



Anxiety and Academic Performance among Secondary School Pupils in Tanzania

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Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/BJESBS/2016/24140

Editor(s):

(1) Shao-I Chiu, Taipei College of Maritime Technology of Center for General Education, Taiwan.

Reviewers:

(1) M. Camino Escolar-Llamazares, University of Burgos, Spain.

(2) Leela Dhar Mangi, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India.

Complete Peer review History: <http://sciencedomain.org/review-history/13277>

Short Research Article

Received 6th January 2016

Accepted 26th January 2016

Published 12th February 2016

ABSTRACT

Anxiety is among the most prevalent psychological turmoil facing many school adolescents around the world. It affects about 13% to 25% of the adolescent population. This study was designed to examine the causes and effects of anxiety on academic performance among secondary school adolescents in Tanzania. The study utilized a survey method to collect data in two public secondary schools in Dodoma urban. Simple random sampling was used to involve 92 pupils among whom males counted for 45.8% and females 54.2%. The data collected through questionnaires were analyzed using descriptive analysis, multiple-responses and covariates (chi-square) through SPSS window version 20. Findings indicate that a considerable number of pupils were affected by anxiety leading to poor performance. The problem of anxiety differed across ages and sex among school adolescents. In addition to that, the study revealed that school rules, teachers' practices, and behaviours, corporal punishment as well as pupils' irresponsibility were the causes of anxiety disorders experienced by the pupils. The majority of the pupils in schools has frequently experienced anxiety disorders and psychologists feel that these are psychological problems which could be cured through the provision of proper guidance and counselling, creating friendly environments and provision of information to pupils.

Keywords: Anxiety; fear; academic performance; secondary school.

1. INTRODUCTION

Anxiety is the most common psychological turmoil facing school adolescents' function in everyday life [1,2,3,4,5]. In school life, every school adolescents in one way or another, a victim of anxiety disorders. Young people/pupils with anxiety disorder are so much afraid and worried that they cannot function normally. Anxiety has been defined as a future oriented mood or feelings characterized by negative affective state accompanied by self-focused, psychological and self-preoccupation within the controllability of future threat or potentially negative situation [1,6].

Furthermore, it is estimated that 13% to 25% of the world adolescents in school face anxiety [7] and this figure could vary (higher or lower) because the majority of school adolescents, particularly in developing countries such as Tanzania, start and finish their studies without undiagnosed anxiety levels. Theoretically, anxiety has been divided into two parts namely, trait anxiety and state anxiety. Trait anxiety characterizes individual's semi-permanent susceptibility to anxiety and includes items like "I am tense; I am worried; I feel calm and secure"; whereas state anxiety refers to actual characteristics or experience of an individual in a certain situation and it includes items like "I am too much worried; I am content; I am a steady person [1,3,8,9].

The occurrence of anxiety in an individual is determined by the interactions prone to anxiety and the amount of stress in the situation. Anxiety has been linked with negative consequences on a pupil's social, emotional development, academic failure and long-term effects on psychological functioning in adulthood, such as anxious feeling, tense, scared, worried, and fearful. Negative consequences are influenced by decreased abilities in thinking, listening and responding to questions [7,10]. S. Kumar Das et al. [11] stress that anxiety in pupils tends to interfere with concentration and memories which are critical for academic success and a cause of pupils' achievement stress. They stress that if not treated early, anxiety can lead to impaired peer relations, missed schooling, substance use, i.e., alcohol and other illicit drugs and anxiety disorder in adulthood.

2. LITERATURE REVIEW

According to American Psychiatric Association [1] anxiety disorders are grouped into seven types:

Generalized anxiety disorder (GAD), social anxiety disorder or social phobia (SAD), specific phobia or obsessive compulsive disorder (OCD), post-traumatic stress disorder (PTSD) and panic disorder (PD). The review presents the commonest anxiety disorders that affect school adolescents frequently, such as generalized anxiety disorder (GAD), social anxiety disorder (SAD) and panic disorder.

2.1 Generalized Anxiety Disorder or Chronic Neurosis

Generalized anxiety disorder (GAD) is a chronic and impairing disorder, independent of its substantial comorbidity with other mental disorders [1,12]. Generalized anxiety disorder (GAD) seems to be the commonest disorder that affects many of the school adolescents and teens. The school adolescent with GAD feels anxious, uncomfortable and worried from time to time when faced with certain situations such as examination or speaking at school events or meeting with teachers in the offices. Generalized anxiety makes pupils highly uncomfortable, not because it is an intense kind of anxiety that it is generally relatively mild, but because of its persistent and unending presence [13].

