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Full Length Research Paper

The relationship between test anxiety and academic achievement of grade ten students of Shirka Woreda, Oromia Regional State, Ethiopia

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ABSTRACT

Anxiety is a kind of self-preoccupation which is manifested as self-minimization and results in negative cognitive evaluation, lack of concentration, unfavorable psychological reactions and academic failure. The aim of this study was to examine the relationships between test anxiety and academic achievement among secondary school students. A descriptive correlation, cross sectional design was utilized. A stratified sample of 300 grade ten students and 8 teachers were drawn from three secondary schools. Data were collected by using the Test Anxiety Inventory developed by Spielberger (1980), it is a four point Likert scale with 20 items to find out how often participants experience the feeling described in each statement. The students' first semester 2019 academic year average score of 6 subjects were used to measure their academic achievement. Pearson correlation, percentage, the mean and standard deviation were run. It was found that a significant negative relationship exists between test anxiety and students' achievement scores. Results showed that a cognitive factor contributes more in test anxiety than affective factors. The results of the study were suggested that the female reported significantly higher test anxiety level compared to male students. Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety. Considering the psychological factors leading to severe test anxiety among secondary school students is highly recommended. Counseling services should be available to nursing students when needed.

Keywords: Academic achievement, Oromia Reginal State, secondary school, student, test anxiety.

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INTRODUCTION

Education is a fundamental human right to all people irrespective of their sex, race or economic status as it is the key to sustainable social, economic and political development (McMillan and Schumacher, 2010). The social and economic development of the country is directly linked with students' academic achievement. The students' academic achievement plays an important role in producing the best quality graduates who will become great leader and manpower for the country thus responsible for the country's economic and social development (Newton, 2015). In the process of teaching and learning of a subject, it is a need to measure the level of the success of the students' learning achievement, one of the basic means of measuring students' academic achievement is testing (Dinga et al., 2018). Understanding the status and determinants of academic achievement of students is essential for successful and effective intervention to bring quality education (Muhdin, 2016).

Academic achievement, which is measured by the examination results, is one of the major mechanisms to measure the academic performance of students.

Academic achievement in every society reflects the educational system's success in targeting and attention to individual needs (Aloka et al., 2018). Research shows that factors and personal factors, social, cultural, economic, political, moral and psychological many academic growths can be effective (Duraku, 2016; Oludipe, 2009). Dinga et al. (2018) argued that schools are established with the aim of imparting knowledge and skills to those who go through them and behind all this is the idea of enhancing good academic performance. As a result, understanding the status and determinants of academic performance of students is essential for successful and effective intervention to bring quality education (Muhdin, 2016). Students' academic gain and learning performance is affected by numerous factors including gender, teaching faculty, students previous education background, student's behavior of taking drug, family's social, educational and economic status (Moges, 2017).

Tests and examinations at all stages of education, especially at secondary education level have been considered an important and powerful tool for decision making in our competitive society, with people of all ages being evaluated with respect to their achievement, skills and abilities (Habibullah and Ashraf, 2013). Student's success is judged by test performance while the best criterion of performance is the sum of the student's academic achievement in all the subjects taken. On the other hand, poor academic achievement is a performance that judged by the examinee and some other significant as falling below an expected standard (Mekonnen, 2014).

Test anxiety is an undesirable reaction toward evaluation. It is the most important problem that is faced by the students in their education (Dinga et al., 2018). Test anxiety is a psychological condition in which students experience extreme distress and anxiety in test situations. A little anxiety during exams is required that will help students to get motivated and learn. Mounting up so much of anxiety will not help the student to perform rather it will influence the academic performance negatively (Oluoch et al., 2018). The psychological symptoms that build up in students before a test includes restlessness, unusual body movements, difficulty in concentrating, insomnia, fatigue, muscle contraction, abdominal pain, and tremors (Habibullah and Ashraf, 2013).

