

Comparison of School Anxiety among High School Students in Bilingual, Talented, and Public Schools in Shiraz, 2020

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Abstract

Background: In all societies, anxiety, as a part of every human being's life, is considered as an appropriate and consistent response. Anxiety in a balanced and constructive level makes us work hard and timely, thereby making our lives longer and more fruitful. One of the contexts where anxiety could be highly harmful so much is school settings since students are vulnerable to this issue and it could impair their education. This research aimed to compare school anxiety among male and female high school students in bilingual, talented, and public schools in Shiraz, Iran.

Method: We conducted this cross-sectional study to compare school anxiety among male and female high school students in bilingual, talented, and public schools of Shiraz, Iran in 2020. To this end, 725 third-grade high school students with the mean age of 17.12 ± 0.4 from bilingual (N=95, boys=40, girls=55), talented (N=260, boys=100, girls=160), and public schools (N=370, boys=170, girls=200) were selected via a two-stage sampling method out of the statistical population with Cochran's formula. First, random schools were chosen, then, random classes were selected to collect data from volunteer students. Subsequently, among the students of these schools, 725 students were randomly selected in the second stage. The students filled out the school anxiety questionnaire and the results were analyzed with ANOVA using SPSS version 24.

Results: School anxiety in bilingual schools was found to be significantly lower than that in public schools ($P=0.001$). In addition, school anxiety in talented schools was significantly lower than that in public schools ($P=0.001$), yet no differences were observed between the talented schools and bilingual schools ($P=0.09$). The means of school anxiety of the subjects were respectively 103.21 ± 13.72 for public high schools, 86.32 ± 19.68 for talented schools, and 84.45 ± 12.73 for bilingual schools.

Conclusions: These findings are up to an extent consistent with those of previous studies. There was a meaningful difference between the scores of anxiety and depression; in addition, talented students, owing to the learning of self-regulatory skills in gifted schools, had a better mental health level than those at ordinary schools. On the other hand, it seemed though the pressures of the educational system at ordinary schools, different educational, cultural, ideological, and family issues of the students and their different learning capabilities were the reasons behind their anxiety. This difference was significant in three scales of anxiety, depression, and physical symptoms.

Keywords: Anxiety, Students, Schools

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1. Introduction

In all societies, anxiety as a part of every human being's life, is considered as an appropriate and consistent response. Anxiety in a balanced and constructive level makes us work hard and timely, thereby making our lives longer and more fruitful (1). Having no anxiety crisis has been rarely observed during adolescence. On a number of occasions, this anxiety suddenly appears and it sometimes occurs gradually (2). It could be sometimes all-encompassing, yet ends in a few hours in certain cases. Therefore, anxiety, as a part of children and adolescents' life, constitutes one of the components of their personality structure. Some childhood and

particularly adolescence anxieties has been regarded to be normal and their positive effect on the process of development are accepted because it provides people with the opportunity to expand their adaptation mechanisms for dealing with stressful and anxious situations. On the contrary, anxiety might show up as a disease, which is considered to be the source of failure and maladaptation and attributes to a wide range of cognitive and physical disorders (3).

In the course of growth, children and adolescents experience a wide range of anxiety, which is sometimes so severe that makes their everyday life difficult. School anxiety is a common type of performance anxiety that involves 10% to 30% of students in various surveys (4).

Esteki and Moinmehr (4) have indicated that the average anxiety scores of Iranian students are higher than those of American students. They believe that test anxiety may appear very soon even at preschool age. School anxiety could negatively affect children's life and threaten their mental health. This disorder also has adverse effects on efficiency, prosperity of talent, formation of personality, and the social identity of the individual.

In the absence of treatment, the child is gradually driven toward disappointment, worthlessness, discouragement, isolation, and eventually depression and suicide, leading to irreparable harm to the body of the family (5). School anxiety involves a variety of dimensions, which are mentioned in the following. Similar to other anxiety disorders, physiological responses are also observed in school anxiety. Once confronted with anxiety-inducing situations, affected children may show symptoms, such as tantrums, crying, sticking to the parents, or silence (6). Fear of self-assertiveness is also a type of anxiety caused by intense fear and anxiety in different situations (7). It is a very debilitating disorder that can disrupt numerous aspects of a person's life. Some of the affected individuals may not leave home for weeks or give up many social situations, such as their career and education (8). Test anxiety is also the result of environmental stresses, negative psychosocial pressures, and students' self-concept weaknesses about their talent and ability to learn, which leads to decentralization, mental disturbance, misdiagnosis, unpleasant physical reactions, and academic failure (9). Ugwuanyi and colleagues (10) defined test anxiety as the following: «Test anxiety is a kind of self-obsession characterized by self-inferiority, uncertainty about one's abilities, and often results in negative cognitive assessment, lack of concentration, undesirable physical reactions, and drop in academic performance of the individual». Lack of self-confidence is a problem many people are facing. It begins at an early age and will often continue until adolescence. Self-confidence, in many cases, is necessary and those who are self-confident are much more optimistic and positive than others. The increasing trend of expansion of anxiety in various forms has negatively impacted individuals and social life of humans and has threatened their feeling of peace and safety (11). It could be said that the personality of adolescents is affected by various variables, one of which is the educational system and school. Research has indicated that if individuals have

healthy and systematic conditions in the school environment, they will reveal less of such abnormal behaviors (12). Although anxiety and aggression are natural and desirable behaviors in the growth path of teenagers, if these behaviors are not controlled correctly, they could become disrupting emotional behaviors (12). The results of this research suggested that education of independent learning strategies plays a major role in reducing students' inclusive anxiety.

