International Journal of Science and Research Archive
eISSN: 2582-8185
Cross Ref DOI: 10.30574/ijsra
Journal homepage: https://ijsra.net/

(RESEARCH ARTICLE)

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Test anxiety and academic achievement in junior secondary schools in Kitutu Chache north sub-county, Kisii, Kenya: A correlation study

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International Journal of Science and Research Archive, 2025, 15(02), 501-514

Publication history: Received on 02 April 2025; revised on 10 May 2025; accepted on 12 May 2025

Article DOI: https://doi.org/10.30574/ijsra.2025.15.2.1373

Abstract

Anxiety is a type of self-preoccupation that shows up as self-minimization. It causes poor cognitive evaluation, difficulty focusing, negative psychological reactions and academic failure. The purpose of this study was to investigate the relationships between junior secondary school students' academic achievements and test anxiety. The study employed a cross-sectional and descriptive correlation design. Six junior secondary schools provided a stratified sample of forty-five teachers and 388 JSS students. The Test Anxiety Inventory (TAI), a four-point Likert scale with 20 items questionnaire that was created by Spielberger in 1980 was used alongside with the interviews for teachers. The academic achievement of the students was assessed using document analysis with their average score in eight subjects' performance during the first term of the 2025 school year. The mean, standard deviation, percentage and Pearson correlation were calculated. Students' achievement scores and test anxiety were revealed to be significantly correlated negatively. The findings indicated that cognitive variables account for a greater proportion of test anxiety than affective aspects. According to the study's findings, female students reported far higher levels of test anxiety mean 2.76 than their male counterparts mean 2.54. Thus, it is determined that test anxiety is one of the elements that contribute to students' poor performance and underachievement. Though, it can be controlled by providing students with the necessary instruction on how to handle test anxiety-causing environments. It is strongly advised to take into account the psychological elements that contribute to extreme test anxiety in junior secondary school students. Students should have access to counseling services when they need them.

Keywords: Cognitive; Psychological; Academic Achievement; Test Anxiety; Poor Performance

1. Introduction

One of the main methods for assessing students' academic success is academic achievement, which is determined by test scores. According to Aloka et al. (2018), academic accomplishment in any community is a reflection of how well the educational system targets and attends to individual needs. Many academic growth elements can be beneficial, according to research, including personal, social, cultural, economic, political, moral, and psychological factors (Duraku, 2016; Oludipe, 2009). According to Dinga et al. (2018), the purpose of schools is to teach students useful skills and knowledge, with the ultimate goal of improving their academic performance. Therefore, a successful and effective approach to bring excellent education requires an understanding of students' academic level and factors (Muhdin, 2016). Many factors such as gender, the teaching staff, the students' recent educational background, drug use, and the social, educational, and economic standing of the family, influence students' academic progress and learning performance (Moges, 2017).

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Test or examination anxiety is one of the several obstacles that secondary school students must overcome in order to succeed academically (Yousefi et al., 2010; Kavakci et al., 2014). These difficulties prevent them from achieving academic success at a level that is satisfactory. In actuality, test anxiety is the cause of its appearance (Omwenga, 2025). One psychological element impeding pupils' academic success is test anxiety. Even though this element is crucial to the learning process, little is known about the relationship between test anxiety and academic success in Ethiopian secondary school students (Legese, 2014; Getachew, 2015).

Legese's (2014) study examined the degree to which university students' academic performance is impacted by test anxiety. According to the study, university students' academic performance and test anxiety were negatively connected (McMillan and Schumacher, 2010). The mean grade of the male and female pupils differed significantly as well. In this study, the mean score for exam anxiety was higher for female students than for male students. Additionally, Getachew (2015) studied the anxieties and attitudes of tenth grade students in government and private schools in the Kolfe Keranio sub-city of Addis Ababa toward their academic achievement. This study found a strong correlation between students' anxiety and their academic achievement. There was no discernible sex difference between government and private schools, according to the results. Nonetheless, there aren't many studies on test anxiety in Kisii County junior secondary school students. Therefore, Finding the effect of test anxiety on academic achievement among secondary school students in Kitutu Chache North Sub-County, Kenya was necessary.

1.1. Objectives of the study

- To assess the level of test anxiety in junior secondary schools, Kitutu North, Kisii County.
- To find the relationship between test anxiety and academic achievement among students.
- To establish significance differences between test anxiety of male and female students.

1.2. Significance of the study

- Help students with low academic achievement in improving their academic performance.
- Guide teachers in creating effective teaching and learning strategies to help students achieve better learning outcome.
- Help parents in understanding their children mental status and providing better support at home.
- Assist educators and test writers in identifying the causes of students' successes and failures and in creating appropriate and sufficient interventions for their students.
- Help and guide the Kisii County educational office in providing reliable empirical data; and assist school administrators in resolving low academic performance based on the study's findings.