A study conducted by Nicholson (2009) to explore the effects of test anxiety on student achievement of grade 11 students, revealed that anxiety and achievement are related to each other. Khalid and Hasan (2009) conducted a study on a purposively selected sample of 187 undergraduate students to explore the relationship between test anxiety and academic achievement and found that students with academic achievement have low test anxiety scores and vice versa. Oludipe (2009) conducted a study to explore how test anxiety affects students' performance levels in the sciences, especially in physics, and concluded that "low test anxious students performed better than high test-anxious students on both numerical and non-numerical tasks in Physics". Generally, most of the study's results mainly indicate a negative relationship between test anxiety and academic achievement (Dodeen et al., 2014; Syokwaa et al., 2014; Shishigu, 2018; Oluoch et al., 2018). These research findings imply that increase in test anxiety lowers academic achievement of students. However, the findings in studies carried out by Ndirangu et al. (2008) and Kavakci et al., (2014) found no relationship between test anxiety and academic achievement of students. Several researchers explored gender differences with respect to test anxiety and found that females have higher levels of overall test anxiety than males (Syokwaa et al., 2014). It is quite evident from the arguments given above and results of the studies reported that text anxiety affects achievement along with other variables such as motivation to learn, ability to benefit from formal instruction and gender. The different researchers (Syokwaa et al., 2014; Oluoch et al., 2018) have suggested various means to minimize test anxiety with managing external factors like environment of examination hall; behavior of examiners etc. internal factors like organization of questions in a test, sufficient description of the context, clarity in instruction for students etc. Despite these measures to minimize test anxiety it is generally agreed that it has become most upsetting and a disruptive factor for students. There are number of researches reporting text anxiety as one of the major cause for students' underachievement and low performances at different levels of their educational life (Oluoch et al., 2018).

Statement of the problem

Secondary school students face many challenges which prevent them from academic achievement; one of these is test anxiety (Yousefi et al., 2010; Kavakci et al., 2014). Due to these challenges, they fail to attain an acceptable level of academic achievement. This manifestation is actually the result of test anxiety. Test anxiety is psychological factor that hinder students' academic achievement. Though this factor plays a major role in the learning process, however, the link between test anxiety and academic achievement is not well researched in the context of secondary school students in Ethiopia (Legese, 2014; Getachew, 2015).

The study conducted by Legese (2014) was focus on exploring the extent to which test anxiety influences academic achievement of University students. The study reported that test anxiety of university students was inversely correlated with their academic performance.

There was also significant difference existed between the mean score of the male and female students. In this study the female students reported higher level of test anxiety mean as compared to the male students. Getachew (2015) also conducted a study on anxiety, attitude towards mathematics achievement of tenth grade students at government and private schools in Kolfe Keranio sub-city of Addis Ababa. This study indicated that mathematics achievement was highly correlated with students' anxiety. There was also statistically significant mean difference between private and government school students in mathematics subject and academic achievement. The result was also show that there was no significant sex difference between both private and government schools.

Most of the studies that assessed test anxiety and stress among students were carried out in western population. However, there are limited researches on test anxiety among secondary school students in the Ethiopian population. This area of research has a greater concern to be intensely studied to identify the locus of the impact of test anxiety on academic achievement among secondary school students in Oromia Regional State, Ethiopia particularly in Shirka Woreda, Arsi Zone. To this end, this study attempt to addresses the following basic research questions:

1. What is the level of test anxiety in Shirka Woreda secondary schools of grade ten students?
2. Is there a relationship between test anxiety and academic achievement among secondary schools of grade ten students?
3. Is there any significant difference between test anxiety of male and female in Shirka Woreda secondary schools of grade ten students?

Significance of the study

The findings of the study could have the following significance:

- Help students those with low levels of academic achievement to facilitate their academic performance.
- Help teachers in developing effective practices for teaching and learning in order to improve academic achievement of students.
- Help parents as a guide to understand their children's and to provide better support for them at home.
- Help educators and test writers who diagnose reasons for students' successes and failures, and develop adequate and appropriate interventions for their students.
- Help Shirka Woreda educational office in providing with valid empirical information.

Furthermore, the results of the study were provided school administrators with valid empirical evidence to resolve low academic performance

Delimitation of the study

This study was conducted on the relationship between test anxiety and academic achievement of secondary schools of grade ten students in Shirka Woreda, Oromia Regional State, Ethiopia. The target population of this study was 1336 (male 762, female 574) students and the sample size were 308 students (male 176, female 132). Gado-Guna, Shirka, and Tereta secondary schools were chosen due to easily accessible and manageable to gather the data, as budget and time constraints existed.

Limitations of the study

In sampling only one grade level from the secondary school students may inhibit generalizing the results beyond the setting. In the second place, the study focused on the relationship between test anxiety and academic achievement of the students. There are a number of other intervening variables that could affect students' academic achievement.

