

Effect of Modelling Technique on Test Anxiety Among Secondary School Students in Anambra State.

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ABSTRACT

Test anxiety is a prevalent psychological condition that negatively impacts academic performance, self-efficacy, and psychological well-being among secondary school students. The limited effectiveness of conventional approaches in mitigating test anxiety prompted the investigation of innovative techniques in this study. The purpose of this study was to determine the effect of modelling technique in reducing test anxiety among secondary school students in Awka South Local Government Area of Anambra State, Nigeria. Specifically, the study sought to: ascertain the effect of modelling technique in reducing test anxiety of secondary school students compared with a control group using pre-test and post-test mean scores; and determine the differential effectiveness of modelling technique in reducing test anxiety between male and female secondary school students using pre-test and post-test mean scores. The study adopted a quasi-experimental research design, specifically a non-randomized pre-test, post-test control group design. The population comprised 580 Senior Secondary School 1 and 2 (SS1 and SS2) students in the 16 government-owned secondary schools in Awka South Local Government Area, Anambra State. The sample consisted of 154 students (70 males and 84 females) identified as test anxious from three government-owned co-educational secondary schools in the area. Participants were assigned to experimental and control groups. Data were collected using an adopted Spielberger Test Anxiety Inventory (TAI). The internal consistency reliability of the instrument was established using Cronbach's alpha. The experimental group received an 8-week behavioural modelling intervention, while the control group received conventional counselling. Mean scores were used to answer the research questions, and Analysis of Covariance (ANCOVA) was used to test the null hypotheses at a 0.05 level of significance. The findings revealed that modeling technique was effective in reducing test anxiety among secondary school students. Furthermore, the results indicated that modelling technique was more effective in reducing test anxiety among male than female students. Based on the findings, it is recommended that guidance counsellors in secondary schools adopt modelling technique to address test anxiety. Additionally, schools should develop awareness and psychoeducational programs for parents to enhance their understanding of test anxiety and enable them to support their children through appropriate routines, supervision, and positive learning environments.

Keywords: test, test anxiety, modelling, secondary school students

Introduction

Standardized testing was first institutionalized as a policy mechanism in China during the Han Dynasty, circa 200 BCE. By the 18th century, written test was introduced to supplement oral test, particularly in mathematics. Later in the same century, quantitative scoring systems were adopted to reduce the subjectivity inherent in qualitative judgements of examinee performance across both oral and written components. (DuBois, 1970 and Williams, 2010). Since the onset of western education in Nigeria, test scores have been used to evaluate students for placement. (Anyamene, Akuezilo and Udeagha, 2022). Secondary school students in Nigeria face increasing academic demands that put considerable pressure on them. One of the basic challenges students encounter during their school years is anxiety during test. Tests scores play a central role in the progression of students from one level of education to the other. Test scores have no doubt become an invaluable tools to educators and other stake holders. Test scores have been widely used for certification and academic progression in the Nigeria Secondary education system. Continuous Assessment (CA) scores and examination scores are aggregated to determine students' promotion to the next class. At the end of Junior (JSS 3) and Senior (SSS 3) scores from school- based examinations are combined with results from official bodies such as the West African Examination Council (WAEC) and the National Examination Council (NECO) to make final certification and promotion decisions (Yashim and Jibrin, 2020). According to Oloyede (2025) to gain admission into Nigerian tertiary institutions, candidates must obtain high scores in the Unified Tertiary Matriculation Examination (UTME). In addition, Oloyede (2025) noted that universities uses a combination of the UTME score and the senior school certificate examination SSCE results, obtained from bodies such as (WAEC/NECO) to screen and accredit candidates for admission. Furthermore, teachers use periodic test scores to identify knowledge gaps, measure learner comprehension, and adjust teaching methods. (Yashim and Jibrin, 2020). This over-dependence on tests scores, has precipitated unease and uncertainty among secondary school students as they anticipate test results outcomes thus, leading to test anxiety (Iruogbu, 2013) Test anxiety is a psychological condition that makes people to experience extreme distress and anxiety in testing situations (Faleye, 2010). Test anxiety as a type of performance anxiety; where the pressure is how to do well. It is a physical, cognitive, emotional or behavioural discomfort experienced by an individual either before, during or after an examination or evaluative situations which when not properly checked can negatively affect their academic performances, mental health and overall wellbeing. What distinguishes test anxiety from general nervousness is its consistency, it tends to occur across different testing situations and can become a pattern that significantly affects how a student relates to academic assessments overtime. A student dealing with test anxiety does not just feel nervous on the day of an examination. The anxiety often begins earlier, sometimes days ahead, and can interfere with sleep, concentration and general well-being. Scholars have generally approached test anxiety through two broad dimensions. The first is the cognitive dimension, which involves the kinds of thoughts a student's entertain during or after a test, particularly self-doubting thought, worry about failing, negative comparisons with peers, memory problems, difficulty concentrating and worry (Putwain, Nicholson, Pekrun and Becker, 2017). The second is the somatic dimension, which covers the physical sensations the body produces under stress, such as racing heart, sweaty palms stomach discomfort, shaking, dry mouth, fainting, nausea, diarrhea, vomiting and tension in the muscles (Von der Embse, Jester, Roy and Post 2018) both noted that these two dimensions can occur separately or together, though the cognitive component tends to have a stronger direct link to poor test performance. And together they can significantly reduce a student's performance even when the student have studied

