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Reducing Economics Test Anxiety Among Students as Measured By a Test Anxiety Scale: a Cognitive Behavioural Therapy

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A B S T R A C T

Psychological problems such as anxiety have been reported to adversely affect students' learning outcomes. This study explored the effectiveness of cognitive therapy with reflective activities on reducing Economics test anxiety among secondary school students. A randomized controlled trial experimental design was used. The sample size was 120 senior secondary school students in South East Nigeria. A questionnaire titled "test anxiety scale" was used to collect data. It contained a demographic section and 20 items. To assign subjects to treatment or control groups, a randomization process was used. Subjects in the treatment group were subjected to a cognitive behavioural therapy (CBT) program. A three-time point evaluation was conducted with subjects in the treatment and control groups. Repeated measures and data collected were analysed with ANOVA. In comparison with the control group, research subjects exposed to CBT reported lower test anxiety. In addition, at the follow-up measure, the scores of research subjects in the CBT groups were significantly lower than those of the control group. Hence, CBT significantly reduced Economics students' test anxiety. The researchers concluded that the CBT program reduces Economics students' test anxiety.

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1. INTRODUCTION

1.1. Anxiety

Anxiety is one of the psychological concepts that can negatively influence students' mental lives. It may manifest itself in students as moods, emotions, feelings, and inner struggles. It is also possible for students to experience anxiety in the form of anxiousness they encounter with side effects such as shaking, sweating, muscle tension, and puzzlement. Based on psychological analysis, anxiety is considered to be one of the foremost significant contributing factors to

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mental disorders in which students express their inner struggles (Bayangard, 2007). Test anxiety is the incapacitating self-doubt and disastrous reflection about imminent failure; along with the interference and disorder students frequently encounter prior to test or during test or examinations (Carr, 2016). According to Einat (2000), anxiety deactivates mistrust and disastrous contemplations about looming failure. Additionally, students frequently experience interference and disorder before or during examinations, including sweating, tremulousness, diarrhea, and other symptoms activated by examination and test anxieties. Test anxiety could be described as global phenomenon which students encounter before and during test or examination and subsequently result in poor achievement in such test. Having test anxiety does not indicate that a student is less brilliant than others, but rather that they are nervous at the time of the test. In other words, Economics test anxiety is a state of distress that students experience when involved in situations requiring Economics terms, graphs or mathematics which they perceive as threatening to their self-esteem and may also experience tension, difficulty breathing and lack of concentration (Bursal; Paznokas, 2006).

Eifediyi, Ojugo and Aluede (2017) revealed that some students that encounter anxiety prior to a test could really weaken in their learning activities which could impede test achievement, wellbeing, and other challenges in life. Some of the difficulties students encounter seem to positively relate to youth suicidal behaviour in later life (Farooqi, Ghan, & Spieleberger, 2012). There are three categories of test anxiety: cognitive, affective, and behavioural" (Beck & Clark, 1988). The cognitive category comprises anxious, denigrating self-statements which result in difficulty in recollecting information in analysis and comprehending queries. The affective category refers to students' assessment of their physiological condition during testing for example tension, tense muscles, and unsteadiness. The behavioural category includes weak study abilities, evasion, and postponement. However, anxious students who have a high level of test anxiety trigger uneasiness which accumulates in the memory, and these situations can interfere with test achievements (Essau, Conradt & Peterman, 2000).

Previous studies have enumerated the prevailing circumstances that have led to test anxiety among Nigerian students. Some researchers like Eifediyi, Ojugo and Aluede (2017) reported that factors responsible for test anxiety among students are mental and chronological ages which hinder the learning process. More than 50% of students in Nigeria are confronted with anxiety prior to and during test circumstances that affects their performance. Earlier research revealed that test anxiety rates among school pupils and students exceed 33% (Sena, Lowe & Lee, 2007). According to other research, nearly 40% of students report experiencing text anxiety (Salend 2011; Ogungbamila 2011). Nigerian students are affected by test anxiety in a reciprocal and destructive manner which indicates the need for effective treatment for these students in senior secondary school for effective implementation of curriculum contents and actualization of the learning objectives.