MATERIALS AND METHODS

Research design

The study was employed mixed-method approach, both quantitative and qualitative (Creswell, 2014). A descriptive, cross section, correlational design was used to conduct this study with the aim to assess the level of test anxiety and to identify the relationship between test anxiety and academic achievement based on average score among secondary school of grade ten students of Shirka Woreda, Oromia Regional State, Ethiopia.

Both primary and secondary sources of data were employed for this study. The primary sources of data were grade ten students and teachers of Shirka Woreda secondary schools in Arsi Zone of Oromia regional State. Secondary sources of data were collected from documents mainly focused on records of students' average score of different subjects.

Sample size and sampling techniques

The population of this study involved grade ten students and teachers of Shirka woreda secondary schools of Arsi Zone, Oromia Reginal State. The total number of grade 10 students in sample secondary schools (Shirka, Gado-Guna and Tereta) was 1336 (male 762, female 574).

To get the determined sample size for the present study, the method of determining sample size that was suggested by Yamane (1967:886 as cited in Israel, 1992) was used. The formula for this sampling method was as follows: $n = \frac{N}{1+N(e)^2}$

Where: n is the sample size, N is the population size and e is the level of precision. A 95% confidence level and P= .5 are assumed in the formula. Then, from the data: N= 1336, e=. 05,
Therefore:

$$n = \frac{1336}{1+1336\,(.05)^2} = \frac{1336}{1+1336(.0025)} = \frac{\mathbf{1336}}{\mathbf{1+3.34}} = \frac{1336}{4.34} = 308$$

According to this technique from 1336 students, (male= 762, female= 574), 308 students (male 176, female 132) were taken as a sample of the study. The participants were recruited from three Shirka secondary school 185 (male 103, femaie 82), from Gado-Guna 52 (male 33, female 19) and from Tereta 71 (male 40, female 31), based on the proportion of males and females in each school. The list of each secondary school students were made available through the principal and his vice. A total of 176 male and 132 female students were selected based on a stratified and systematic random sampling technique by choosing the odd numbered entries on the list among the total number of students.

Data gathering instruments

Data were collected using a two-part questionnaire. First part was concerned with the participant's demographic background such as age, average score and academic level. Second part of the questionnaire included the Test Anxiety Inventory (Spielberger, 1980) which was used as a measure of the primary outcome variable of the current study, test anxiety among secondary school students. The TAI consists of 20 items and the participants indicate on a four point Likert-type scale how often they experience the feeling described in each item. The four response choices are: *(1) almost never, (2) sometimes, (3) often, and (4) almost always*. There are both positively and negatively worded items in the scale. Eight of the items measure the *worry* component and 8 items measure the *emotionality* while the remaining four items contribute to the TAI-T score. Reliability analysis for the test anxiety inventory was calculated in the current study and revealed high reliability as indicated by Cronbach's Alpha = 0.81.

The Test Anxiety Inventory (TAI) were initially prepared in English and then translated to local language Afan Oromo and Amharic for the purpose of clarity and to make it easily understood by the sample students. The Test Anxiety Inventory (TAI) were presented to two MA holder Shirka preparatory English language teachers for comment. Based on the comment of the teachers' ambiguous statements were modified. The modified and improved Test Anxiety Inventory was distributed among the respondents with the necessary explanations on how to complete it. The participants were ensured about the confidentiality and anonymity of the collected data.

Interview

For this study, a structured type of interview was prepared for randomly selected teacher respondents on the assumption that it helps to get similar information and easy to conduct.

Document analysis

The student participants' first semester classroom final examination total average score of 6 subjects (*English, Mathematics, Physics, Chemistry, Geography and History*) were obtained from three sample secondary schools record offices. These subjects were selected due to they were representatives of the language, natural science and social science. The average score was assigned out of 100 in 2019 academic year.