1.3. Delimitation of the study

This study examined the correlation between test anxiety and academic achievement in junior secondary schools in Kitutu Chache North, Kisii County, Kenya. The study's target population junior secondary students and its sample size was 388 students (171 males and 217 females) and 45 teachers. Bogeka, Eronge, Bokeabu, Engoto, Bototo and Ebate junior secondary schools were selected because they were easily accessible and manageable to collect data from the given time and financial constraints.

1.4. Limitation of the study

It was difficult to generalize the study's findings because it only comprised a small sample of junior secondary school students. The study's second main focus was on the connection between students' academic performance and test anxiety. Students' academic achievement may also be impacted by a number of other intervening events.

2. Literature review

2.1. Students Performance

At every educational level, but particularly at the secondary level, examinations and tests are regarded as a significant and potent instrument for decision-making in our cutthroat society. Individuals of all ages are assessed based on their accomplishments, competencies, and skills (Habibullah and Ashraf, 2013). Success is determined by a student's performance on tests, although the optimum performance criterion is the total of the student's academic performance across all disciplines (Keari et al., 2024). According to Mekennen (2014), bad academic achievement, on the other hand, is a performance that is deemed below the standard anticipated by the examinee and other key parties.

Test anxiety is an unfavorable emotion toward examination. It is the most essential challenge that is confronted by learners in their studies (Dinga et al., 2018). Students that suffer from test anxiety are psychologically distressed and anxious during taking tests. It is necessary for pupils to experience some anxiety during tests in order to become more focused and study (Omwenga et al., 2025). An excessive amount of anxiousness will not improve a student's performance; on the contrary, it will have a detrimental effect on their academic achievement (Oluoch et al., 2018). Before an exam, students may experience psychological symptoms such as tremors, muscle contraction, abdominal pain, insomnia, restlessness, strange body movements, and difficulties concentrating (Habibullah and Ashraf, 2013).

2.2. Impacts of Test Anxiety

The previously cited evidence and study findings make it clear that text anxiety has an impact on academic performance in addition to other factors like gender, learning motivation, and the capacity to gain from formal education. Various researchers (Syokwaa et al., 2014; Oluoch et al., 2018) have proposed ways to reduce test anxiety by controlling internal factors like test question structure, adequate context description, and student instruction clarity, as well as external factors like the exam hall environment and examiner behavior (Anika, 2024). It is widely acknowledged that test anxiety has become a major source of distress and disruption for pupils, even with these efforts to reduce it. Numerous studies have found that text anxiety is a significant contributing factor to students' poor performance and underachievement across a range of academic levels (Oluoch et al., 2018).

2.3. Relationship between Test Anxiety and Performance

According to a 2009 study by Nicholson, which examined how test anxiety affected grade 11 students' academic performance, there is a connection between anxiety and success. The association between test anxiety and academic achievement was investigated by Khalid and Hasan (2009) using a purposively selected sample of 187 undergraduate students. They discovered that students who perform well academically also had low test anxiety ratings, and vice versa (Omwenga et al., 2025). In order to investigate the relationship between test anxiety and students' performance in the sciences, particularly physics, Oludipe (2009) found that "low test nervous learners scored better than high anxious learners on both quantitative and non-numerical tasks in Physics."

Test anxiety and academic achievement are often negatively correlated, according to the majority of study findings (Dodeen et al., 2014; Syokwaa et al., 2014; Shishigu, 2018; Oluoch et al., 2018). According to these study results, children who experience more exam anxiety do less academically (Omwenga and Mweti, 2024). However, research by Ndirangu et al. (2008) and Kavakci et al. (2014) revealed no connection between students' academic success and test anxiety. According to a number of studies examining gender differences in test anxiety, women experience higher levels of total test anxiety than men (Syokwaa et al., 2014).

3. Materials and methods

3.1. Research Design

The study used a cross-sectional and descriptive correlational design with an approach that was both quantitative and qualitative (Creswell, 2014). The study's objectives were to determine the degree of test anxiety and the correlation between test anxiety and academic achievement using the mean score among junior secondary school students in Bogeka, Eronge, Bokeabu, Engoto, Bototo and Ebate Kitutu Chache North, Kisii, Kenya. For this study, data from both primary and secondary sources were used. Teachers and junior secondary students served as the main data sources. Documents mostly including records of students' average scores in various subjects served as secondary sources of information.

3.2. Sample size and sampling techniques

This study's population consisted of junior secondary school students and teachers in Kenya. There were 388 junior students in the sample secondary schools (171males and 217 females) and 45 teachers from selected schools. The sample size was calculated using Slovin's Formula (Zach, 2023) recommended method.