1.2. Secondary School Economics Students

In Nigeria, senior secondary school students are students within the age bracket of 14 to 17 years old. This falls within the formal operational age of Piaget (1958)'s theory of cognitive development. Students at this level of education have developed the ability to consider several aspects of a task, rather than only focusing on the obvious features. At this point, students are capable of mentally going through a series of steps in basic Economics data analysis in order to solve problems and then reverse their thinking to the beginning. This stage of cognitive development of students is the peak of students' cognitive abilities that enable them to deal with academic problems. According to Sweetland (2007), achieving formal cognitive abilities requires that students have the mental capacity to think as adults and solve problems of all types.

In other words, Economics students at this stage possess the mental capacity to grasp all the basic Economics concepts taught in senior secondary school and solve their problems.

Unfortunately, previous researches in Nigeria (Salend, 2011; Ogungbamila, 2011) have found that in national examinations, students have a dismal academic performance in the Economics subject. This has drawn the concern of parents, educators, curriculum planners, school administrators, and the government (Olanipekun, Garuba, & Kio, 2014: Akpan, & Umobong, 2013). Their worries increase as they understand that students' achievement in school may be related to their life performance (Ogungbamila, 2011). Prior studies in Nigeria have associated poor academic attainment with several factors, including teaching effectiveness, school-related issues (Adeyemi, 2005; Adeyemi, 2005) and the family environment (Akpan, & Umobong, 2013). Furthermore, Adediwura, and Adekola (2019) found that students' test anxiety is negatively related to their academic achievement in Economics. In addition, Abanobi and Agu (2022) revealed that students exposed to paper and pencil tests exhibit greater test anxiety than students exposed to computer-based tests but that their scores on test anxiety are not significantly different. Abanobi and Agu also found that the anxiety score of male and female Economics students differs significantly, thus suggesting that female students are more test anxious compared to male students when exposed to computer-based tests. In spite of the researchers' efforts, academic achievement among Nigerian students has fallen short of expectations (Akpan, & Umobong, 2013). These phenomena demand a study of this nature to investigate effective therapies such as CBT for the reduction of test anxiety among Economics students in southeast Nigeria.

1.3. Cognitive Behavioural Therapy

CBT is defined as a mixture of cognitive and behavioural therapies with pragmatic interventions to treat depression and anxiety disorders (Cully, & Teten, 2008). CBT is premised on the fact that emotions are difficult to modify directly. Hence, CBT focuses on emotions by transforming thoughts and behaviours that are contributing to the afflicting emotions. However, cognitive behavioural therapy instils skills that empower students to be conscious of thoughts and sentiments; recognize how situations, thoughts, and behaviours influence emotions; and enhance feelings by changing dysfunctional behaviours and thoughts. Nevertheless, CBT stresses the importance of reflection, which is an integral part of CBT writing from the outset. The declarative procedural reflective activity is a rational for the inclusion of self-reflective practice in CBT. Self-reflection activities is proposed as a technique to enhance self-reflective capacity in a number of vital ways which incorporate some of the benefits of personal therapy such as learning by doing in a manner more compatible with CBT's empirical focus (Bennett-Levy, 2006). Reflective activities are extensive instructional techniques that afford students the chance to deliberate critically, converse and share their knowledge and experiences (both past and current) together in small groups on a particular subject matter. Several reflective activities can be integrated into Cognitive Behavioural Therapy in the implementation of Economics at secondary school, including muddiest point, one-minute wonder, and self-questioning (Amedu, 2017).

