In line with this thought, exam anxiety can also be said to be an uneasiness or apprehension experienced before, during or after examination because of concern, worry or fear of uncertainty. Certainly, a minimal amount of anxiety is needed to mobilize human beings to respond rapidly and efficiently; but when such anxiety is in excess, it may instigate poor response and even inhibit response (Simpson, Parker & Harrison, 1995). Hence, too much anxiety during



examination may interfere with students' concentration on the test, thus lowering their performance in examination (Cassady & Johnson, 2002).

Exam anxiety threatens students' mental health and it has adverse impact on effectiveness, talent, their personality and social identity formation (Cassady, 2010). Furthermore, Cassady posited that as one of the most pervasive and problematic phenomenon among students, exam anxiety can negatively influence their optimal efficiency, self-controllability and progress. Students who write the University Tertiary Matriculation Examination (UTME), post-UTME and Distance Learning Centre Examinations (DLC) are unique set of students. They are unique because the first two categories of students are faced with examinations that will determine a successful or an unsuccessful transition in their academic pursuit, while the third category of students would usually have limited physical contact with facilitators thus leaving them with the burden of preparing psychologically for an exam. Several factors could influence exam anxiety such as self-efficacy, locus of control or being a male or female.

Self efficacy is defined as the beliefs in one's competence to organize and execute the courses of action required in producing given accomplishments. The courses of action over which a person can exercise control are diverse; they may be concerned not only with activities, but with drive, thought, and emotions as well. The costs are also several and involve someone's ability to handle hard luck or to become aware of thought patterns that obstruct or stimulate intended actions (Bandura 1997). Furthermore, Self efficacy makes a difference in how people think, feel, and act. In terms of feeling, a low sense of self efficacy is associated with depression, anxiety, and helplessness (Bandura, 1997), and this could result in exam anxiety among students.

Self efficacy is explained in the theoretical framework of social cognitive theory by Bandura which stated that human achievement depends on interactions between one's behaviours, personal factors and environmental conditions (Bandura 1997). The behaviour of individual depends largely on early experiences at home. The home environment that stimulates curiosity will help build self efficacy just as displaying more of that curiosity, and exploring activities would invite active and positive reciprocity. This stimulation enhances the cognitive and affective structures of the individual which include his ability to sympathize, learn from others, plan alternative strategies and regulate his own behaviour and engage in self reflection (self efficacy).

Literature provides empirical evidence on the relationship between self-efficacy and test-anxiety. For example, Yildirim (2012) reported that high math self-efficacy is positively related to math achievement and high test-anxiety is negatively related to math achievement. Equally, Hsieh, Sullivan, Sass, and Guerra (2012) in scrutinizing data of 297 undergraduate engineering students found that self-efficacy and test anxiety both predicted students' final grades in a math class. Students with high levels of self-efficacy envision how they can succeed and they trust in their own capabilities (Bandura, 1993). Knight's and Nelson (2010) carried out a study which showed that students can avoid adverse outcomes of test anxiety by being thoughtful of past achievements, which will build bravery and fortitude, and in turn will increase their self-efficacy. Those who focus on the area that they are skilled at, cope better and have lower anxiety. Positive thinking techniques can transfer into the classroom and help students excel in academic achievement as well. Students who perceive themselves as being competent will more likely strive to learn how to do better on challenging tasks such as exams. Those with high levels of self-efficacy show lower levels of test anxiety. This may be because they believe in themselves and are able to imagine a successful outcome (Abdi et al., 2012; Adewuyi, Taiwo, & Olley, 2012).



Persons who do not observe themselves as capable, lose the drive to complete hard tasks and instead seem to focus on possible negative outcomes. Students with low levels of self-efficacy redirect their focus on the many ways their possible failure on a task could jeopardize areas of their lives (Bandura, 1993). Individuals with low self-efficacy also do not seek out opportunities to gain the knowledge or skills necessary to make success more likely, including building self-confidence in their own abilities. One reason for this is that these individuals see themselves as unintelligent when asked to put forth a great deal of effort. Students who perform poorly may see difficult experiences as threats and attribute the results to their own negative internal characteristics. This perceived incompetence increases test anxiety and typically causes an even greater negative effect on performance. But, high self-efficacy can do the opposite.