In this paper, stress or nervous pressure was defined and the stressor factors included those causing individual stress, physiological symptoms of stress, behavioral symptoms of stress, organizational stressors, stress-making factors outside of the organization, as well as ways to cope with individual and organizational stress. In school, we must eliminate the school stressors to cope with the stress of the students as school members or to reduce their severity. Hence, certain measures, for instance creating a supportive environment for students, enriching their personality, reducing school conflicts, avoiding the establishment of strict and uncompromising rules in the environment as much as possible, and creating a suitable physical environment for students would help overcome stress problems. Krispenz and co-workers (13) showed that anxiety is a sign of danger to oneself and can affect students' learning; and when this sign reaches self-awareness, it acts to deal with anxiety. Repression and denial are two types of these defense measures. Both mechanisms attempt to make something unconscious by forgetting or ignoring it. The statistical population of their study included all the students of the elementary school, 200 of whom were randomly selected to fill out the questionnaire.

The current study aimed to compare male and female students' school anxiety in three different types of high schools in Shiraz, Iran. This paper focused on the study and comparison of school anxiety and its dimensions in three kinds of school (bilingual, talented, and public). We hypothesized that the degree of school anxiety varies among students of bilingual, talented, and public schools. The present research was a causal-comparison study. We considered school anxiety as the dependent variable and schools (bilingual, talented, and public) as independent variables. The researcher had no impact on them at all. The location of the school, the class, the economic level, and age were taken into consideration as the control variables.

2. Method

The statistical population of this cross-sectional study included all the third-grade high school students of the education department in Shiraz, Iran who enrolled in the second semester of the academic year 2019-2020 in Shiraz high schools. 725 third-grade high school students with the mean age of 17.12 ± 0.4 from bilingual (N=95, boys=40, girls=55), talented (N=260, boys=100, girls=160), and public schools (N=370, boys=170, girls=200) were selected with a two-stage sampling method out of the statistical population via Cochran's formula.

In the first stage, from each curriculum, a bilingual, gifted, and public school were selected in a targeted availability way. Afterwards, among the students of these schools, 725 were randomly selected in the second stage.

Bilingual, talented, and public high schools were selected on account of the existence of different education systems. The students in talented schools were allowed to enroll in this school based on the exam conducted under the supervision of the Education Department (The National Institute for the development of brilliant talents is an institution that supervises the academic affairs of talented students with high intelligence; this organization is also referred to as the SAMPAD. Bilingual schools' students, in addition to an internal examination, must pay the cost to the school (in bilingual schools, besides teaching in Persian, teaching in other languages also take place). Finally, the students of public schools enroll without any tests and study under the supervision of the government and ordinarily.

The sample studied in this research was selected from the students in Shiraz high schools, who were identical in terms of age, gender, and education department. To make the schools homogeneous, the school history, number of students, teacher status and management experience, and the percentage of the last two years' acceptances were identified. Additionally, since we utilized the questionnaire method in collecting information, it was tried to obtain transparent and real information of the status quo by expressing the necessity and importance of honest cooperation.

Talented schools have about 800 high school students. Bilingual schools have about 200 high school students. Public high schools in Shiraz have about 10000 students. Therefore, according to the Cochran's formula, the sample size was 370 (boys=170, girls=200) for public

schools, 260 (boys=100, girls, 160) for talented schools, and 95 (boys=40, girls=55) for bilingual school. Students were selected via the two-stage sampling method. We primarily chose random schools, and secondly, random classes were selected to gather data from volunteer students who have mentioned their consent to be part of this study. The students with psychological or physical disorders were excluded from the study and the inclusion criteria was mentioning informed consent for participation in the research. To analyze the data, ANOVA was applied using SPSS version 24.

Research Instruments

School Anxiety Questionnaire: The school anxiety questionnaire was developed by Phillips and colleagues (14) in 1980. The original form of the questionnaire includes 74 questions. Bahman and colleagues (1) reduced the number of questions to 52 and the answers are yes (score=3), sometimes (score=2), and no (score=1). The subjects filled out the questionnaire on three-choice scale of yes, no, and sometimes. The questionnaire measured four dimensions of test anxiety. The dimensions of the school anxiety questionnaire, separated by items, namely examination anxiety, fear of self-assertiveness, lack of self-confidence, and physiological reactions. Content validity index (CVI), content validity ratio (CVR), and test-retest reliability were reported to be 0.88, 0.87, and 0.80, respectively (1).

Using Cronbach's alpha, the reliability of each sub-test was determined: fear of self-assertiveness (0.80), examination anxiety (0.87), the lack of self-confidence (0.70), and physiological reactions (0.78), (1).