well. Students who are mentally preoccupied with fear of failure are less able to retrieve information they have studied, regardless of how physically calm they may appear.

The causes of test anxiety among secondary school students have been examined from psychological, social and environmental perspectives, and literature suggests that no single factor is entirely responsible for the condition. Rather, test anxiety typically develops when several contributing factors intersect in a student's life over a period of time. McDonald (2021) identified poor study habits as one of the most consistent predictors of test anxiety, noting that students who are not adequately prepared for examinations are significantly more likely to experience fear and worry when the test date approaches. Parental pressure, teacher behaviour in the classroom, and previous negative experiences with examination can also play a role in sustain test anxiety. Furthermore, Zeidner (2018) posited that environmental factors within the school setting, including over crowded examination halls, inadequate lighting, insufficient furniture, and noise may exacerbate students' psychological stress response in students who are already anxious. Ogunola, Odumesi, Usman, and Abdulkadir (2025) asserted that school-level variables including inadequate counselling support and insufficient examination preparation programs, deprive students of essential coping mechanisms for managing high-stakes testing pressure thereby increasing their susceptibility to anxiety induced underperformance. Collectively, these studies illustrates that test anxiety emerges from the interaction of individual, social, environmental and institutional factors, none of which can be addressed in isolation if the objective is to achieve sustained and meaningful reduction of test-related fear. Test anxiety varies in intensity among individuals, ranging from mild to severe. Research indicates that some students experience only mild symptoms and maintain adequate test performance, whereas others exhibit debilitating anxiety resulting in substantially impaired performance or panic episodes during assessment (Zeidner, 1998). Test anxiety is a ubiquitous phenomenon that transcends age, race and educational qualification, affecting individuals across diverse fields. Individuals react differently prior to taking test, during the test and after the test. Some feel pressured, stressed, unprepared, too prepared, overzealous, under zealous, excited and even afraid. While moderate levels of pre-test anxiety can function adaptively by enhancing motivation and preparation, excessive and disruptive anxiety transitions from a facilitative to a debilitating influence on performance (Adeyemi and Okeke, 2024). This distinction is critical for counsellors, as not all students who express pre-test nervousness meet the clinical threshold for test anxiety requiring intervention. The point at which anxiety shifts from facilitating preparation to impairing functioning constitutes the key criterion for school guidance counsellors, teachers, and school administrators to initiate support service. Akinsola and Nwajei (2013) emphasized the necessity of supporting students in overcoming test anxiety noting that failure to address this issue may contribute to school dropout, impersonation during examination, prolonged graduation time, examination malpractice, certificates racketeering, underachievement, lowered self- esteem, reduced efforts, loss of motivation for school tasks and excessive self- preoccupation. Historically, school teachers and educational managers have employed a range of informal intervention strategies to mitigate test anxiety among students. These have included preparatory talks, daily mood check, greeting at the door, temperature checks, music, post test reframing, guided imagery, prayers before test, social support, informal rehearsal of test-day behaviour without a clinical script, school orientation programs, advisory services, individual and group counselling, ensuring clarity in test items, avoiding ambiguous language in examination questions to help test anxious students overcome their anxiety and sharing test format, time limits, question types with practice tests beforehand. (Akinsola and Nwajei, 2013; von der Embse et al., 2013). American schools have also integrated stress and anxiety management programs into classroom practice. These interventions commonly incorporate yoga, breathing exercises, and visualization techniques. Additional supports include