2.2 Social Anxiety Disorder (SAD)

The social anxiety disorder (SAD) is an unrealistic and chronic illness featured by fear of a specific situation or activity or thing with a relatively high lifetime prevalence of 7-13% in the general population [1]. According to [1,14,15] adolescents (pupils) with social phobia tend to have fear, look foolish, lack confidence of being criticized, afraid of making mistakes or responding with the wrong answers in the class, even if they have a good point to contribute. G. A. Bernstein et al. [2] observe that, teens with social phobia may fall behind in the school and some time avoid going to school or attending school or social events. L. Figueroa [6] contends that if social phobia is not interfered with early, the clinging behaviour will continue into adulthood and may inhibit interactions with others and interfere with normal development. Brook and Schmidt [14] report that girls are more vulnerable to social anxiety disorders as compared to their counterpart boys.

2.3 Panic Disorder (PD)

Panic disorder is marked by periodic attacks (PAs) leading to fear or discomfort with no

apparent reason [1,16]. PA is unexpected attack which can come abruptly and reach at peak within 10-15 minutes, but residual effects can persist longer if the counselling interventions are not taken immediately. Panic attack (PAs) is the most frequent turmoil that many school pupils face before or after a test or an examination, which results in increased heart beats, chest pain, trembling and shaking, as well as respiration, and sometimes feeling like one is going crazy; while dizziness and hot and cold flashes are some of the common symptoms [13,17].

In light of the aforementioned explanation, it is clear that school adolescents who suffer from anxiety have difficulties in school function as it tends to lower their confidence and academic performance. So far, there is scanty literature on anxiety and pupils academic performance in Tanzania. It is against this background that the study examines the causes and effects of anxiety among secondary school pupils in relation to their academic performance.

2.4 Research Questions

This study was guided by the following operational questions: What are the possible causes of pupils' anxiety in secondary schools; What is the extent to which anxiety affects pupils' academic performance in secondary schools; and, What are the possible strategies for curbing pupils' anxiety disorders in secondary schools?

3. MATERIALS AND METHODS

The study used a survey method to collect quantitative data from a sample of 92 pupils through open and closed ended questionnaires in two public secondary schools in Dodoma Region. Pupil respondents were obtained through simple random sampling based on their sex and class category from Forms 1, 2, 3 and 4 in each school. Questionnaires were deliberately used to diagnose some aspects related to pupils' anxiety disorder. The questions were of three categories: Those illustrating demographic details (e.g., school, sex, age, school level or grade), those examining the anxiety prevalent and its effects on academic performance, and the open ended ones which focused on causes and strategies for curbing anxiety among school adolescents. The collected data were both quantitative and qualitative and were cleaned and coded using SPSS version 20 windows. The descriptive analysis, multiple-responses and chi-square were applied for verification of anxiety vulnerability on pupil performance.

Besides that, the study recruited a small sample of 92 pupils from two public secondary schools using a simple random sampling. Thus, the results were limited and therefore cannot be generalized to all pupils over the entire country.

4. RESULTS AND DISCUSSION

4.1 Demographic Characteristics of Participants

In the first question, the survey assessed multiple demographic characteristics of respondents, including age, sex, grade in school, and types of schools such as boarding and day schools (see Table 1 for details).

4.2 Causes of Anxiety among School Adolescents

The pupils were asked to identify the causes of their anxiety in schools. To obtain their response, the multiple response analysis was run as illustrated in Table 2.

From the information presented in Table 2, the causes of anxiety among secondary school pupils were: Administration of corporal punishment in secondary schools was a major cause of pupils' anxiety (87.0%), followed by school strict rules and regulations which account for 43.5%, pupil capacity (8.7%) and inappropriate preparation by pupils (10.7%).

4.3 Physical Signs of Anxiety among School Pupils

According to [1,3] many children and adolescents aged 5-17 are faced with anxiety disorder which is estimated to be 6-10%. The prevalence of separation anxiety is estimated to be 3%, social phobia (1%) and panic attack (2-5%). It has been already noted that panic disorder, separation anxiety and generalized anxiety are more common among school adolescents. Pupils were asked to identify signs of the anxiety they experience. Their responses are presented in multiple responses in Table 3.