Locus of control is another personality factor that has been found to affect individual reactions to exam anxiety. Locus of control was defined by Kirkpatrick, Stant, Downes and Gaither (2008) as a dimensional construct representing the degree to which individuals perceive reinforcing events in their lives to be the result of their own actions or fate. The construct, locus of control is a theory that accounts for how people perceive and explain successes and failures in their lives. Locus of control can be internal or external. Individuals with internal locus of control believe that the outcomes of their actions are results of their own abilities. They believe that hard work leads to positive outcomes. They also believe that every action has its own consequences and one's attitude determines one's altitude.

Locus of Control is such a multidimensional construct that expresses the degree which people know their life events resulting from their actions and behavior (an internal locus of control) or destiny (an external locus of control). Unambiguously, students that take higher grades consider their effort and ability as their success factor. In disparity, those who have lower performance know exam's difficulties and misfortune as their failure factor (Patrick Creek, Stents, Duns & Gayher, 2008). People who have internal control understood the relationship between behaviour and its consequences and they believe that they can influence on their environment. In contrast, people who don't see the relationship between their actions and its consequences enjoy external control. These people believe that more effort isn't necessary because the consequences are beyond the scope of their control (Rotter, 1966). The perception that we have on causality of our behaviour plays a decisive role in facing the exam. People with external locus of control experience more test anxiety (Carden, Beryant & Moss, 2004). Extant literature reveals that external LOC is typically positively correlated with text anxiety (Beekman et al., 2000). Furthermore, Berrenberg's (1987) study of undergraduates relating a scale of exaggerated internal LOC to test anxiety found a negative correlation between internal LOC and test anxiety. However, in another investigation, the relationship between locus of control, procrastination and anxiety were examined in which internals experienced higher academic procrastination and test anxiety than externals (Carden, Bryant, & Moss, 2004).

Using Barow's model of anxious apprehension in explaining the relationship between test anxiety and locus of Control, he submitted that individuals who feel as if they have no control over external events that cause them anxiety or no control over their emotional or physical reaction to the stressor tend to have anxiety problems. A number of studies found that low perceptions of control over external threats and emotional and physiological reactions are related to increased levels of anxiety (e.g., Weems, Silverman, & Rapee, 2003; Zeidner & Schleyer, 1999). Nunn (1988) found significant and positive correlations between externality on the locus of control scale and



trait anxiety as measured by the State-Trait Anxiety Inventory for Children. McLaughlin and Saccuzzo (1997) found that gender effects were apparent with females showing a slight but significantly greater internal locus of control.

Moore (2006) found out that test anxiety was positively related to locus of control orientation; whereby increased test anxiety levels were prominent in participants with an external locus of control, than those with internal locus of control. Indeed, other studies have also found out that low perceptions of control over external threats and, emotional and physiological reactions, are related to increased levels of anxiety in externals (Weems, Silverman & Rapee, 2003). Studies by (Hobfoll, 1998), reveal that externalizers; those who make external attribution for negative outcomes, are more likely to experience high levels of test anxiety, hence poor academic performance, than internalizers; those who attribute outcomes of events (whether positive or negative) to self and whose own efforts acts as resources to conquer exam anxiety.

Gender differences have been identified in test anxiety. In general, women are considered to be more sensitive to evaluative stimuli and consequently show more anxiety in the face of negative evaluation than men (Zeidner, 1998). Thus, it seems likely that females would exhibit higher levels of test anxiety than males (Zeidner, 1998). Although findings have not consistently indicated that females have a higher prevalence of test anxiety than men, existing information suggest that this might be the case. For instance, Zaheri, Shahoei, and Zaheri (2012) assessed 243 male and 283 female students in conjunction with Scholastic Aptitude Testing and found that on average, the female students received scores one third of a standard deviation higher than the male students on the Test Anxiety Inventory.