providing food and supplementary materials on the morning of examinations alongside reassurance that students are adequately prepared and that encountering difficult items is a normative aspect of testing. However, these techniques demonstrate limited efficacy in reducing test anxiety. Mental health professionals, including guidance counsellors and psychologists, have developed and implemented a range of therapeutic interventions for test anxiety. These encompass behavioural approaches such as systematic desensitization, relaxation training, biofeedback, anxiety reduction techniques and anxiety management training as well as cognitive approaches including rational emotive therapy, cognitive restructuring and other skill deficit treatment approaches including study skills training, test taking skills training, other skill deficit approaches and skill focused treatment approaches simultaneously, self talks, peer support and psychoeducation. Despite ongoing intervention efforts, test anxiety remains prevalent among secondary school students. This persistence may be attributed to the lack of structure and standardization in the strategies employed by school teachers and guidance counsellors. Informal methods are typically ad-hoc and inconsistent. For instance, one teacher may employ breathing exercises on one occasion, while another may rely on prayer on another. Consequently, students are not provided with a repeatable skill set that can be consistently applied. Bandura (1977) stressed that for modeling and behavioral rehearsal to be effective, the modeled behavior must be standardized, clearly demonstrated, and repeatedly practiced to facilitate observational learning. In the absence of a manualized protocol, students are unable to accurately imitate or master adaptive coping behaviors. A second limitation is the brevity and timing of informal strategies. Most are limited to brief, 2–5-minute “calming breaks” administered immediately before examinations. Test anxiety, however, is a learned cognitive-behavioral pattern. Although a single session of mindfulness may produce transient relief, such brief interventions do not foster mastery, self-efficacy, or sustained habit change as observed in structured, multi-session CBT protocols. Third, informal approaches emphasize symptom management rather than cognitive restructuring. Techniques such as breathing, music, stretching, or reassurance target physiological arousal but do not address core maladaptive cognitions, including catastrophizing beliefs such as “I will fail” or “My future is ruined.” Without cognitive restructuring, these anxious thoughts are likely to resurface during testing situations. Fourth, informal methods lack behavioral rehearsal and imitation practice. Teachers often instruct students to “relax” without providing opportunities to practice coping behaviors under simulated test conditions. Akinsola and Nwajei (2013) demonstrated that modeling combined with rehearsal significantly reduced test anxiety. However, informal practices typically omit the rehearsal component, resulting in a discrepancy between intellectual understanding and behavioral execution under stress. Fifth, informal interventions lack monitoring, feedback, and follow-up. They do not include pre- and post-intervention assessment, homework, or accountability mechanisms. Thus, counsellors cannot determine intervention effectiveness. Without the use of standardized measures such as the Test Anxiety Inventory, such approaches remain largely speculative. Finally, most teachers and paracounsellors lack clinical training in evidence-based approaches such as CBT, modelling, exposure, or systematic desensitization. Consequently, they often default to encouragement, additional practice, or prayer. While these strategies may reduce immediate pressure, they do not address the underlying anxiety disorder pattern. Collectively, these informal approaches lack the theoretical grounding, procedural standardization, and behavioral rehearsal central to modelling-based interventions. Given the increasing significance of test scores for placement, certification, and accountability, it is imperative to examine the effect of a standardized modelling technique on test anxiety among secondary school students.

Modelling technique is a behaviour modification approach grounded in Bandura’s (1997) social learning theory. It entails the systematic demonstration of standardized adaptive behavior