Muddiest points are the contents students struggle to grasp most, provide real time feedback to instructors to adjust their teaching and pedagogy to address specific issues in a given class (Tsingos-Lucas et al., 2016). Input from instructors using Muddiest Points indicates that formative process feedbacks are communicated to students no later than the beginning of the next class, to solve students' misconceptions. One-minute wonder is a reflection activity made up of an analytical and formative classroom assessment for learning method that aligns with the viewpoint of continuous quality enhancement (Whittar, 2015). One-minute-paper is a

reflection tool that engage students with learning activities and provide the teacher with early feedback on classroom learning as well as provide an insight into the perceived effectiveness of their instruction practices (Lonie, 2010). Furthermore, self-questioning is a reflective activity which is an effective way of stimulating self-directed students. Study on self-questioning reveals that questions generated by the student are more effective than questions posed by the teacher (Grotbo, 2014). Self-questioning as a reflective activity could assist students in self-directing and identifying important points. Therefore, as students engage in self-questioning through reflective activity, the more likely they are to improve on their achievements.

A lot of previous studies have demonstrated the effectiveness of reflective activity therapy on students' learning. Tsingos-Lucas et al., (2016) revealed that reflective activities enhanced students' achievement and retention. In addition, Grotbo (2014) revealed that daily guided reflection by students aids in the attainment of learning goals for a course of study. In addition, it increases students' self-assurance in achieving their learning objectives. Furthermore, another researcher found that reflection activities enhance students' practice in nursing science (Wright, 2014). Even though previous researchers have established the effectiveness of reflective activities in students' learning, there is a scarcity of empirical evidence on the combination of CBT based on reflective activities therapy on Economics students' test anxiety at Senior Secondary school in Eastern Nigeria.

The present study sought to offer a contribution to the knowledge base by using CBT based on reflective activity. This was done to alleviate Nigerian students' Economics test anxiety at senior secondary school. CBT was augmented with reflective activities. This study utilized a novel research lens in the Nigerian context in the sense that there is a dearth of empirical studies in this area. CBT reflective activities therapy creates a scenario where students that suffer test anxiety come together in a therapy group to engage in activities that trigger active reflection which is the conventional aspect of CBT.

Statistics have shown that more than 10 percent of students achieve below average on their tests due to test anxiety. In Nigeria, a lot of students in secondary schools in southeast Nigeria are faced with the difficulties of moving on with their educational pursuits under emotional and psychological distress because of test anxiety. However, if students' test anxiety is not minimized through CBT-reflective activity, educational development can be hindered. In light of this, the present study tested the hypothesis that CBT combined with reflective activity could significantly decreased students' test anxiety.

Research Objective

The main purpose of this study was to investigate the effectiveness of cognitive behavioural therapy on economics students test anxiety.

2. METHOD

2.1. Participants

Participants included 120 students. In this study, a statistical power analysis and sample size calculation were conducted using the version 3.1.9.5 developed and recommended by Faul et al. (2009). This yielded a sample coefficient of 0.89. Based on a study of two groups that included three assessments, it was determined that a sample size of 120 at a 0.05 a priori probability level would provide 85% statistical power and 0.30 effect size. A computer-generated random number was used to assign 60 individuals each to the treatment and control groups. In table 1 the demographic statistics of the participants are shown.

The researcher visited sample schools for study in Enugu State, Nigeria to inform principals and gain approval from them. During the visit, the researchers explained to school officials what CBT entails as well as how the instruction program could be supportive in reducing test anxiety among students. During the morning assembly, the researchers made the first oral selection. The first screening took place from November to December 2020. Consent form was administered to students in which 306 students indicated a willingness and offered to partake in the program intervention. Before that, researchers informed parents of students through formal letters. Participants were screened for fitness based on the Diagnostic Scientific Manual for Mental Disorders, Volume 5 classification of conditions. In addition, the researchers took into consideration of the following factors:

(i) the student must offer Economics subject;

(ii) the student must have a poor academic record;