- *Slovin's Formula: n= N / (1+Ne2)*
- *Where n= Sample size*
  - *N=Target population*
  - *E=Acceptable margin of error at 5% (STD value of 0.05)*

3.3. Data Collection Instruments

3.3.1. Questionnaires

A two-part questionnaire was used to gather data: the first part asked about the participant's demographics, including age, gender and academic level; the second part included the Test Anxiety Inventory (TAI) (Spielberger, 1980), which was used to measure test anxiety in junior secondary school students, the main outcome variable of the study. Participants rate how frequently they experience the feelings listed in each of the 20 questions on the Test Anxiety Inventory using a four-point Likert-type scale. There are four possible answers: (1) never, (2) sometimes, (3) often, and (4) always. The scale has elements with both positive and negative wording. Four of the items add to the Test Anxiety Inventory-T score, while eight of the measures assess emotionality and eight measure worry. The current study's reliability examination of the test anxiety inventory showed strong reliability, as shown by Cronbach's Alpha = 0.81.

3.3.2. Interviews

A structured interview style was created for this study's randomly chosen teacher respondents based on the idea that it facilitates the collection of comparable data and is simple to administer.

3.3.3. Document analysis

Six sample junior secondary school provided records of continues assessment test average score for the first Term classroom final exam of the student participants in their performance. The 2025 academic year's average score was given out of 100.

3.4. Validity and reliability of the instrument

Pilot study was conducted to evaluate the validity and reliability of the instruments. Thirty (13 male and 17 female) junior students were randomly chosen from two junior secondary schools that were not participating in the main study to test and enhance the instruments in order to assess the instrument's dependability. Cronbach alpha was calculated to assess the items' internal consistency. Using the Cronbach Alpha Reliability Coefficient, the reliability coefficient of the Anxiety Inventory was calculated. It turned out that this number was α =.81.

3.5. Ethical considerations

The University Ethics and Review Committee, accredited by the National Commission for Science, Technology, and Innovation (NACOSTI), provided the researcher with an ethical review certificate prior to the study, and the researcher obtained the respondents' voluntary consent. Throughout the study, honesty and transparency were maintained, particularly in data collection, participant selection, interpretation, and report writing from various reviews.

3.6. Data collection procedure

Participants who agreed to participate were briefed about the study, and researchers worked with various subject teachers to set aside 15 to 20 minutes of class time for students to fill out the survey. Additionally, some students were met one-on-one or in groups in the school's cafeteria and lobby to collect data.

3.7. Data Analysis

Data analysis techniques used for this study included both quantitative and qualitative approaches. The statistical software program SPSS version 22 was used to code, enter, clean, and analyze the data (Creswell, 2014). Frequencies and percentages were used to display the data using descriptive statistics. Means and standard deviations were used to display the Pearson Product Moment Correlation. The study factors were taken into consideration when doing the appropriate statistical analysis. A significance level of $p < 0.05$ was selected. The outcomes of the interviews were then qualitatively examined and evaluated.

4. Results

The purpose of the current study was to investigate the relationship between junior secondary school students' academic performance and test anxiety.

4.1. Demographic Characteristics of Participants

4.1.1. Gender Distribution of participants

Data analysis showed that 388 students, 45 teachers, and 6 junior secondary schools took part in the current study.

Table 1 Gender characteristics of the study participants

School	Students' participation				Teacher participation					
	Male	%	Female	%	Total	Male	%	Female	%	Total
Bogeka	37	43	49	57	86	3	42.9	4	57.1	7
Eronge	16	43.2	21	56.8	37	1	25	3	75	4
Bokeabu	24	42.1	33	57.9	57	2	28.6	5	71.4	7
Engoto	41	45.6	49	54.4	90	4	36.4	7	63.6	11
Bototo	35	47.3	39	52.7	74	2	22.2	7	77.8	9
Ebate	18	40.9	26	59.1	44	5	71.4	2	28.6	7
Total	171	43.7	217	56.3	388	17	37.8	28	62.2	45

The gender distribution of the respondents was being determined in order to certify the representativeness of the study and gauge the degree of gender imbalance. Following a tabulation of the participants' gender, it was discovered that 217 (56.3%) of the students were female and 171 (43.7%) were male. This demonstrated that compared to male students, more female students took part in the study. This suggests that students in junior secondary schools are more likely to be female than male. A tabulation of the teachers' genders revealed that there were 17 men (37.8%) and 28 women (62.2%), which means in junior secondary school, female teachers are likely to be more than male teachers as presented in *table 1* and *figure 1.*