to facilitate students' observation, imitation, and subsequent acquisition of targeted coping skills. In the context of test anxiety, it entails the demonstration of standardized coping behaviors, followed by guided behavioral rehearsal to promote acquisition and generalization of adaptive responses. This process is grounded in the premise that individuals inevitably acquire behaviours through visual observation, consistent with Bandura's social learning theory. Students learn not only through direct experience but also through vicarious observation of others. In therapeutic contexts, behaviour modelling is purposeful and goal-directed, designed to teach clients healthier behavioural repertoires. The intervention commenced with a brief psychoeducational overview of social learning principles, after which participants received explicit instructions regarding the target behaviours for observation. The therapist subsequently demonstrated the appropriate behavioural responses, and participants were encouraged to rehearse the modelled behaviours through role-play or alternative simulation techniques (Bandura, 1977; Akinsola and Nwajei, 2013). Behavioural modelling technique incorporates structured opportunities for reinforcement contingent upon accurate imitation of the modelled behaviour. The goal of this technique is the modification of maladaptive behaviours including stress and anxiety responses, through observational learning and imitation of modelled adaptive behaviours. Bandura classified factors that enhance the acquisition of modelled behaviour into three categories namely; the characteristics of the model, the characteristics of the observer and the characteristics of the modelling presentation (Bandura, 1997). Models who share salient characteristics with observers such as sex, competence and race, elicit greater attention and perceived relevance, thereby increasing the likelihood of imitation (Bandura, 1986; Wurst, Pohl, Feige, Lehr and Gloster, 2023). However, caution must be exercised to avoid selecting models of such high prestige that observer's perceive their behaviour as unattainable and unrealistic for emulation. Optimal observational learning occurs when model competence is perceived as achievable by the observer (Bandura, 1986; Schunk, 1987; and Wurst et al., 2023). Hanson (2022) posited that according to social cognitive theory, the most effective type of model is an individual that is one to two proficiency level beyond the observer, should be a coping model who demonstrates gradual mastery while initially exhibiting similar anxiety level to the observer. The observer's attentional capacity and retention are primary determinants of modelling efficacy; therefore clinicians must assess the intellectual strength of observers prior to implementing observational learning procedure. Inability to pay attention can be ameliorated through stimulus control procedures including task simplification, environmental distraction reduction, guided verbal commentary and strategic segmentation of modelling displays. Elevated observer anxiety impairs attentional and retention processes essential for observational learning, thereby disrupting the encoding of modelled behaviours. Ren, Zhao, Tian, Bian and Zhang (2022) stated that to optimize observational learning, it may be necessary to train observers in relaxation techniques prior to model presentation and instruct them to employ relaxation strategies during the model's behavioural performance. Model presentation modalities can be broadly categorized into two forms: live modelling, wherein the model enacts target behaviours in the physical presence of the observer, and symbolic modelling, which utilizes mediated representations of behaviour through films, videotape, audiotape, animation, or written narratives. (Adebayo and Okonkwo, 2025). Guided verbal instructions and concurrent commentary should also be incorporated in the modelling presentation protocol to help direct observer attention to critical behavioural components and underlying cognitive strategies, consistent with social cognitive theory. Aluko (2010) demonstrated that modelling techniques are highly effective for treating behavioural problems including students test anxiety, as they provide observational learning opportunities and explicit behavioural rehearsal steps that facilitate remediation of skills deficits and promote behavioural change.

Embse et al., (2018) and Adebayo (2025) found that gender differences in test anxiety have been consistently documented, with female students exhibiting elevated anxiety levels relative to male counterparts. This was as a result of their findings and other scholarly evidenced based literatures where female secondary school students reported significantly higher pre-intervention test anxiety scores than male students, supporting the need for gender -sensitive modelling interventions. Gender refers to the state of being male or female, particularly with regard to social and cultural characteristics, rather than biological sex. According to Udousoro (2011), gender is a cultural construct that distinguishes the roles, behaviour, mental and emotional characteristics between male and female developed by the society. Gender is conceptualized as a sociocultural determinant whose expression and meaning vary across cultural and geographical contexts (Hyde, Bigler, Joel, Tate, and Van Anders, 2018). Gender has been reported as a significant factor influencing test anxiety among secondary school students (Adebayo and Okonkwo, 2025; Donker et al., 2024). It should be noted, therefore, that findings regarding modelling intervention techniques and gender differences remain inconclusive and non-exhaustive. This study therefore sought to determine the effect of modelling technique on test anxiety among secondary school students in Awka south local government area of Anambra State.

Statement of the Problem

Despite the documented prevalence and consequences of test anxiety among secondary school students in Nigeria, secondary schools in Awka South L.G.A of Anambra State, continues to address the problem through informal, unvalidated, and reactive means. School counsellors rely primarily on personal observation to identify test anxious students without access to structured screening tools, frequently mischaracterizing affected students as lazy or intellectually deficient. Improvement strategies are similarly non-systematic, preparatory talks, school orientation programs, advisory services, individual and group counselling, range of therapeutic interventions for test anxiety with verbal reprimand and seat adjustment dominating classroom responses while evidence-based approaches go largely unknown and unapplied. School counsellors, despite their relevant competencies, are rarely engaged in managing test anxiety in any formal capacity. Consequently, many test anxious students in the local government areas, accumulate academic and psychosocial disadvantages that compound with each year of missed support. There is, therefore, a compelling need to investigate the effect of modelling technique on test anxiety among secondary school students in Awka South L.G.A of Anambra State and to evaluate them against the existing evidence base.