Table 3 presents physical signs which the pupils have experienced. The majority of school pupils experienced sudden heart beat (85.5%), followed by hand trembling (52.4%), body aches (40%), while upset stomach were found to be the lowest sign of anxiety experienced by secondary school pupils of all response cases (8.5%).

Table 1. Demographic characteristics of participants

	Frequency	Valid percentage	Mean	SD. Deviation
Age of the participant				
13-15	41	44.6	15.9239	1.6918
16-18	46	50.0		
19-22	5	5.4		
Gender of the participant				
Male	42	45.3	-	-
Female	50	54.7		
Grade of the participant				
Form 1	25	27.2	-	-
Form 2	25	27.2		
Form 3	18	19.6		
Form 3	24	26.1		
Type of school (Public)				
Kisasa Secondary	44	47.8	-	-
Dodoma Secondary	48	52.2		

Table 2. Causes of anxiety among secondary school pupils (multiple-responses)

Category labels	Code	Count	Responses	Cases
Strict school rules and regulations	1	40	16.3	43.5
Teacher harshness	2	31	12.7	33.7
Teacher harassment	3	10	4.1	10.7
Pupil capacity	4	8	3.3	8.7
Inappropriate preparation	5	26	10.6	28.3
Failure to follow examination instructions	6	22	9.0	23.0
Inability to speak English properly	7	28	11.4	30
Corporal punishment	8	80	32.7	87.0
Total responses		245	100.0	266.3

Table 3. Signs of anxiety among school pupils (multiple-responses)

Category labels	Code	Count	Responses	Cases
Failure to write	1	22	11.5	26.8
Respiration	2	20	10.4	24.5
Sweet balms	3	19	9.9	23.2
Body aches	4	33	17.2	40.0
Upset stomach	5	7	3.6	8.5
Sudden heart beats	6	48	25.0	85.5
Hand trembling	7	48	22.4	52.4
Total responses		192	100.0	234.1

*10 missing cases * 82 valid cases

Table 4. Anxiety vulnerability by age, sex and grade/form

Covariate	Yes (n ₁ , %)	No (n ₂ , %)	P-value
Age in categories			
13-15	35 (85.4)	6 (14.6)	.035*
16-18	39 (84.8)	7 (15.2)	
19-22	2 (40.0)	3 (60.0)	
Sex of the candidate			
Female	45 (90.0)	5 (10.0)	.041*
Male	31 (73.8)	11 (26.2)	
Grade/Form of the candidate			
Form 1	17 (68.0)	8 (32.0)	.390
Form 2	16 (64.0)	9 (36.0)	
Form 3	18 (75.0)	6 (25.0)	
Form 4	13 (72.2)	5 (27.8)	

*Dependent: Have you ever experienced anxiety at school? * =significance

4.4 Anxiety and Pupil Academic Performance

A robust of evidence has linked anxiety negatively with pupil academic performance, even though sometimes anxiety can help pupil to complete some tasks such as assignments, projects or to study hard due to past experiences of bad grades [6,13,18]. Research has consistently demonstrated that anxiety is associated with pupils' poor performance due to devastating psychological effects of anxiety which lead to poor performance [6,19,20]. The study assessed anxiety vulnerability according to demographic characters such as age, gender and form/grade as described in Table 4.

From the information in Table 4, anxiety vulnerability of pupils' participants by age, sex and grade/class was examined. Results indicate that 85.4% of the pupils aged 13-15 had experienced anxiety at school while 14.6% of the same age had never experienced anxiety in their school life; 84.8% of the school adolescents aged 16-18 had experienced anxiety, while 15.2% of the same age had never experienced anxiety; and 40% of the pupils aged 19-22 had experienced anxiety whereas 60% of the same age had not.

Similarly, 90% of the female pupils had experienced anxiety in their school life while 10% of the female pupils had never experienced such situation; 73.8% male pupils had experienced anxiety in their school life while 26.2% had never experienced it. This implies that female pupils were more prone to anxiety prevalence as compared to male pupils. To determine whether or not there was a statistical significant relationship between age, sex and grade and anxiety, a null hypothesis was tested. To achieve this, a covariate (chi-square) was computed to test the relationship. Results show that there is a relationship between age, sex and anxiety among school pupils. A null hypothesis was tested to determine whether or not there was a statistical significant relationship between grade/class and anxiety, and after covariate (chi-square) computation, the results show that there is no association between grade/class and anxiety experience among pupils.