Validity and reliability of the instrument

Test Anxiety Inventory designed by Spielbeger (1980) was employed to measure individual differences in test anxiety. Based on the fact that Legese (2014) administered the test anxiety inventory at Addis Ababa University students, while the present study involved secondary school students, there was need to revalidate the instrument. For face validity, the instrument was shown to 3 professionals in the field of Educational Psychology. Minor comment was given, for example the words "*course*" and "*grade*" was changed to "*subject*" and "*score*" respectively to reflect students' level of anxiety in the study. To determine the reliability of the instrument, pilot study was carried out in order to test and make improvement on the instruments using 40 (male 25, female 15) grade ten students randomly selected from Sole-Digelu secondary school. Cronbach alpha were computed to see the internal consistency of items. The reliability coefficient of Test Anxiety Inventory was determined by calculating Cronbach Alpha Reliability Coefficient. This value was found to be α =.81.

Ethical considerations

The researchers strived to protect respondents from

possible harm that might arise as a consequence of their participation in research. An approval to conduct the study was obtained from the ethical committee of the research unit at College of Education and Behavioral Science, Arsi University. Voluntary participation was assured. Agreement to complete the questionnaire worked as an informed consent. Subjects were assured about the confidentiality and anonymity of the collected data and that it will be only used by the researchers for the purpose of the current study.

Data collection procedure

Participants who gave consent to participate in the study were given a brief explanation about the study. Researchers arranged with different subject teachers to take 15-20 minutes of the class time for the students to complete the survey questionnaire. In addition, some students were met individually or in groups in the lobby and cafeteria of the school for the purpose of data collection.

Data analysis

For this study, both quantitative and qualitative methods of data analysis were employed. Data was coded, entered, cleaned and analyzed using SPSS statistical software package version 22 (Creswell, 2014). Data was presented using descriptive statistics in the form of frequencies and percentages. Pearson Product Moment Correlation was presented in the form of means and standard deviations. Appropriate statistical analysis was carried out according to the study variables. The significance level was chosen as ($p < 0.05$). Finally interview results were qualitatively analyzed and interpreted.

RESULTS AND DISCUSSION

This chapter deals with the analysis, presentation and interpretation of the data gathered from the respondents through questionnaires, interviews and document analysis. Thus, the quantitative as well as qualitative analysis of data was incorporated into this chapter. The qualitative part was complementary to the quantitative analysis. The data were analyzed in accordance with the research questions by using frequencies, percentage, means, Standard Deviations and Pearson Product Moment Correlation to analyze and describe the results of the research findings.

Results

The current study was done with the aim to explore the relationship between test anxiety and academic achievement among secondary school students

Demographic characteristics of study participants

In this section, frequencies and percentages were used to describe and summarize data in reference to demographic characteristics of the respondents. The demographic variables analyzed were age of the respondents, and the schools' status. In addition to age and schools' status, the respondents' average score of academic achievement were also analyzed. The details of the characteristics of the respondents were given in Table 1.

Analysis of data revealed that 308 secondary school students and 8 teachers participated in the current study. As shown in Table 1, the student respondents were 176 (57.1%) male and 132 (42.9%) were females. There were 8 (5 males and 3 females) teacher respondents.

Table 1. Demographic characteristics of the study participants.

Name of sample Schools	Student participants			Teacher participants		
	Male	Female	Total	Male	Female	Total
Shirka	103	82	185	3	1	4
Gado-Guna	33	19	52	1	1	2
Tereta	40	31	71	1	1	2
Total	176	132	308	5	3	8

Level of test anxiety

The test anxiety level of student respondents was measured using distribution of frequencies and percentages of Test Anxiety Inventory (TAI) developed by Spielberger (1980). Table two represents the student participants' responses to the Test Anxiety Inventory. On the students' levels of anxiety, it was clearly seen from Table 2 that quite a substantial number of students show sighs of test anxiety as reflected by their level of worry

Table 2. The frequencies and percentages of preference for the level of test anxiety (N = 300).