Purpose of the study

The main purpose of this study is to determine the effect of modelling technique on test anxiety of secondary school students in Awka South L.G.A of Anambra State, specifically, the study sought to determine:

1. Effect of modelling technique on test anxiety of secondary school students when compared to those in the control group using their pretest post-test mean scores
2. Effectiveness of modelling technique on test anxiety of male and female students using their pre- test and post- test mean scores.

Research Questions

The following research questions guided the study:

1. What is the effect of modelling technique on test anxiety of secondary school students in Awka South L.G.A of Anambra State when compared to those in the control group using their pretest posttest mean score?
2. What is the effect of modelling technique on test anxiety of male and female secondary school students in Awka South L.G.A of Anambra State when compared to those in the control group using their pretest posttest mean score?

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

- 1 **H₀₁:** There is no significant difference in the effect of modelling technique on test anxiety of secondary school students when compared with those in control group who received conventional counselling using their post-test mean score.
- 2 **H₀₂:** There is no significant difference in the effect of modelling technique on test anxiety of male and female secondary school students when compared with those in control group who received conventional counselling using their post-test mean score.

Methodology

This study adopted a quasi-experimental research. The specific design adopted for this study was a non-randomized pre-test post-test control group design. This was because subjects were not randomly assigned to groups. Nworgu (2015) described a quasi-experimental study as an empirical interventional study used to estimate the casual impact of an intervention on target population without random assignment. The study was conducted in Awka South L.G.A of Anambra State. Awka south is made up of nine surrounding towns, namely, Amawbia, Awka, Ezinato, Isiagu, Mbaukwu, Nibo, Nise, Okpuno and Umuawulu. Awka South LGA has 16 co-educational public secondary schools. Population for the study was Five hundred and eighty (580) SS 1 and SS2 students. This population was obtained after the researcher went round these schools and distributed the Spielberger test anxiety inventory TAI to the students and all those who scored 40 and above in the instrument were added up to make up the population for the study and after which the schools with the highest number of test anxious students were used as sampled schools. Out of the three selected schools, two were randomly assigned to experimental (pretest and post-test) groups and the control group using simple random sampling technique (flip of a coin). In each of the two sampled schools, the various arms of SS 1 and SS2 classes were listed on two pieces of paper, folded and using balloting, one of the arms was picked. The experimental group 1 consists of 52 students (17 males and 35 females) respectively and finally the control group consists of 55 students (30 males and 25 females) making the total sample number 107. Experimental group 1 were treated with behavioural modelling technique (BMT), while the control group received no treatment but neutral interaction with the school guidance counsellors. The researcher assigned participants into the two groups based on their schools. The two schools were selected using simple random sampling. The data collected for this study, were also collected and analyzed in tables. Mean was used in answering the research questions, and analysis of covariance (ANCOVA) were used in testing the null hypotheses at 0.05 level of significance. The scoring of the instrument was done in accordance with the Test Anxiety Inventory Scale: Almost always =4 points, Often = 3 points Sometimes = 2 points and Almost never = 1 point.

Results

Research Question 1: What is the effect of modelling technique on test anxiety of secondary school students when compared to those in the control group using their pre- test and post- test mean score?

Table 1: Pretest and Posttest test anxiety mean scores of secondary students treated with modelling technique and those treated with conventional counselling (Norm = 40)

Source of Variation	N	Pretest Mean	Posttest Mean	Lost Mean	Remark
Modelling Technique	52	44.77	29.46	15.31	More Effective
Conventional Couns.	55	47.04	37.11	9.93	Effective

In Table 1, it was observed that the secondary students treated with modelling technique had pretest mean score of 44.77 and posttest mean score of 29.46 with lost mean 15.31 in their test anxiety, while those in the control group who received conventional counselling had pretest mean score of 47.04 and posttest mean score of 37.11 with lost mean 9.93. With posttest mean scores of 29.46 and 37.11 which are below the norm of 40.00 both modelling and conventional counselling techniques are effective in reducing test anxiety among secondary school students. However, with higher lost mean 15.31 Modelling technique is more effective.