From the information presented in Table 5, 78% of the female pupils had performed poorly in their studies because of anxiety while 22% of them had never performed poorly in their studies because of being anxious, 59.5% of the male pupils had performed poorly and 40.5% had not. Statistically, there is a relationship between performance and anxiety across sex. The proportion attributes that female pupils are more vulnerable to anxiety than the male counterparts.

In addition to that, 68% of the form one and 64% of form two pupils had performed poorly in their studies, while 32% of the form one and 36% of the form two had not; 69.6% of the form three and 72.2% of form four pupils had performed poorly in their studies, while 30.4% of the form three and 27.4% of the form four pupils had not. This implies that there is no association between class level and anxiety among pupils.

Table 6 illustrates the contribution of anxiety towards pupil's academic performance. In view of this, 35.9% of the pupils who performed poorly in their studies agreed that anxiety had contributed to their performance by 100%, while 39.3% of those who had never performed poorly disagreed on anxiety having contributed to performance by 100%; 32.8% of those who performed poorly in their studies agreed that anxiety had contribution by 80%, while 17.9% of those who had never performed poorly disagreed on anxiety having any contribution to performance by 80%. Lastly, 3.1% of the pupils who performed poorly and 10.7% of them who had never performed poorly show that anxiety has no contribution to pupil's failure by 0%. Therefore, the above output shows that there is a significant relationship between anxiety and pupils' academic performance.

4.5 Strategies to Curb Anxiety Disorder among School Pupils

The pupils were asked on the strategies to curb anxiety among pupils. Their responses are illustrated in Table 7.

Table 7 illustrates the strategies for curbing anxiety among school pupils. In general, 60.9% of all responses suggested that self-confidence is the best strategy for curbing anxiety in schools, followed by good behaviour (37.0%) and studying hard (34.8%). Lastly, 14.1% of all respondents suggested that avoiding coming to school very late will solve the problem while

Table 5. Performance by sex and grade/class level

Covariate	Yes (n ₁ , %)	No (n ₂ , %)	P-value
Sex of the candidate			
Female	39 (78.0)	11 (22.0)	.055*
Male	25 (59.5)	17 (40.5)	
Grade/form of the candidate			
Form 1	17 (68.0)	8 (32.0)	.851
Form 2	16 (64.0)	9 (36.0)	
Form 3	64 (69.6)	28 (30.4)	
Form 4	13 (72.2)	5 (27.8)	

* Dependent: Have you performed poorly in your studies due to anxiety? =significance

Table 6. Contribution of anxiety on the pupil academic performance

		To what extent do you agree that anxiety contributes to pupils' academic performance?					Total	P -value
		100%	80%	50%	30%	0%		
		Have you ever performed poorly in your studies due to anxiety?	Yes	23 35.9%	21 32.8%	12 18.8%		
	No	11 39.3%	5 17.9%	1 3.6%	8 28.6%	3 10.7%	28 100%	
Total		34 37.0%	26 28.3%	13 14.1%	14 15.2%	5 5.4%	92 100%	

**Dependent: To what extent do you agree that anxiety contributes to pupils academic performance? *=significance*

Table 7. Strategies to curb anxiety among school pupils (multiple responses)

Category labels	Code	Count	Responses	Cases
Self preparation	1	29	14.4	31.5
Studying hard	2	32	15.9	34.8
Attending school regularly	3	8	4.0	8.7
Self confidence	4	56	27.9	60.9
Socialization with teachers	5	29	14.4	31.5
Avoiding lateness	6	13	6.5	14.1
Good behaviour	7	34	16.9	37.0
Total responses		201	100	218.5

8.7% believed that attending school regularly can be the best way to deal with anxiety among school pupils.

5. CONCLUSION

The study revealed that the majority of the pupils in schools has frequently experienced anxiety disorders. However, psychologists feel that these are psychological problems which could be cured through the provision of proper guidance and counselling, creating friendly environments and provision of information to pupils. Statistically significant anxiety levels in this study were more common among female pupils than male counterparts in schools. The psychological recommendation is that the best way to rectifying psychological unsettled minds amongst pupils is to provide them with opportunities for expressing their concerns both at home and schools so that appropriate measures can taken by parents or caregivers and teachers. Correspondingly, teachers in schools should strive to be informed of the types of anxiety in order to identify pupils with such behaviours and devise appropriate strategies for addressing them.

6. RECOMMENDATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

Considering the results of this study, the following recommendations are put forward:

- The Ministry of Education, Technology and Vocational Training [MOEVT] should strengthen in-service activities and workshops for teachers to enable them get knowledge and skills on pupils' emotional reactivity, mental health issues and how they negatively affect pupils academic performance.
- MOEVT should increase the tracking mechanisms on the violation of corporal punishment policy in schools because it has been observed to be a source of excessive fear and worries among pupils.
- Schools should strengthen the counselling units and establish specific programmes to help pupils to avoid exhibiting anxiety problems when faced with the difficult tasks/moments.
- It should be noted that this paper used a descriptive survey with a few diagnostic questions to measure some aspects of anxiety, which means that this paper cannot provide a complete test of each anxiety types. Therefore, a national survey can be carried out to test each type of anxiety disorder among school pupils in primary and secondary schools using an experimental designed and multiple anxiety measure.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. (5th Edition). Washington, DC; 2013.
2. Bernstein GA, Borchardt CM, Perwein AR. Anxiety disorders in children and adolescents: A review the past 10 years. *Journal of the American Academy of Child Adolescent Psychiatry*. 1996;35(9):1110-1119.
3. Carr A. *The handbook of child and adolescent clinical psychology: A contextual approach*. Second Edition. Routledge, Taylor and Francis. London & New York; 2006.
4. Clark DA, Beck AT. *Cognitive therapy of anxiety disorders: Science and practice*. New York, NY: Guilford Press; 2010.
5. Minahan J, Rappaport N. *Anxiety in students: A hidden culprit in behavior issues*. Cambridge, Harvard Education Press; 2013.
6. Figueroa L. *Teachers' awareness and skills in addressing students with anxiety symptoms*; 2013. Available:http://digitalcommons.pcom.edu/psychology_dissertations (Retrieved on 12th January, 2015)
7. Walsh K, Deb S, Chatterjee P. Anxiety among high school students in India: Comparisons across gender, school type, social strata and perceptions of quality time with parents. *Australian Journal of Educational & Developmental Psychology*. 2010;10:18–31.
8. Spielberger CD. *State-trait anxiety inventory: Bibliography* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press; 1989.
9. Spielberger CD, Gorsuch RL, Lushene R, Vagg PR, Jacobs GA. *Manual for the state-trait anxiety inventory*. Palo Alto, CA: Consulting Psychologists Press; 1983.
10. Weeks M, Coplan RJ, Kingsbury A. The correlates and consequences of early appearing social anxiety in young children. *Journal of Anxiety Disorders*. In press, Accepted Manuscript; 2009.
11. Kumar-Das S, Halder UK, Mishr B. A study on academic anxiety and academic achievement on secondary level school students Indian streams. *Research Journal*. 2014;4:1-6 ISSN 2230-7850 Available:www.isrj.net
12. Andrews G, Hobbs MJ, Borkovec T, et al. *Generalized worry disorder: A review of DSM-IV generalized anxiety disorder and options for DSM-IV*. Depression and Anxiety 0: 1–14. Wiley-Liss, Inc; 2010.
13. Leahy RL, Holland SJ. *Treatment plans and interventions for depression and anxiety disorders*. The Guilford Press, New York & London; 2000.
14. Brook CA, Schmidt LA. *Social anxiety disorder: A review of environmental risk factors*. *Neuropsychiatr Dis Treat*. 2008;4(1):123–143.
15. ADAA. *Social Anxiety Disorder*. ADAA; 2014. Available:<http://www.adaa.org/understanding-anxiety/social-anxiety-disorder> (Retrieved on 20th, 2016)
16. Craske MG, Kircanski K, Phil C, Epstein, A, et al. *Panic disorder: A review of DSM-IV panic disorder and proposals for DSM-V*. Depression and Anxiety. Wiley-Liss, Inc. 2010;1–20.
17. Wade C, Travis C. *Psychology* (2rd Ed). Harper & Row publisher, New York; 1990.
18. Culler RE, Holahan CJ. *Test anxiety and academic performance: The effects of study-related behaviours*. *Journal of Educational Psychology*. 1980;72:16-20.
19. Salkind JN. *Encyclopedia of educational psychology*. SAGE Publication Inc. New Delhi; 2008.
20. Rosado BL. *The effects of deep muscle relaxation and study skills training on test anxiety and academic performance*. Honor's Project. East Texas Baptist University; 2013.

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Peer-review history:
The peer review history for this paper can be accessed here:
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