	Items	Almost never	Sometimes	Often	Almost always
1	I feel confident and relaxed while taking test	110(36.7)	60(20)	41(13.7)	89(25.7)
2	While taking test, I have uneasy and upset feeling	68(22.7)	40(13.3)	91(30.3)	101(33.7)
3	Thinking about my score in a subject interferes my work on test	55(18.3)	64(21.3)	71(23.7)	110(36.7)
4	I freeze up on important exam /test	96(32)	67(22.3)	65(21.7)	72(24)
5	During exams I find myself thinking about whether will ever get through school.	67(22.3)	56(16.7)	67(22.3)	110(36.7)
6	The harder I work at taking a test, the more confused I get	43(14.3)	60(20)	178(59.3)	19(6.3)
7	Thoughts of doing poorly interfere with my concentration on test	66(22)	71(23.6)	62(20.6)	101(33.6)
8	I fell very confused when taking an important test	55(18.3)	52(17.3)	88(29.3)	105(35)
9	Even when I am well prepared for a test, I fell very nervous about it	61(20.3)	76(25.3)	54(18)	109(36.3)
10	I start feeling very uneasy just before getting test paper back	61(20.3)	58(19.3)	49(16.3)	132(44)
11	During test I fell very tense	64(21.3)	68(22.7)	58(19.3)	110(36.7)
12	.I wish examination did not bother me so much	100(33.3)	85(28.3)	59(19.7)	56(18.7)
13	During important test, I am so tense that my stomach get in upset	51(17)	64(21.3)	97(32.3)	88(29.3)
14	I seem to defeat myself while working important tests	67(22.3)	75(25)	96(32)	62(20.7)
15	I fell very panicky when I take an important tests	64(21.3)	66(22)	94(31.3)	76(25.3)
16	I worry a great deal before taking an important examinations	51(17)	54(18)	97(32.3)	98(32.6)
17	During tests, I found myself thinking about the consequences of failing	54(18)	61(20.3)	82(27.3)	103(34.3)
18	I felt my heart beating very fast during the time of my important examinations	70(23.3)	61(20.3)	64(21.3)	105(35)
19	After completing my examination, I try to stop worrying about it but I can't	52(17.3)	56(18.7)	90(30)	102(34)
20	During examinations I get so nervous that I forgot facts that I really know and prepared best	46(15.3)	85(28.3)	68(22.6)	101(33.6)

before, during and after tests. For example, most of 110 (36.7%) the student respondents as indicated in item 1, they never feel confident and relaxed while taking tests but only 89 (25.7%) of them almost always feel confident and relaxed while taking test. As item 12 of Table 2, show there were also 100 (33.3%) of the student respondents reported that they bother about examination almost always and 59 (19.7%) of the respondents often bother about examination.

In addition to these item 16 of Table 2 show majority 195 (64.9%) of the respondents worry a great deal before taking an important test. More than half 181 (60.4%) of the respondents thinking about their result interferes their work on test as indicated in item 3 of Table 2. On the same note, 163 (54.2%) of the respondents reported that thought of doing poorly interferes with their concentration on test as indicated in item 7 of Table 2.

Furthermore, more than half 194 (65.6%) of the respondents rejected the claim the harder they work at taking the test, the more confident they get as indicated in item 6 of Table 2. This point of view was supported by more than half 163 (54.3%) of the respondents still felt very nervous about test even when they were well prepared for it as indicated in item 9 of Table 2. In addition to these 169 (61.6%) of the respondents get so nervous that they forgot facts that they know and prepared best as indicated in item 20 of Table 2. Therefore, the above findings show that there was high level of test anxiety which generally supports low academic achievement.

The relationship between test anxiety and academic achievement

To investigate whether there was any statistical significant relationship between test anxiety and academic achievement among students, a Pearson Product Moment Correlation Coefficient was determined, with scores on test anxiety as the independent variable and academic achievement in different subjects as dependent variable Table 3.

The finding of the study reveals that there was statistically significant negative correlation ($r = -.030$, $n = 300$, $p > .05$) between text anxiety and academic achievement, with high level of test anxiety associated to

Table 3. Pearson product moment correlation coefficient of test anxiety and academic achievement (N = 300).

	Academic achievement	Test anxiety
Academic Achievement Pearson correlation	1	-.030*
Sig. (2-tailed)		.602
N	300	300
Test Anxiety Pearson correlation	-.030*	1
Sig. (2-tailed)	.602	
N	300	300

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

poor achievement among the students and vice-versa. Therefore, it was concluded that there was statistically significant negative relationship between Test Anxiety and Academic Achievement among the students.

Test anxiety score of male and female students

The test anxiety score of male and female respondents was measured by mean for the selected subjects was resented as follows in Table 4.

The results as presented in Table 4, item 3 show that the test anxiety of males (M = 2.89) differs from females (M = 2.77). It implies that majority of the students thinking about their score in a subject interfere their work on test. While, for females the highest mean score on test anxiety was indicated on item 17 (mean = 2.93) showing that majority of the students thinking about the consequences of failing. The mean scores of male students ranged from 2.14 to 2.89, with the mean average score of 2.52. While, the test anxiety means score of female students ranged from 2.20 to 2.93, with the mean average score of 2.75. These results indicate that female secondary school students were more test anxious than male secondary school students.