Null hypothesis 1

The effect of modelling technique on the test anxiety scores of secondary school students will not be significant when compared with those treated with conventional counselling using their posttest mean scores.

Table 2: ANCOVA on the effect of modelling technique on the test anxiety of students when compared with those who received conventional counselling

Source of variation	SS	df	MS	Cal. F	Pvalue	$P \leq 0.05$
Corrected Model	2247.642	2	1123.821			
Intercept	94.963	1	94.963			
Test anxiety1	684.397	1	684.397			
Treatment models	1053.657	1	1053.657	29.665	.000	S
Error	3693.872	104	35.518			
Total	125253.000	107				
Corrected Total	5941.514	106				

Table 2 revealed that at 0.05 level of significance, 1df numerator and 106df denominator, the calculated F is 29.67 with Pvalue of 0.000 which is less than 0.05. Therefore, the second null hypothesis is rejected. So, the effect of modelling technique on the test anxiety of secondary school students is significant.

Research Question 2

What are the differences in the effect of modelling technique on the male and female secondary school students' test anxiety using their pretest and posttest scores?

Table 3: Pretest and Posttest test anxiety mean scores of male and female students treated with modelling technique

Source of Variation	N	Pretest Mean	Posttest Mean	Lost Mean	Remark
Male	17	44.00	28.35	15.65	More Effective
Female	35	45.14	30.00	15.14	

In table 3, it was observed that the male students treated with modelling technique had pretest mean score of 44.00 and posttest mean score of 28.35 with lost mean 15.65 in their test anxiety, while the female students treated with modelling technique had pretest mean score of 45.14 and posttest mean score of 30.00 with lost mean 15.14. With lost mean score of 15.65 for males which is greater than lost mean score of 15.14 for females, modelling technique is more effective in reducing male secondary school students' test anxiety.

Null hypothesis 2

The effect of modelling technique on the test anxiety scores of male and female secondary school students will not differ significantly using their posttest mean scores.

Table 4: ANCOVA on the effectiveness of modelling technique on the test anxiety of male and female students

Source of variation	SS	df	MS	Cal. F	Pvalue	$P \leq 0.05$
Corrected Model	35.808	2	17.904			
Intercept	427.641	1	427.641			
Test anxiety1	4.768	1	4.768			
Gender	33.815	1	33.815	1.679	0.201	NS
Error	987.115	49	20.145			
Total	46158.000	52				
Corrected Total	1022.923	51				

In table 4, it was observed that at 0.05 level of significance, 1df numerator and 51df denominator, the calculated F is 1.68 with Pvalue of 0.201 which is greater than 0.05. Therefore, the second null hypothesis is accepted. So, the effectiveness of modelling technique on the test anxiety of male and female secondary school students do not differ significantly.

Results

1. The result indicated that students exposed to modelling technique recorded significantly lower posttest test-anxiety scores compared to those who received conventional counselling.
2. Male students recorded a greater reduction in test-anxiety scores than their female counterparts

Discussion

The findings of the study revealed that students in both the experimental and control groups exhibited test anxiety prior to the commencement of treatment, as evidenced by their pretest scores