(iii) must have mild-to-moderate anxiety symptoms as measured by TAI

At the selection process, not all the 306 volunteered students met the selection criteria, so they were excluded from the program. As a result, 120 students who met the selection criteria were randomly assigned to experimental (60 participants) and control (60 participants) groups. At the follow-up intervention, three (3) participants dropped in the experimental group while two (2) dropped in the control group. In addition, the age, gender and location information of participants was obtained from a biodata questionnaire administered to qualified participants. Hence, to remove randomization bias, the biodata of respondents was hidden from the person who randomized the participants into the experiment and control groups. The researcher guaranteed the participants of their privacy of their interactions as well as personal information as they worked together in full disclosure before the beginning of the pretest and treatment package. In addition, the pretest assessment was administered using the TAI to obtain baseline data. Afterward, the experimental group was subjected to a CBT-based programme for 90 minutes. It was a 12-week program (once weekly). The study was conducted between January and March 2021. One week after treatment, the participants were asked to complete a post-test assessment (time 2). In addition, follow-up assessment measures (times3) were done by researchers one month after the intervention program ended. In all phases of recruitment, treatment, and data analyses, the data analyst, research assistant, and participant were all blinded.

2.2. Design

This study used randomized controlled trial of pre-test-post design that constituted intervention and no-intervention groups.

2.3. Measures

In this paper, the Test Anxiety Inventory (TAI) originally designed by Spielberger in 1980 and validated by Oladimeji (2005) in Nigeria, modified in context of test anxiety peculiar to Economics was applied to obtain data on students' level of test anxiety. The instrument is a 20-item questionnaire designed on a 4-point rating scale from Almost Never (1) to Almost Always (4). Some questionnaires that were negatively worded were revised before adding up the score to students' test anxiety. Scores of 80 indicate high test anxiety, while a score of 20 is the lowest score indicating low-test anxiety. Participants' test anxiety scores on the TAI are interpreted as follows: A score within 20 to 30 shows that the student does not have test anxiety, a score within 30 to 40 shows that the student displays some of the features of test anxiety, however, the level

of stress and tension is perhaps healthy, scores within 40 to 50 suggest that the student exhibits substantial test anxiety, and a score of 50 or above implies that the student has an excessive amount of anxiety. The TAI instrument construct validity was established using a rotated component matrix. Furthermore, the Bartlett sphericity test is significant at the 0.05 level, indicating that the instruments' correlation matrix is not an identity matrix. The selection of items was based on a benchmark factor loading of 0.5. However, only items that loaded above 0.5 were selected and one factor was applied to the study. The results indicated that none of the items were factorial impure and were not included in the final instrument. Therefore, a 20-item instrument was used for data collection. The internal consistency reliability was also determined by Cronbach alpha reliability estimation, which yielded 0.86.

2.4. CBT intervention conditions

The CBT programme consists of a 12-week guided self-help group intervention adapted from a well-established structured self-help model (Naeem, Johal, & Godfrey, 2016). The sessions were a group-oriented procedure and each session was held once a week and lasted 90 minutes each. The four facilitators who implemented the program acquired foundational CBT training and were guided by two qualified CBT therapists. This programme was designed to lessen Economics test anxiety among students. This was done using CBT with reflective activities as a means to further understanding and commitment to materials by the participants. Such interventions included using muddies points, one-minute wonders and self-questioning as a point of reference in group discussion and assignments. CBT group structure was meticulously followed, including theme weeks (thinking, behaviour, and emotions), behavioural activities, reflective thinking, and exercises at the end of each session.

During sessions 1 through 3, the facilitator introduced the participants to the intervention's objectives, established rapport, outlined rules and regulations, and discussed anxiety, symptoms, and causes of Economics phobia. In the end, a workbook assignment was given on Economics. Furthermore, sessions 8 and 11 were devoted to deep reflective activities regarding their learning process, such as critical self-review of their weaknesses and necessary stipulated steps to achieve their learning goal. Reflective thinking on learning procedures took place every week. Each reflective activity techniques were modified in accordance with CBT.