Test anxiety scores between the three secondary school students

The test anxiety scores of the three secondary school respondents were measured by mean for the selected subjects was resented as follows in Table 5.

As indicated in Table 5, the test anxiety score of Shirka secondary school students ranged from 2.21 to 2.80, with the mean score of 2.50. Test anxiety score of Gado-Guna secondary school students ranged from 2.12 to 2.88, with the mean score of 2.59. The test anxiety score of Tereta secondary school students ranged from 2.18 to 2.94, with the mean score of 2.74. These results indicate that majority of Tereta Secondary school students were more test anxious than the other two secondary school (Shirka and Gado-Guna) students.

The response of the interview

Further analysis of the qualitative data obtained confirmed that students experienced nervousness before, during and after test. Nervousness is one of the behavioral symptoms of test anxiety that is experienced by the students due to motor restlessness. The teachers interviewed stated that the students forgetting facts due to excess nervousness and this resulted to them failing in the test. Concerning the first question, the teacher-3 was asked to respond for question "*In your opinion what causes anxiety during test/exam?*"). He said that:

> "When the students don't manage their time properly that means if they don't complete their homework, class work, assignment and when they are not prepared for taking a test at a time these leads to lack of self-confidence and anxiety. Some students stressed by time limitation of a test, because they are not sure to complete the test within the time given." Teacher 3.

The excerpt from teacher 3 is an indicator that lack of preparation for the test, low self-confidence, fear of failure and time limitation of a test make the students feel anxious. Ultimately, these make the students anxious.

Concerning the second question, the teacher-6 was asked to respond for question "*According to your observation and experience, what are the feelings of test taking students*?"

> "Most of the students when they were taking test, they were so nervous and they always feel like they were going to fail the test. They sometimes feel like they haven't studied enough. They sometimes feel not good at all and they worry and think about their result. They were in a lot of stress always about test. Even they can't read properly. This usually makes them forget to answer even simple questions correctly". Teacher 6.

Table 4. Means of preference for the test anxiety scores of the male and female students.

No	Item	M	F
1	I feel confident and relaxed while taking test	2.65	2.47
2	While taking test, I have uneasy and upset Feeling	2.84	2.86
3	Thinking about my score in a subject interferes my work on test	2.89	2.77
4	I freeze up on important exam /test	2.79	2.75
5	During exams I find myself thinking about whether will ever get through school.	2.72	2.79
6	The harder I work at taking a test, the more confused I get	2.44	2.70
7	Thoughts of doing poorly interfere with my concentration on test	2.34	2.80
8	I fell very confused when taking an important test	2.38	2.76
9	Even when I am well prepared for a test, I fell very nervous about it	2.49	2.85
10	I start feeling very uneasy just before getting test paper back	2.30	2.82
11	During test I fell very tense	2.38	2.70
12	I wish examination did not bother me so much	2.36	2.20
13	During important test, I am so tense that my stomach get in upset	2.59	2.89
14	I seem to defeat myself while working important tests	2.14	2.88
15	I fell very panicky when I take an important tests	2.28	2.74
16	I worry a great deal before taking an important examinations	2.37	2.85
17	During tests, I found myself thinking about the consequences of failing	2.57	2.93
18	I felt my heart beating very fast during the time of my important examinations	2.76	2.70
19	After completing my examination, I try to stop worrying about it but I can't	2.72	2.80
20	During examinations I get so nervous that I forgot facts that I really know and prepared best	2.39	2.69
	Mean average score	**2.52**	**2.75**

Table 5. The means of preference for the test anxiety scores of the three secondary school students.