and also a reduced test anxiety following their post test scores. This may be as a result of the uniqueness of the two approaches. Modelling technique provided students with explicit behavioural and procedural strategies for managing test anxiety through observation, imitation, and rehearsal. While conventional counselling addressed the cognitive and affective dimensions of anxiety by facilitating verbal exploration of anxiety antecedents, emotional disclosure, and cognitive reframing. Thus, the use of behavioural demonstration and verbal processing offered a unique intervention to both groups. Students were equipped with concrete coping skills to replicate during test, and also given the opportunity to process underlying fears and maladaptive thoughts that sustain test anxiety. The results further indicated that students exposed to modelling technique recorded significantly lower posttest test-anxiety scores compared to those who received conventional counselling. This may be as a result of modelling nature of working faster for test anxiety because it builds competence and confidence through observation, imitation, and rehearsal. While conventional counselling builds awareness, but awareness alone is often insufficient when physiological arousal is high during a test. Another reason for observed reduction in test-anxiety scores among students exposed to modelling technique may be attributed to the nature of the intervention, which enables participants to observe and imitate modeled adaptive behaviours. This process facilitates the acquisition of procedural knowledge and enhances students' understanding of effective strategies for managing test anxiety. In contrast, conventional counselling primarily emphasizes verbal exploration of anxiety antecedents and emotional disclosure, with less emphasis on behavioural rehearsal. The significant reduction in test anxiety following modelling intervention was corroborated by the rejection of Hypothesis One. Therefore, it is concluded that modelling technique has a significant effect on test anxiety among secondary school students. Another cogent reason for the significantly lower posttest mean scores in the experimental group, compared to the control group, may be attributed to the intervention's capacity to enhance students' self-efficacy beliefs regarding the management of test anxiety. Through the observation of peers or expert models successfully coping with test-related stress, students developed vicarious self-efficacy—the conviction that “if they can do it, I can do it too” (Bandura, 1986). Furthermore, modelling provides explicit procedural knowledge by demonstrating concrete anxiety-management skill and action-based techniques, such as relaxation and behaviour rehearsal, that can be replicated during test. These modelling mechanisms are often absent in traditional talk-based counselling approaches (Adebayo and Okonkwo, 2025). The result of the present study are consistent with those of (Uzor 2008; Mozghan 2016; Nnadi and Oguzie, 2019) who all reported that modelling technique significantly reduced test anxiety among secondary school students. The findings of (Nwamuo 2013; Ngwakwe 2012; and Ishyaku, 2015) also lends credence to the findings of this study that modelling technique reduced students test anxiety and shyness when compared to those in their respective control groups. Aluko (2010) extended this by testing behavioural interventions and found significant reductions after modelling and rehearsal techniques were used on test anxiety among secondary school students in Oyo State Nigeria.

The findings of the study revealed an insignificant difference in the effect of modelling technique on the test anxiety of male and female secondary school students, with male students recording a greater reduction in test-anxiety scores than their female counterparts. This finding may be attributed to differences in behavioural responsiveness to observational learning and emotional regulation strategies. Male students may have exhibited greater willingness to imitate modeled coping behaviours and to apply procedural techniques, such as relaxation and rehearsal, during testing situations. In contrast, female students may experience test anxiety through more internalized, cognitive-emotional patterns, such as worry and rumination, which may be less responsive to behavioural modelling alone and may require additional cognitive restructuring

components. The result aligns with the social learning perspective that behavioural change through modelling is moderated by individual differences in attention, retention, and motivation (Bandura, 1977). It also corroborates previous studies that reported gender variations in the efficacy of behavioural interventions for anxiety (Akinsola and Nwajei, 2013). Consequently, it is concluded that while modelling technique is effective for both male and female students, its impact is significantly more pronounced among male students in the context of this study. The findings of the study also lend credence to the findings of (Nnadi, Oguzie and Uzoekwe (2019); Zarus (2010); Nwamuo (2013); Uzor (2008) who all reported in their various studies that modelling technique had more impact on male than female. Although the present study found a disparity in the post test mean scores of male and female students, the disparity was only marginal and not significant. The difference in the male and female students in the experimental group was not due to gender per se. the difference probably was due to chance. Gender was not a determinant of the effectiveness of modelling therapy, rather both male and female students actually benefitted equally from the technique. one possibility that might help explain why the students' post test score was reduced almost equally in both male and female was that modelling activities were equally enriching for both gender types another reason for the reduction on the severity of test anxiety, might also be as a result of the equal opportunities given to both male and female students in the experimental group to discuss the possible causes of test anxiety and possible ways of reducing it.

Conclusion

This study concludes that test anxiety among secondary school students in Awka South Local Government Area, Anambra State, is a prevalent educational challenge that negatively affects students' learning, classroom participation, and academic performance. The findings indicate that school teachers and counsellors predominantly rely on informal methods to identify and address test anxiety, while the use of formal assessment tools and evidence-based intervention strategies remains limited. Furthermore, although school counsellors are recognized as critical stakeholders in managing test anxiety, their level of involvement in supporting students with test-anxious behaviours is inadequate in many schools. Based on the findings, it is concluded that modelling technique and conventional counselling, were effective in reducing test anxiety among secondary school students, although modelling technique proved to be more effective. In addition, the results revealed that modelling technique produced a significantly greater reduction in test anxiety among male students than among female students.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Guidance counsellors in secondary schools in Awka South Local Government Area should adopt modelling technique as a structured, evidence-based intervention to reduce test anxiety among students. In-service training and workshops should be organized to equip counselors with the requisite skills for effective implementation.
2. Given that modelling technique was found to be more effective for male students, counsellors should design gender-sensitive intervention strategies that address the unique manifestations of test anxiety among female students.

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