A traditional CBT group structure was strictly enforced in the intervention group. They also used CBT tools such as behavioural experiments, thought records, and homework following each session. A muddiest point, one-minute wonder, and self-questioning were used as reflective activities. Cognitive restructuring, cognitive disputation, refraining, training for attention, and training for mood monitoring were used (Ezegbe, Ede & Eseadi, 2018).

2.5. Data Analysis

SPSS software version 20 was used to impute the data and JASP 0.16 was used to analyze the data. After screening the data, Mauchly's test was applied to determine whether assumptions had been violated. The data collected were analysed statistically using repeated measures ANOVA at a probability level of 0.05. Post-hoc analyses was also conducted using Pholm. As stated by Field (2008), if the assumption of sphericity is violated, Greenhouse-Geisser (if epsilon value, $\varepsilon < 0.75$) technique was utilized to interpret the data. Furthermore, the TAI scores at pre-test and follow-up were analysed univariately between groups to determine whether there were significant differences. Data generated by the experimental group at each evaluation was compared with data generated by the control group.

3. RESULTS AND DISCUSSION

3.1 Results

Table 1 shows demographic data of participants. A number of variables were investigated in this study, including age, gender, and location. The Chi-square test showed no significant differences between students in secondary schools offering Economics by age, gender, or location (all $p > 0.05$). Therefore, the treatment effect was not affected by students' demographic variables.

Table 1. Participants' Bio-data

Variables	Category	CBT Group	Control Group	test value	*p*
		N(%)	*N(%)*	X^2	
Age	14 -17	27(47.4%)	24(41.4%)	.008	.930
	18 and Above	30(52.6%)	34(58.6%)		
Gender	Male	30(52.6%)	31(53.4%)	.418	.518
	Female	27(47.4%%)	27(46.6%)		
Location	Urban	27(47.4%)	32(52.2%)	.701	.403
	Rural	30(52.6%)	26(44.8%)		

Table 2. Descriptive statistics of students test anxiety scores.

	Group	N	Mean	Std. Deviation	Std. Error	95%CL
Pretest	Experimental	57	79.0175	1.14160	.15121	74.00, 80.00
	Control	58	78.1897	1.24896	.16400	76.00, 80.00
Posttest	Experimental	57	35.8246	2.79747	.37053	28.00, 41.00
	Control	58	61.8793	12.70872	1.66874	80.00,35.00
Follow_Up	Experimental	57	32.7719	2.78399	.36875	26.00, 39.00
	Control	58	59.6552	11.03829	1.44940	32.00, 8.00

Table 2 shows the pre-test, post-test and follow-up test anxiety scores of senior secondary school students in the Economics subject. The pretest scores show similarities in test anxiety mean scores in the treatment (M =79.01, SD= 1.14) and control groups (M =78.18, SD=1.24). At the post-test, a significant difference was observed between the anxiety mean scores of two groups, treatment (M =35.82, SD= 2.79) and control (M =61.87, SD= 12.70) indicating there was a sharp decline in students' test anxiety scores in the experimental group. A follow-up analysis revealed a difference in test anxiety mean scores between the treatment (M =32.77, SD= 2.78) and control groups (M =59.65, SD=11.03) which indicated that the follow-up test anxiety mean score of treatment group is persistently lower than control group. Thus, CBT with reflective activities has clearly found worthy of reducing Economics test anxiety of students since there was a huge difference in anxiety scores of pre-tests and post-test.