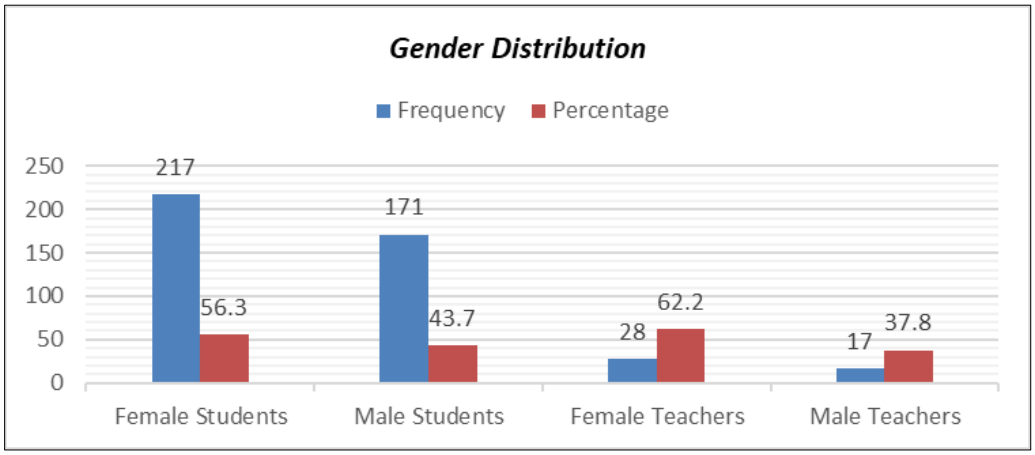

Figure 1 Gender distribution of respondents

4.1.2. Age Distribution of Students' Participants

The study also looked into the age ranges of the student responses. The results showed that the majority of students who responded were between the ages of 11 and 12; 128 (33%), followed by 15-16 years; 111 (28.6%), and 13-14 years; 86 (22.2%). The fewest respondents, 63 (16.2%) were over 16 years old *(Figure 2).*

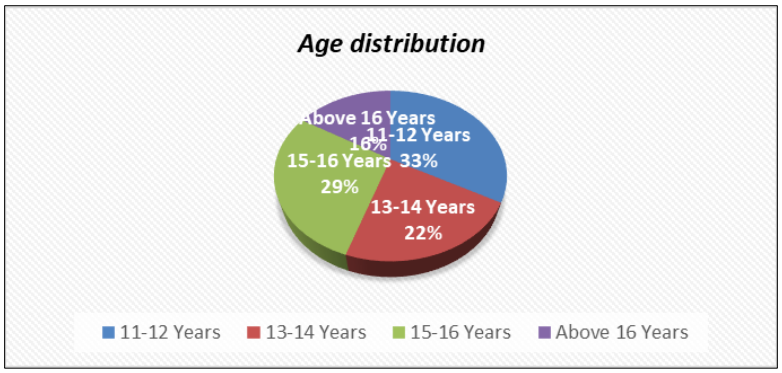

Figure 2 Age distribution of respondents

4.1.3. Distribution of Years of Teacher Respondents' Experience

The study results showed that majority 39 (86.7%) of the teacher respondents had experience in teaching for less than 5 years, while 5 (11.1%) had experience in teaching between 6-10 years and 1 (2.2%) had taught more than 10 years. Which means that junior secondary teachers have been employed recently and those who have taught more than 5 years come from primary section to assist the junior secondary teachers *(figure 3).*