Furthermore, (Hembree, 1988) investigated the relationship between test anxiety and academic achievement regarding gender. The results of this study showed that, test anxiety occurred in girls more than boys and this difference was significant. On the other hand, there are some contradictory results regarding gender. Linnenbrink, (2007) explored the relationship between test anxiety and gender and reported that the differences among females and males regarding test anxiety were non-significant and slight. Previous research has shown that males typically score lower on measurements of test anxiety than females (Berger & Schechter, 1996). This shows that there was a gender effect on worry and emotionality test anxiety for high achieving students. Overall, females reported more test anxiety than males; and females experienced higher worry than emotionality, while males reported little difference between the two dimensions (Everson, Millsap & Rodriguez, 1991). Also (Stober, 2004) reported that women showed greater symptom intensity than men in public self-consciousness, social anxiety, and test anxiety, however, gender differences in test anxiety were not reflected in performance. These ambivalent findings necessitated the inclusion of gender as a factor that could influence exam anxiety.

Research hypotheses

1. Self-efficacy and locus of control will independently and jointly predict exam anxiety among UTME, POST UTME and DLC students in Ibadan.
2. Age, gender, religion and educational level will have significant joint and independent influence on exam anxiety.
3. Females will score significantly higher on exam anxiety than males

METHODOLOGY

This study was conducted using an ex-post-facto design. Ex post facto design refers to a design in which the researcher studies the variables of interest with the aim of



studying their past features. This is because these variables of interest (self efficacy, locus of control, gender and exam anxiety) had already occurred in nature prior to the commencement of the study. Therefore, the researcher collected the necessary data needed for the study in order to draw inferences about these variables in association with the dependent variable (exam anxiety) of interest. The independent variables are self efficacy, locus of control and gender, while the dependent variable is exam anxiety. This study was carried out among UTME and Post-UTME students from Elect academy Agbowo Express Ibadan, Apex tutorial opposite University of Ibadan, Excellent tutor, Agbowo express Ibadan and students of the Distance learning centre, University of Ibadan. A total of five hundred and ninety six (596) participants consisting of 50 (8.3%) UTME students, 130 (21.7%) post UTME students and 416 (69.3%) DLC students participated in the study. Of these, 297 (49.5%) were males while 299 (49.8%) were females. Convenience sampling technique was used as the sampling technique modality in this study. A structured questionnaire was used for data collection. The first section of the questionnaire, contains 5 items which tapped information on the socio-demographic characteristics of the respondents. This includes age, sex, tribe, religion and educational level. Age was measured in continuous form: Gender was dichotomized and measured as: male or female. Tribe was measured as Yoruba, Igbo and Hausa. Religion was measured as Christian, Muslim and Traditional. Educational level was measured as UTME, Post UTME and DLC. The next section measured self efficacy using the general self efficacy scale which is a 10 item questionnaire developed by Schwarzer, & Jerusalem, (1995). Participant's response was scored and coded on a 5 point scale ranging from 1-not at all true to 5-exactly true on all items. The author reported a reliability coefficient of 0.84, while this current study found a Cronbach alpha of 0.73. The next section which measured locus of control consists of 17 items questionnaire developed by Craig, Franklin and Andrews (1984). The items tapped information on internal and external locus of control. Response format was likert which ranged from 1=strongly disagree to 5=strongly agree. The reliability coefficient of the scale by the author was .66, while this present study reported a Cronbach alpha of 0.75. The last section measured exam anxiety using the test anxiety scale consists of 10 items questionnaire developed by Westside and used by Richard Driscoll, (2004). Participants response was scored and coded on 5 point scale ranging from 1-not at all or never true to 5-extremely or always true on all items. A Cronbach alpha of 0.77 was reported for this scale in the current study.

Procedure

The researcher sought for permission and obtained approval from the concerned authorities to carry out this study. After the permission has been granted, the administration of instrument was done to cut across all available students at a particular area, this was after informed consent by the participants was granted. Direction on how to complete the questionnaires was given and they were encouraged to be truthful as possible in their responses with the assurance that their questionnaires will not be personally identified. Data collected were analysed using statistical package for social sciences (SPSS). Three hypotheses were analysed using simple multiple regression and t-test for independent variables.