Table 3. Repeated measure ANOVA of effect of CBT in reducing test anxiety

Cases	Sum of Squares	df	Mean Square	F	p	η^2
Group	26021.218	1	26021.218	356.223	< .001	0.197
Time	74408.489	2	37204.244	941.450	< .001	0.564
Time ✻ Group	14290.251	2	7145.126	180.807	< .001	0.108
Residuals	8931.071	226	39.518			

A repeated measure analysis of variance was conducted in Table 3 to assess the effects of cognitive behavior therapy on Economics students' test anxiety. The results showed that there

was a significant difference in students' test anxiety scores as assessed with TAI, F (1, 113) = 356.223, p < .001, η² = 0.197. It was also found that time has a substantial effect on students' test anxiety; F (2, 112) = 941.450, p < .001, η² = 0.564. Further, the results showed that there was a statistically substantial interaction effect of time and group F(2, 112) = 180.807, p < .001, η² = 0.108. Considering the significant differences in test anxiety mean scores by time, and the interaction between time and group, a Sidak post-hoc test by time was performed. The purpose of this is to illustrate where there are differences.

Table 4. Post Hoc Comparisons - Time

		Mean Difference	SE	t	p_{holm}
Time1	Time2	29.752	0.829	35.887	< .001
	Time3	32.390	0.829	39.069	< .001
Time2	Time3	2.638	0.829	3.182	0.002

Table 4 illustrates the Pholm mean anxiety comparisons of secondary school students in the Economics subject. The data showed that the cognitive behavioural therapy group had a lesser test anxiety score at from pretest to posttest (*MD*=29.752, SE=.829, *p*=.001). The Pholm post hoc test also indicated that students maintained a lower mean test anxiety score at follow-up (MD =2.638, SE = .829, p=.002).

Table 5. Post Hoc Comparisons - Group ✻ Time

		Mean Difference	SE	t	p_{holm}
Experimental, Time1	**Control, Time1**	**0.828**	**1.328**	**0.623**	**0.533**
	Experimental, Time2	43.193	1.178	36.681	< .001
	Control, Time2	17.138	1.328	12.906	< .001
	Experimental, Time3	46.246	1.178	39.273	< .001
	Control, Time3	19.362	1.328	14.581	< .001
Control, Time1	Experimental, Time2	42.365	1.328	31.903	< .001
	Control, Time2	16.310	1.167	13.972	< .001
	Experimental, Time3	45.418	1.328	34.202	< .001
	Control, Time3	18.534	1.167	15.877	< .001
Experimental, Time2	Control, Time2	**-26.055**	**1.328**	**-19.620**	**< .001**
	Experimental, Time3	3.053	1.178	2.592	0.030
	Control, Time3	-23.831	1.328	-17.946	< .001
Control, Time2	**Experimental, Time3**	**29.107**	**1.328**	**21.919**	**< .001**
	Control, Time3	2.224	1.167	1.905	0.116
Experimental, Time3	**Control, Time3**	**-26.883**	**1.328**	**-20.244**	**< .001**

In table 5, the Pholm post-hoc test indicates that secondary school students in the intervention group showed almost identical results at time 1 (*MD*=.828, SE=1.328, *p*=.533). Additionally, at time 2, the intervention group had significantly lower test anxiety scores than the control group. (*MD*=-26.055, SE=1.328, *p*=.001) showing that mean test anxiety scores of students exposed to cognitive behavioural therapy drastically dropped in comparison to the control group. In addition, at follow-up, Economics students in the intervention group consistently maintained a lower mean Economics test anxiety score compared to the control group (*MD*=-26.883, SE=.1.328, *p*=.001) denoting that mean scores of students exposed to cognitive behavioural therapy decreased significantly in reference to the control group. This

entails that CBT with reflective activities is effective in reducing Economics test anxiety among students since substantial difference exist with respect to time and groups.