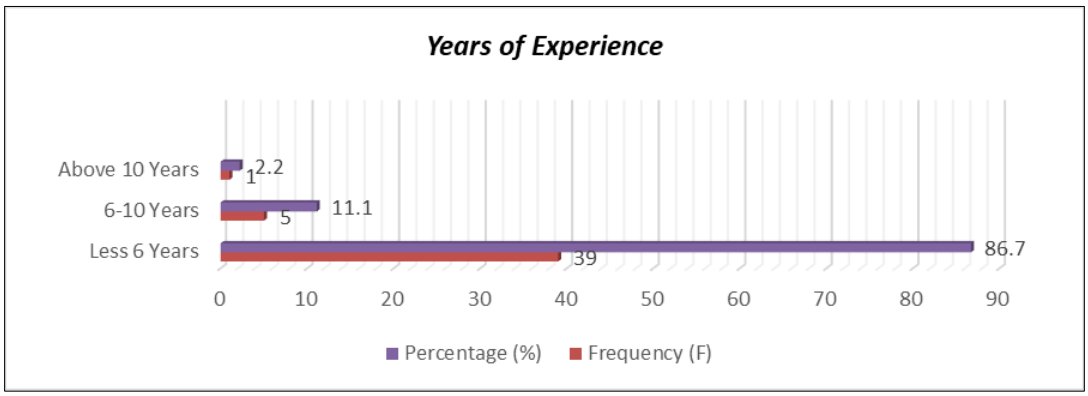

Figure 3 Years of experience of teachers' respondents

4.2. Level of Test Anxiety

The Test Anxiety Inventory (TAI), created by Spielberger in 1980, was used to examine the distribution of frequencies and percentages of test anxiety among the students who responded. The Test Anxiety Inventory responses of the student participants are shown in table 2. It evident that a significant portion of students exhibit symptoms of test anxiety, as seen by their degree of concern before, during, and following exams. For instance, as stated in item 1, the majority of 140 student respondents (36.1%) said they seldom feel ease and confident when taking exams, whereas only 53 (13.7%) said they nearly always feel ease and confident during test-taking. In item 2, 126 (32.5%) said they never feel anxious but 97 (25%) always feel anxious during test. As indicated in item 12 of *Table 2*, 107 (27.6%) of the student respondents said they get bored during exams, and 80 (20.6%) said they always get bored by the exams. In addition to this, item 16 reveals that the majority of respondents 126 (32.5%) always worry a lot before a significant exam. As shown in item 3, majority 124 (32%) of the respondents said that sometimes thought about their exam results which interfered with their ability to complete the work while only 57 (14.7%) often think about exam result. Similarly, as shown in item 8, 75 (19.6%) of the respondents stated that they feel quite perplexed while doing exams and item 7, 77 (19.8%) reported that their focus is disrupted by thought of failing during exams. In item 5, 100 (25.8%) students always exams make them to questioned themselves if they will graduate from school since big number 115 (29.6%) sometimes become really anxious during test, while 104 (26.8%) and 76 (19.6%) of students become more tense during test *(table 2).*

Moreover, item 6 showed that 124 (32%) of the respondents rejected the idea that the more they study for the exam, the more puzzled they become. This opinion was corroborated by the fact that, as shown in item 9, 107 (27.6%) of the respondents still had extreme test anxiety despite being well-prepared before exams. In addition, as shown in item 20, 103 (26.5%) of the respondents become so anxious during test and they forget what they have studied. Those who

always tried to quit about worrying after test but they failed to quit are 98 (25.3%) while 96 (24.7%) never tried to quit on worrying, yet this makes them to freeze during significant test 111 (29.4%) sometimes, 63 (16.1%) often and 96 (24.7%) always.

Therefore, the results above demonstrate that test anxiety was high, which typically contributes to poor academic achievement *(table 2).*

Table 2 The frequency and percentage of the participants, (N=388)

Items	Never	Sometimes	Often	Always
Feel at ease and confident whilst taking the exam 53(13.7)		140 (36.1)	127 (32.7)	68 (17.6)
Feel anxious and agitated during the exam	126 (32.5)	76 (19.6)	89 (23)	97 (25)
Think about my exam result, it gets in the way of my work (30.4)	89 (23)	124 (32)	57 (14.7)	118
Freeze during an essential test or exam (24.7)	118 (30.4)	111 (29.2)	63 (16.1)	96
Exams make me question if I'll graduate from school (25.8)	99 (25.5)	114 (29.4)	75 (19.3)	100 (25.8)
The more I study for an exam, the more puzzled I become (16.3)	124 (32)	87 (22.4)	113 (29.1)	63 (16.3)
My focus on the test is disrupted by thoughts of failing (19.8)	117 (30.2)	75 (19.3)	119 (30.7)	77 (19.8)
Felt quite perplexed while taking a significant exam (19.6)	99 (25.5)	127 (32.7)	87 (22.4)	75 (19.6)
Despite being prepared, I still get anxious before exam (27.6)	115 (29.6)	101 (26)	65 (16.8)	107 (27.6)
Start feeling really anxious before getting exam back (27.6)	107 (27.6)	128 (33)	71 (18.3)	82 (21.1)
I felt really tense during the exam	112 (28.9)	96 (24.7)	104 (26.8)	76 (19.6)
Wish I wasn't so bothered by exams	107 (27.6)	98 (25.3)	103 (26.5)	80 (20.6)
Feel so nervous before big exam, my stomach gets upset	133 (34.3)	131 (33.8)	57 (14.7)	67 (17.3)
I appear to defeat when I'm working on significant exams (28.6)	95 (24.5)	119 (30.7)	63 (16.2)	111(28.6)
When I had to take an essential test, I became really anxious (23.7)	89 (23)	115 (29.6)	92 (23.7)	92 (23.7)
Before taking a significant exam, I worry a lot (32.5)	117 (30.2)	79 (20.4)	66 (17)	126 (32.5)
Found considering consequences of failing test (16.5)	113 (29.1)	87 (22.4)	124 (32)	64 (16.5)
When am having my exams, I could feel my heart racing	77(19.8)	95 (24.5)	121 (31.2)	95 (24.5)
I try to quit worrying about, after finishing my exam, but I can't (25.3)	96 (24.7)	107 (27.6)	87 (22.4)	98 (25.3)
Feel so anxious during exams that I forget things have studied (26.5)	103 (26.5)	83 (21.4)	99 (25.5)	103 (26.5)

4.3. The Relationship Between Academic Achievement and Test Anxiety

A Pearson Product Moment Correlation Coefficient was calculated, using test anxiety scores as the independent variable and academic achievement across various subjects' performance as the dependent variable, in order to examine whether there was any statistically significant relationship between students' test anxiety and academic achievement. According to the study's findings, there was a statistically significant negative correlation ($r = -.033$, $n = 388$, $p > .05$) between academic achievement and test anxiety, with students who experienced high levels of test anxiety performing

poorly on exams and vice versa. Thus, it was determined that students' academic achievement and test anxiety had a statistically significant negative relationship (table 3).