RESULTS

This section presents the results of the data analyses from a sample of 596 participants (297 males and 299 females) who are students at various levels of educational pursuit. The purpose of the study is to understand the influence of self-

efficacy and locus of control on exam anxiety among candidates of University matriculation examination (UTME), post-UTME candidates and students of the Distance learning centre, University of Ibadan.

In order to understand the connectedness among the variables, an initial analysis was carried out. The summary of this analysis is presented in table 1 below.

Table 1: Table showing Zero Order Correlation, Means and Standard Deviation of all variables

Variables	1	2	3	M	SD
1. Self-Efficacy	1			26.29	5.27
2. Locus of control	.26**	1		52.49	9.10
3. Test anxiety	.31**	-.07	1	32.22	6.99

*P<.05, **P<.01.

Results from the table 1 above shows a significant positive relationship between self-efficacy and test anxiety ($r=.31$; $p<.01$) and between self-efficacy and locus of control ($r=.26$; $p<.01$). This implies that the more students perceived themselves as being capable of doing something, the higher their anxiety for tests. The other implies that locus of control and self-efficacy goes in the same direction. However, locus of control and test anxiety did not significantly correlate ($r=-.07$; $p>.05$). Further statistics was done to help throw light on the interrelatedness observed from the zero order correlation.

HYPOTHESIS 1

The first hypothesis which states that Self-efficacy and locus of control will have significant joint and independent influence on exam anxiety among UTME, post-UTME and DLC students in Ibadan was tested using a simple multiple regression. The result is as summarized on table 4.2.

Table 2: Summary of multiple regression test showing the joint and independent influences of Self-efficacy and locus of control on test anxiety amongst students

Independent Variables	β	t	p	R	df	R ²	F	p
Self-efficacy	.35	8.83	<.01	.34	2	.12	40.69	<.01
Locus of control	-.16	-4.09	<.01		597			

**p<.01

Results from table 2 reveals that there is a significant joint influence of self-efficacy and locus of control on test anxiety ($F(2, 597)=40.69$; $p<.01$). the variables jointly contribute about 12% of the variance observed in the dependent variable. Furthermore, self-efficacy ($\beta=.35$; $t=8.83$; $p<.01$) and locus of control ($\beta=-.16$; $t=-4.09$; $p<.01$) had a significant independent prediction of stress associated with work. Self-efficacy contributed about 35% of the variance observed in the dependent variable, while locus of control contributed about 16% in the variance seen in the dependent variable. The hypothesis was fully confirmed.

HYPOTHESIS 2

The second hypothesis which states that gender, age, tribe, religion and educational level will have significant joint and independent influence on exam anxiety among UTME, Post-UTME and DLC students in Ibadan was tested using a simple multiple regression. The summary of result is as presented in table 3

Table 3: Summary of multiple regression test showing the joint and independent influences of demographic characteristics on test anxiety of students

Independent Variables	β	t	p	R	df	R ²	F	p
Gender	-.06	-1.64	>.05		5			
Age	.01	.29	>.05					
Tribe	-.05	-1.14	>.05	.13		.02	1.89	>.05
Religion	-.08	-1.98	<.05					
Edu. Level	.04	-.85	>.05		594			

*p<.01

Results from table 3 reveals that there is no significant joint influence of all the demographic variables on test anxiety ($F(5, 594)=1.89$; $p>.05$). Furthermore, none of the demographic characteristics independently predicted test anxiety significantly, except religion ($(\beta=.04$; $t=-.85$; $p<.05$). Hence, the hypothesis is rejected.