3.2 Discussion

The The results of this study demonstrated that cognitive behavioural therapy had a significant impact in the reduction of students' test anxiety in Economics in South East Nigeria over the none intervention group. The follow-up assessment findings revealed that the reduction in secondary school Economics students' test anxiety was retained after some months of the experiment in South East Nigeria. Additionally, the treatment group differed significantly from the no treatment group in posttest and follow-up measures. This finding could be attributed to the effectiveness of CBT in terms of its structure such as behavioral experiments, thought records, and homework at the conclusion of each learning session as well as muddie points, one-minute wonders, and self-questioning during instructional procedures which decreased students' anxiety during instructional processes. In addition, other techniques of CBT that made meaningful contributions to the effectiveness of the program include "cognitive restructuring, cognitive disputation, refraining, attention training and mood monitoring skills which were integrated into the teaching and learning process" (Canadian Association for Music Therapy, 2017; Ugwuanyi et al., 2020).

The findings of this study are in accordance with Ugwuanyi et al. (2020) who revealed that CBT-Music is efficacious in the reduction of secondary school students' text anxiety in south east Nigeria. Additionally, Daryabeigi et al., (2020) found that CBT with coping cats can lower children's internalizing issues, especially anxiety, in children with internalizing disorders. Students with this internalizing disorder are withdrawn/depressed, suffer from somatic complaints, and are anxious/depressed, which prevent them from being able to learn effectively. The current study conforms with Kaya and Avci (2016) that found that "CBT treatment centred on resolving future anxiety and trait anxiety skill training reduced students' trait anxiety and fear of making mistakes while enhancing their positive expectations".

Therefore, this study represents a valuable and first of its kind investigation of CBT's efficacy in alleviating text anxiety among Economics students in South East Nigeria. Hence, psychotherapists and mental health counselors should adopt CBT to reduce anxiety among Economics students. This could be done in several ways such as working with students or groups to enhance their mental health, helping students define goals, plan action and gain insight, encouraging students to discuss emotions and experiences, and referring students to psychologists and other services. The role of psychotherapists in carrying out CBT therapy in a controlled environment includes the use of verbal and questioning interaction to explore behaviour, attitudes, emotions, and assisting students to comprehend and resolve internal conflicts.

One of the concerns raised by this study is the prevention and treatment of mental disorders in students. There is ample evidence that psychological suffering may be a symptom of an underlying difference in students' pursuit of educational goals. In this regard, when working with students, therapists should take a full position to increase therapeutic effects rather than taking a position in terms of relationships between students' value orientation and differentiation and psychological adjustment.

This study is limited to Senior Secondary School (SSII) students who offer the Economics subject. Inclusion of students from SS III could make this study robust. Similarly, this study investigated gender, age and location as the demographic variables, however inclusion of family socio-economic status, ethnic group, and work status could have made the work impactful. The adoption of quantitative approach also limited the robustness of this study since it excluded interview, group discussion among others. The self-report format of the

questionnaire used for this study could be influenced peer interaction filling of the questionnaires. Future researchers should include qualitative techniques such as interviews and group discussion to strengthen or authenticate the quantitative data.

Despite the shortcoming of this study, the research used experimental and control group to compare within groups and between group to unveil the efficacy of CBT therapy program on the lessening text anxiety using selected students that offer Economics subject in Nigerian Secondary schools. This study is the first of its kind in Southeast Nigeria that would go a long way in improving the level of achievement of Economics students at secondary school level. More studies should be conducted on demographic variables that predict students' test anxiety specifically on mathematical Economics contents at senior secondary school.

4. CONCLUSION

CBT lessened Economics students' test anxiety at senior secondary school, according to the findings of this study. When compared with conventional teaching methods, the authors revealed that CTB significantly reduced students' test anxiety both at the posttest and during follow-up. Therefore, this study has established the effectiveness of CBT intervention programme in lowering test anxiety of students offering Economics in South East Nigeria. This study has implications for school counsellors, economists, and school administrators. Economics teachers, school counsellors and school administrators should know the efficacy of CBT with reflective activities in reducing the adverse effects of economics test anxiety. Therefore, counsellors should be proactive in detecting the signs and symptoms of anxiety among secondary school students. School administrators should regularly arrange for therapeutic treatment for students prone to anxiety. Economics teachers should also avoid triggering learning events that stimulate academic anxiety among students.

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