No	Items	Shirka	Gado	Tereta
1	I feel confident and relaxed while taking test	2.70	2.72	2.86
2	While taking test, I have uneasy and upset Feeling	2.80	2.88	2.87
3	Thinking about my score in a subject interferes my work on test	2.43	2.77	2.84
4	I freeze up on important exam /test	2.73	2.70	2.88
5	During exams I find myself thinking about whether will ever get through school.	2.21	2.82	2.66
6	The harder I work at taking a test, the more confused I get	2.31	2.52	2.88
7	Thoughts of doing poorly interfere with my concentration on test	2.51	2.32	2.58
8	I fell very confused when taking an important test	2.31	2.34	2.61
9	Even when I am well prepared for a test, I fell very nervous about it	2.32	2.51	2.73
10	I start feeling very uneasy just before getting test paper back	2.42	2.51	2.75
11	During test I fell very tense	2.52	2.48	2.62
12	I wish examination did not bother me so much	2.54	2.12	2.18
13	During important test, I am so tense that my stomach get in upset	2.56	2.81	2.85
14	I seem to defeat myself while working important tests	2.40	2.47	2.66
15	I fell very panicky when I take an important tests	2.33	2.58	2.92
16	I worry a great deal before taking an important examinations	2.68	2.78	2.79
17	During tests, I found myself thinking about the consequences of failing	2.56	2.54	2.94
18	I felt my heart beating very fast during the time of my important examinations	2.55	2.53	2.78
19	After completing my examination, I try to stop worrying about it but I can't	2.64	2.73	2.91
20	During examinations I get so nervous that I forgot facts that I really know	2.52	2.55	2.55
Mean average score		2.50	2.59	2.74

The excerpt from teacher 6 is an indicator that the students experience high level of test anxiety. This makes them feel extremely nervous as a result this leads them to forget even simple concepts in the test making them anxious.

Concerning the third question, the teacher-7 was asked to respond for question, "*In your opinion when does level of anxiety increased? before test, during test or after test?*". Their responses show that the students experienced test anxiety before test, during test and after test, however most of the students experienced test anxiety before taking a test. Concerning the fourth question, the teacher-5 was asked to respond for question, "*What do you suggest and recommend in order to alleviating this test taking anxiety problem of the students*?"

> "The school administrators and teachers are the one who should play the most important role. School administrators should adjust the environment of examination hall such as sitting arrangement. They should also give Psychological counseling for those exam/test/ anxious students. Teachers should motivate the students and provide more information concerning the content of tests and number of questions before the administration of tests. In addition to this teacher should give enough time to complete the test." Teacher 5.

The above response is an indicator of school administrators and teachers play the most important role to alleviate test taking anxiety of the students. Adjusting the physical condition of examination hall and giving Psychological counseling for exam anxious students is very important. Teachers should provide information concerning the content and number of questions before administration of tests. Teachers should give enough time to complete the test. These suggestions would make the students less anxious during exams.

Discussion

The main purpose of this present study was to explore the relationship between test anxiety and academic achievement among secondary school students. Hence, the results of the data analyses were summarized with respect to the five research questions of the study discussed as follows:

The level of test anxiety of the students

In this section an attempt was made to answer the research questions: "*What is the level of test anxiety in Shirka Woreda secondary schools of grade ten students?*" As the results have shown in Table 2 most students experienced greater extent of high level of test anxiety when taking tests. This implies that there is a statistically significant difference between the students in their level of test anxiety. In general, most of the students show high level of test anxiety but the levels of anxiety differ among them. In this study, the majority of the respondents experienced high test anxiety. Further analysis of the qualitative data obtained also confirmed that students experienced nervousness before, during and after tests. As the interviewed teacher confirmed the students find themselves forgetting facts due to excess nervousness and this resulted to them failing in the test. Excessive test anxiety leads to low academic achievement. In this regard therefore, the present research finding supports the study conducted on the relationship between anxiety levels and academic achievement among students in selected secondary schools (Syokwaa et al., 2014). These results are much allied to the study done by other researchers (Oluoch et al., 2018; Ndirangu et al., 2008; Barongo and Owiyo, 2015; Duraku, 2016). Secondary school students had either moderate or high level of test anxiety. On the contrary, the finding is in disagreement with that of (DordiNejad et al., 2011; Yousefi et al., 2010) study which reported low level of test anxiety relationship with academic achievement. A moderate level of test anxiety is essential for better academic achievement, absence of anxiety ultimately lead to poor academic achievement as anxiety is a trigger factor to uphill struggle among students (Oluoch et al., 2018). The current study revealed that there was significant relationship between test anxiety and secondary school students' average score.