Table 3 Pearson product moment correlation coefficient test anxiety and academic achievement (N = 388)

	Academic Achievement	**Test Anxiety**
Pearson correlation coefficient of academic achievement	1	-.033
Sig. (2-tailed)		.605
N	388	388
Pearson correlation test anxiety	-.033	1
Sig. (2-tailed)	.605	
N	388	388

*- Correlation is significant at the 0.05 level (2-tailed)

4.4. Test Anxiety Score of Female and Male Students

Table 4 displays the average test anxiety score for both female and male respondents for the chosen subjects' performance. Test anxiety is different for men (M = 2.54) and women (M = 2.76). Item 1, to feel ease and confidence, male scored mean of 2.69 while female scored 2.51. According to the results, item 3, It suggests that most students' performance on test is influenced by their thoughts grade they will score in a particular subject (M=2.51 and F=2.48). Female students' highest mean score on test anxiety was found on item 10 (mean = 2.92), indicating that most of them were feeling really anxious before getting the exam paper back. Female students scored higher than male in 15 items compared to male students who scored higher than female in 5 items. With a mean average score of 2.54, male students' mean scores varied from 2.19 to 2.89. While female students' average score on the test anxiety scale was 2.76, which varied from 2.48 to 2.92. These findings suggest that compared to male junior secondary school students, female students experienced higher levels of test anxiety than male students (table 4).

Table 4 Preference means for the test anxiety of the participants (N = 388)

	M	F
Feel at ease and confident whilst taking the exam	2.69	2.51
Feel anxious and agitated during the exam	2.77	2.67
Think about my exam result, it gets in the way of my work	2.51	2.48
Freeze during an essential test or exam	2.89	2.78
Exams make me question if I'll graduate from school	2.73	2.81
The more I study for an exam, the more puzzled I become	2.47	2.78
My focus on the test is disrupted by thoughts of failing	2.41	2.73
Felt quite perplexed while taking a significant exam	2.52	2.86
Despite being prepared, I still get anxious before exam	2.33	2.85
Start feeling really anxious before getting exam paper back	2.61	2.92
I felt really tense during the exam	2.19	2.73
Wish I wasn't so bothered by exams	2.37	2.89
Feel so nervous before big exam, my stomach gets upset	2.59	2.74
I appear to lose when I'm working on significant exams	2.25	2.81
When I had to take an essential test, I became really anxious	2.31	2.91

Before taking a significant exam, I worry a lot	2.52	2.73
Found considering consequences of failing test	2.81	2.84
When am having my exams, I could feel my heart racing	2.74	2.69
I try to quit worrying about, after finishing my exam, but I can't	2.41	2.79
Feel so anxious during exams that I forget things have studied	2.59	2.77
Mean Average Score	2.54	2.76

4.5. Test Anxiety Scores Between the Six Junior Secondary School Students

The tets anxiety scores of the six junior secondary school respondents were calculated using the mean for the chosen subjects, and the results were presented in *table 5*. The Bogeka junior secondary school students' scores ranged from 2.31 to 2.89, with a mean score of 2.66. The Eronge junior secondary school students' scores ranged from 2.34 to 2.93, with a mean score of 2.66. The Bokeabu junior secondary school students' scores ranged from 2.31 to 2.90, with a mean score of 2.66. The Engoto junior secondary school students' score ranged from 2.43 to 2.92, with mean score of 2.67. The Bototo junior secondary school students' score ranged from 2.18 to 2.85, with mean score of 2.63. And the Ebate junior secondary school students' score ranged from 2.33 to 2.86, with mean score of 2.65. The findings suggest that the majority of the Engoto junior secondary school students were more of test anxious than the other five junior secondary school students (Bogeka, Eronge, Bokeabu, Bototo and Ebate).

Bogeka, Eronge and Bokeabu junior secondar schools had similar mean score of 2.66, which means they had equal level of test anxiety among students. Bototo junior secondary school reported low level of test anxiety amongst the six junior schools. From the study, all schools participated had mean score above 2.6 indicating high level of test anxiety among students.

Table 5 Preference means for test anxiety of each school (N = 388)

Items	**Bogeka**	**Eronge**	**Bokeabu**	**Engoto**	**Bototo**	**Ebate**
Feel at ease and confident whilst taking the exam	2.72	2.74	2.85	2.87	2.79	2.85
Feel anxious and agitated during the exam	2.81	2.93	2.88	2.92	2.76	2.83
Think about my exam result, it gets in the way of my work	2.45	2.78	2.88	2.76	2.85	2.86
Freeze during an essential test or exam	2.78	2.70	2.84	2.81	2.75	2.84
Exams make me question if I'll graduate from school	2.76	2.86	2.56	2.76	2.74	2.84
The more I study for an exam, the more puzzled I become	2.84	2.72	2.63	2.74	2.61	2.76
My focus on the test is disrupted by thoughts of failing	2.55	2.49	2.51	2.67	2.74	2.66
Felt quite perplexed while taking a significant exam	2.54	2.34	2.46	2.77	2.43	2.56
Despite being prepared, I still get anxious before exam	2.50	2.57	2.78	2.55	2.84	2.47
Start feeling really anxious before getting exam paper back	2.53	2.58	2.59	2.63	2.51	2.33
I felt really tense during the exam	2.66	2.72	2.90	2.75	2.63	2.77
Wish I wasn't so bothered by exams	2.80	2.79	2.83	2.78	2.56	2.61
Feel so nervous before big exam, my stomach gets upset	2.89	2.53	2.31	2.56	2.47	2.72
I appear to lose when I'm working on significant exams	2.31	2.58	2.74	2.59	2.64	2.44
When I had to take an essential test, I became really anxious	2.74	2.65	2.64	2.56	2.18	2.76