Table 4: Summary of t-test for independent samples showing the comparison between male and female students on Exam anxiety

Gender	N	X	SD	df	t	p
Male		29.7	32.78	6.93	594	2.05
Female	299	31.61				<.05

*p<.05

DISCUSSION

The first hypothesis which stated that Self-efficacy and locus of control will have significant joint and independent influence on exam anxiety among UTME, post-UTME and DLC students was fully confirmed and accepted. Result shows that there is a significant joint influence of self-efficacy and locus of control on exam anxiety. Furthermore, self-efficacy and locus of control had a significant independent prediction on exam anxiety. It is interesting to know that this study is in line with the study carried out by Yildirim (2012) who found that high math self-efficacy is positively related to math achievement and high test-anxiety is negatively related to math achievement. Adedeji (2017) found that there was significant difference between low self-efficacy ($\bar{x} = 34.09$) and high self-efficacy ($\bar{x} = 32.25$) on test anxiety $t(179) = 1.56$, $p < .05$. This indicates that the students with high self-efficacy reported low level of test anxiety than the students with low self-efficacy. Beekman et al., (2000) found that external LOC is typically positively correlated with text anxiety. Furthermore, Berrenberg's (1987) study of undergraduates relating a scale of exaggerated internal LOC to test anxiety found a negative correlation between internal LOC and test anxiety. Adedeji (2017) found that there was significant difference between internal locus of control ($\bar{x} = 31.29$) and external locus of control ($\bar{x} = 34.89$) on test anxiety $t(179) = -3.09$, $p < .05$. This indicates that the students with external locus of control reported higher level of test anxiety than the students with internal locus of control.

Self efficacy shares a common decimal with internal locos of control. The common decimal is that both variables encourage an individual to take "personal responsibility" for events. On the on hand, self-efficacy talks about capability and an individual's capacity to successfully prosecute an event, while on the other hand, internal locus of control talks about taking the personal responsibility for the failure or success of an event. Examination anxiety from this study was significantly predicted by these variables. It has implication for school counsellors and relevant stakeholders within the education sector. The outcome of examinations could have serious effects on the student. These two variables can help students cope better with whatever the outcome of an exam, hence reducing anxiety associated with the event.



The second hypothesis which stated that gender, age, tribe, religion and educational level will have significant joint and independent influence on exam anxiety among UTME, Post-UTME and DLC students was not confirmed and rejected. The result confirmed that there was no significant joint prediction of demographic factors (gender and educational level) on test anxiety. More so, gender and educational level did not independently predict test anxiety among undergraduate students. Adedeji (2017) also, confirmed that there was no significant joint prediction of demographic factors (gender and educational level) on test anxiety. The result also shows that gender ($\beta = .014$) and educational level ($\beta = -.121$) were not independently predict test anxiety among undergraduate students, University of Ibadan. Linnenbrink, E.A. (2007) reported contrary to findings of this study that test anxiety occurred in girls more than boys and this difference was significant. Berger, (2004), also showed that males typically score lower on measurements of test anxiety than female.

Although no link was observed between demographic variables and exam anxiety in this study, other studies proved otherwise. This has implication for future studies and a call for further investigation into what specific demographics could account for observed changes in examination anxiety as a predictor.

The third hypothesis which stated that female students will score significantly higher on exam anxiety than their male counterpart was rejected. However, there was a significant difference between both gender on exam anxiety. Male students scored higher than their female counterpart on exam anxiety. This is at variance with the stated hypothesis and the extant literature. For instance, several studies (Zaheri, Shahoei, & Zaheri 2012; Berger, 2004; Zeidner, 1998; Hill & Sarason 1966; Hembree, 1988; Berger & Schecter, 1996) have shown that females score higher on exam anxiety than males. The present finding may be due to personality differences or other factors not taken into consideration between the male and female students. It will therefore be important that further studies be conducted to ascertain what these factors are.

Conclusion

Self-efficacy, locus of control and gender are significant predictors of exam anxiety among students writing UTME, post UTME and DLC examinations. Furthermore, male students scored significantly higher on exam anxiety than their female counterparts. This raises further questions as to why this finding disagrees with the extant literature. It is recommended that educational stakeholders such as parents, guardians and school authorities partner with psychologists in general and school psychologists in particular to help develop packages and trainings that will focus on building students' self-efficacy and internal locus of control. This will go a long way in reducing the incidence and aftermaths of exam anxiety among students in these special categories.

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