The relationship between test anxiety and academic achievement

In this section an attempt was made to answer the research question:" *Is there any significant relationship between test anxiety and academic achievement among secondary school student of grade ten?*" As indicated on Pearson Product Moment Correlation Coefficient of test anxiety and academic achievement in Table 3 show a significant weak negative correlation between students' test anxiety and academic achievement ($r = -0.130$, $p < .05$). Negative correlation between students' average score and test anxiety suggests that test anxiety and academic achievement were related constructs and are not independent of each other. This result indicated that as the value of test anxiety increases the value of average score of students' decreases and as the value of test anxiety decreases average score of students' increases. This result is supported by research studies

conducted by Ndirangu et al. (2008), Yousefi et al. (2010).

Test anxiety scores of male and female students

This section was presented based on the research question: "I*s there any significant difference between test anxiety of male and female in Shirka woreda secondary schools of grade ten students?*" As the finding in Table 4 show that the test anxiety scores of the female students is higher than male students, the results of statistical description revealed that there is statistically significant difference between male and female students. This indicates that there is a significant difference between male and female students within the three secondary schools in their test anxiety and academic achievement. In line with the present finding, a study conducted on cross-sectional study on exam anxiety among medical students of a tertiary care teaching hospital of western India, suggest that there was significant difference between male and female students of medical students (Oluoch et al., 2018). Thus, the TAI-total scores were significantly higher in female medical students than the male medical students. There were also other studies which supports the present finding, such as (Legese, 2014; Syokwaa et al., 2014; Ndirangu et al., 2008). On the contrary, the finding is in disagreement with that of Getachew (2015) study which reported no significant difference between the test anxiety of male and female students.

Test anxiety scores of the three secondary school students

As the result in Table 5 indicated, Tereta Secondary school students are more test anxious than the other two secondary school (Shirka and Gado-Guna) students. This implies that there is statistically significant difference between the three secondary schools in their test anxiety of academic achievement. As the previous study indicate that increase in test anxiety lowers test performance of the students (Doden et al., 2018; Syokwaa et al., 2014; Shishigu, 2018).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Results of this study confirmed no relationship between test anxiety and average score among secondary school students. More over only few participants had severe test anxiety. While most participants experienced mild anxiety during examinations this point out that test anxiety is not directly affecting the student's academic achievement rather anxiety during examination acts as a motivating factor. Although it is essential to help out secondary school students to deal with stress and trim down test anxiety efficiently through group work via students, parents, teachers, and administrators, since it was evident that few students had severe test anxiety. The results suggest the need for students to maintain a finest state of health and mind during examination as this is important for better academic achievements.

The interview respondents suggest that lack of preparation for the tests, low self-confidence, fear of failure and previous test experiences are the source of test anxiety. The way in which test is designed to evaluate difficult lesson content and the large amount of information to be covered are the other source of test anxiety. Time limitation and stress during test administration cause test anxiety. The other is taking the subjects like mathematics, physics and chemistry examinations makes the students more anxious due to fear of workout questions. As the interview respondents reported that most of the students experienced test anxiety before taking a test, and in order to reduce test anxiety teachers and school administrators are the one who should play the most important role. The students should prepare well to become less anxious and giving psychological counseling for those test anxious students also suggested.

Results of this study concluded that a significant percentage of the students participated in the study experienced moderate to severe levels of test anxiety. It is fundamental to help out secondary school students to deal with stress and trim down test anxiety efficiently through group work via students, parents, teachers and other concerned parties. In addition, secondary school students should be taught about effective time and anxiety management strategies for better academic achievements.

Current research lacks information regarding the physiological and psychological factors leading to severe test anxiety; therefore, further research is required to address these factors causing test anxiety especially among secondary school students.

RECOMMENDATIONS

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

- Replicate the current study on larger sample size using a combined quantitative and qualitative research approach to better understand the factors leading to test anxiety among secondary school students.
- Encourage the students to prepare for the examinations in advance so that they will develop confidence consequently that help to prevent or reduce test anxiety.
- Guidance through academic advising and counseling

programs should be activated in secondary school especially before examinations that may help to reduce test anxiety and thus improve the academic achievement of students.

- Providing family monetary, social support and encouraging participation in social activities are recommended to decrease test anxiety in students preparing for different exams.
- Guide students to handle and cope with test anxiety during examinations and be made to understand that some level of anxiety is required as a motivating factor before the exam.
- Examinations and continuous assessment tests as well as assignments should be well planned to avoid undue stress on the students which most likely triggers anxiety.

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