Before taking a significant exam, I worry a lot	2.87	2.54	2.41	2.43	2.62	2.54
Found considering consequences of failing test	2.72	2.80	2.44	2.51	2.34	2.35
When am having my exams, I could feel my heart racing	2.56	2.41	2.52	2.59	2.76	2.51
I try to quit worrying about, after finishing my exam	2.65	2.58	2.65	2.87	2.64	2.55
Feel so anxious during exams that I forget things have studied	2.56	2.85	2.81	2.61	2.76	2.72
Mean Average Score	2.66	2.66	2.66	2.67	2.63	2.65

4.6. The Response of the Interview

Additional test of the qualitative information revealed that students felt anxious prior to, during, and following the test. One of the behavioral signs of test anxiety that kids experience as a result of their motor restlessness is nervousness. According to the teachers surveyed, students' excessive anxiety caused them to forget facts, which led to their exam failure. Regarding the first question, "In your opinion what triggers anxiety during test/exam?", the third teacher was requested to comment. He commented that, "When students don't manage their time well, they fail to finish assignments, homework, and class work, and they aren't ready for an test at the right moment, which causes anxiety and a lack of confidence." Teacher3. The statement from teacher 3 shows that students experience test anxiety due to a lack of exam preparation, low self-esteem, fear of failing, and test time constraints. In the end, these cause the students to feel uneasy. Therefore, exam's time limit causes test anxiety in some students since they are unsure if they will finish it in the allocated time.

Teacher 5 was asked to respond to the fourth question, which asked, "What do you propose and recommend in order to alleviate this exam taking anxiety challenge of the students?" He said that "The most significant role should be played by the teachers and school administrators. Administrators at the school should modify the exam room's layout, including the seating arrangements. Additionally, they must to provide psychological counseling to students who are test-averse or exam-anxious. Prior to test administration, teachers should encourage students and give them further information about the test's topic and question count. The instructor should also allow ample time for the students to finish the test". Teacher 5.

In reference to the second question, "What are the feelings of exam-taking students, based on your observation and experience?" teacher number six was requested to comment. “The majority of students were extremely anxious and constantly felt that they would fail the exam, they sometimes felt that they had not studied enough, they sometimes felt very bad and worried about their score, they were under a lot of stress about the test and even had trouble reading, which usually caused them to forget to answer even basic questions correctly.” Teacher 6. The statement from teacher 6 is evidence that the students encounter high degree of anxiety regarding the test. This makes them feel highly worried as a result which causes them to forget even easy facts in the exam causing them too anxious.

Teacher 7 was asked to respond to the third question, which asked, "In your opinion, when does the degree of anxiety increased? before test, during test, or after test?" Their answers indicated that students had test anxiety before, during, and after exam, but that the majority of students had test anxiety before taking an exam.

According to the above response, teachers and administrators at schools are the most essential in helping students reduce their exam-taking anxiety. They should make adjustments to the physical state of the exam room and offer psychological counseling to students who are anxious about exams. They should also give students enough time to finish the exam and provide information about the subject matter and number of questions before administering the exams.

5. Discussion

The main objective of this research was to investigate the relationship between secondary school students' academic performance and test anxiety. As a result, the following is a summary of the data analysis findings in relation to the focus areas of the study.

5.1. The Level of Test Anxiety of the Students

The majority of students reported higher levels of test anxiety when doing exams, as indicated by the data in *Table 2*. This suggests that the students' levels of test anxiety differ statistically significantly from one another. Although exam

anxiety varies from student to student, most students exhibit high levels of anxiety overall. Most of the participants in this study reported having severe test anxiety. Students were anxious before, during, and after testing, according to additional analysis of the qualitative data collected. According to the teacher who was interviewed, the students' excessive anxiety caused them to forget things, which led to their failure on the test. Low academic accomplishment is the result of excessive test anxiety.

The current study's findings thus corroborate the investigation into the connection between students' academic performance and anxiety levels in particular secondary schools (Syokwaa et al., 2014). According to other researchers' studies (Oluoch et al., 2018; Ndirangu et al., 2008; Barongo and Owiyo, 2015; Duraku, 2016), these findings are very similar. Test anxiety was either moderate or high among secondary school pupils. The results, on the other hand, contradict those of studies (DordiNejad et al., 2011; Yousefi et al., 2010) that found a little correlation between academic achievement and anxiety levels. Since test anxiety is a trigger for students' uphill struggles, a moderate amount of anxiety is necessary for improved academic accomplishment; a lack of anxiety eventually results in low academic achievement (Oluoch et al., 2018). The average score of secondary school pupils was shown to be significantly correlated with test anxiety, according to the current study.

5.2. The relationship between test anxiety and academic achievement

This section attempted to address the research question: "Does academic achievement among junior secondary school students have a significant relationship with test anxiety?" According to *Table 3's* Pearson Product Moment link Coefficient, there is a substantial but weakly negative link between students' test anxiety and academic achievement ($r = -0.133$, $p < .05$). Test anxiety and academic accomplishment were related conceptions and are not independent of one another, as indicated by the negative association between students' average score and test anxiety. This result showed that students' average scores decreased as test anxiety levels rose, and that students' average scores increased when test anxiety levels fell. Research findings by Ndirangu et al. (2008) and Yousefi et al. (2010) support this conclusion.

5.3. Test Anxiety Scores of Male and Female Students

Given that *Table 4* indicates that female students score higher on test anxiety than male students, the statistical description's findings indicate a statistically significant difference between the two groups of students. According to this, test anxiety and academic achievement among male and female students in the six junior secondary schools varied significantly (Newton, 2025). The current findings are supported by a cross-sectional study on exam anxiety among medical students at a western Indian tertiary care teaching hospital, which found a substantial difference between male and female students (Oluoch et al., 2018). Therefore, compared to male medical students, female medical students had considerably higher EAI-total scores. Other investigations, including those by Legese (2014), Syokwaa et al. (2014), and Ndirangu et al. (2008), also corroborate the current conclusion. Conversely, the results go counter to Getachew's (2015) study, which found no discernible difference between male and female students' test anxiety.

5.4. Test Anxiety Scores of the Six Junior Secondary School Students

According to the results in Table 5, students at Engoto junior Secondary School experience higher levels of test anxiety than students other junior Secondary Schools. This suggests that the six junior secondary schools' test anxiety and academic achievement varied statistically significantly. According to earlier research, students who experience more test anxiety score worse on exams (Doden et al., 2018; Syokwaa et al., 2014; Shishigu, 2018).

6. Conclusion

The study's findings demonstrated that there is no correlation between secondary school students' average scores and test anxiety. Furthermore, very few subjects experienced extreme test anxiety. Although the majority of participants reported feeling mildly anxious during exams, this shows that test anxiety does not have a direct impact on students' academic performance; rather, it serves as a motivating factor. Since it was clear that few children had severe test anxiety, it is crucial to assist secondary school students in managing stress and reducing test anxiety effectively through group work involving students, parents, teachers, and administrators. The findings imply that in order to do well academically, students should maintain their best physical and mental health throughout exams.

According to the interviewees, test anxiety is caused by a lack of preparation, low self-esteem, fear of failing, and prior test-taking experiences. The third cause of test anxiety is the way the test is made to assess challenging material and the vast amount of material that needs to be covered. Test anxiety is brought on by time constraints and tension during test administration. The second is that students become more nervous when taking exams in topics like chemistry, physics, and mathematics because they are afraid of the questions. Teachers and school administrators should be the primary

players in reducing test anxiety, as the interviewees stated that the majority of pupils had test anxiety prior to taking an exam. In order to reduce their anxiety, students should prepare thoroughly. It is also advised that students who are test-anxious receive psychiatric treatment.

According to the study's findings, a sizable portion of the students who took part in it suffered from moderate to severe test anxiety. Group work involving students, parents, teachers, and other stakeholders is essential for helping secondary school students effectively manage stress and reduce test anxiety. Effective time and anxiety management techniques should also be taught to secondary school pupils in order to improve their academic performance. More study is necessary to address the physiological and psychological variables that contribute to significant test anxiety, particularly in secondary school pupils, as current research does not fully understand these factors.

Recommendations

The following suggestions are made in light of the study's findings

- To gain a deeper understanding of the causes causing test anxiety in secondary school students, replicate the current study with a bigger sample size utilizing a mixed quantitative and qualitative research strategy.
- Students should be encouraged to study for exams ahead of time in order to build confidence, which will help to avoid or lessen test anxiety. Guidance through academic advising and counseling programs should be implemented in secondary school,
- particularly prior to exams, since this could assist kids accomplish better academically by lowering test anxiety.
- In order to reduce test anxiety in students getting ready for various tests, it is advised that families provide financial and social assistance as well as encourage involvement in social activities.
- Help students manage and cope with test anxiety during exams and help them realize that a certain amount of anxiety is necessary as a pre-test motivator.
- Assignments, exams, and ongoing evaluations should all be carefully organized to prevent pupils from experiencing excessive stress, which is likely to cause anxiety.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that there is no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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