3. Results

725 third-grade high school students with the mean age of 17.12 ± 0.4 from bilingual (N=95, boys=40, girls=55), talented (N=260, boys=100, girls=160), and public schools (N=370, boys=170, girls=200) were selected through a two-stage sampling method out of the statistical population with Cochran's formula. The students with a history of psychological disorders were excluded from this study. Furthermore, the inclusion criteria were being a high school student and having no history of psychological disorders. In this section, a descriptive statistics table is initially presented for the school anxiety variable and its dimensions.

Table 1: Average school anxiety and its dimensions based on bilingual, talented, and public schools' students

| Index School type | School anxiety | | Exam anxiety | | Fear of self-assertiveness | | Lack of self-confidence | | Physiologic reactions | |
|----------------------|----------------|--------------------|--------------|--------------------|----------------------------|--------------------|-------------------------|--------------------|-----------------------|--------------------|
| | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Bilingual | 84.45 | 12.73 | 13.25 | 3.49 | 27.58 | 4.25 | 32.54 | 4.22 | 11.60 | 2.20 |
| Talented | 86.32 | 19.68 | 12.52 | 2.83 | 28.64 | 7.15 | 32.61 | 7.84 | 12.54 | 2.95 |
| Public | 103.21 | 13.72 | 16.83 | 2.39 | 33.75 | 6.84 | 36.26 | 5.45 | 15.32 | 2.10 |
| Total | 94.34 | 17.14 | 14.57 | 3.25 | 30.84 | 6.96 | 34.39 | 6.22 | 13.64 | 2.88 |
| F | 24.45 | | 34.15 | | 19.25 | | 7.64 | | 48.73 | |
| P | 0.001 | | 0.001 | | 0.001 | | 0.001 | | 0.001 | |

According to Table 1, the highest level of school anxiety and its dimensions belonged to the students of the public school. The least school anxiety was respectively observed in the talented and the bilingual schools compared to the state school. Using one-way ANOVA, the average of anxiety was compared in three teaching methods. In Table 1, using F statistics and probability level, the results of ANOVA on the school anxiety and its dimensions were analyzed in three groups of students in talented, bilingual, and state schools.

According to the above table, there was a significant difference concerning school anxiety and its dimensions among the three groups of students because the probability level was the same (0.001) for school anxiety, exam anxiety, fear of self-assertiveness, lack of self-confidence and physiological reactions, which was less than the significance level of 0.05. Thus, the hypothesis of the test was rejected and the opposite hypothesis was accepted. There was also a significant difference among the three groups in terms of school anxiety and its dimensions.

In the following, we used Fisher's least significant difference (LSD) as the follow-up test to study school anxiety and its dimensions in a dual fashion. According to Table 2, the probability value in two categories,

(bilingual-public and talented-public) was lower than the significance level of 0.05. Therefore, there was a significant difference in the level of anxiety and its dimensions in two groups (public-bilingual and public-talented). No significant differences were observed in the bilingual school students and talented group.

4. Discussion

The objective of this cross-sectional study was to compare school anxiety and its different aspects in three types of public, bilingual, and talented schools for female and male students in Shiraz, Iran. As mentioned previously, there was a significant difference in terms of school anxiety and its dimensions among the three groups of students. The highest level of school anxiety and its dimensions belonged to the students of public schools, followed by those of talented schools and bilingual schools, respectively.

These findings are partly consistent with previous studies (12, 13). The results suggested that the difference in anxiety and depression scores between the students in talented and state schools is meaningful. In addition, talented students were of better mental health than the students in normal schools; this difference was significant

Table 2: Fisher's least significant difference (LSD) test, school anxiety pair analysis, and its dimensions for bilingual, talented, and public schools' students

| Index School type | P-Value | | | | |
|----------------------|----------------|--------------|----------------------------|-------------------------|-------------------------|
| | School anxiety | Exam anxiety | Fear of self-assertiveness | Lack of self-confidence | Physiological reactions |
| Bilingual-talented | 0.09* | 0.10* | 0.08* | 0.09* | 0.07* |
| Bilingual-public | 0.001 | 0.001 | 0.001 | 0.01 | 0.001 |
| Talented- public | 0.001 | 0.001 | 0.001 | 0.003 | 0.001 |

in three subscales of anxiety, depression, and physical symptoms (15, 16). The results indicated a negative correlation between emotional intelligence and test anxiety among the students. According to our findings, strategies in line with increasing intelligence emotion could be recommended in order to reduce the test anxiety.

To explain the above-mentioned finding, it could be stated that anxiety has an important relationship with students' learning. Anxiety is an individual's adverse reaction to severe pressures or other types of moods imposed on adolescents. Anxiety moods occur when the pressure is greater than the individual's ability to adapt. Therefore, anxiety is an unpleasant and unreliable feeling of fear of the future, often associated with physiological symptoms. Fear is also a global phenomenon and can reflect physical symptoms of anxiety; unlike anxiety, the cause of fear is clear and understandable. Anxiety is an experience seen in individuals' behavior, physiological responses, and mental reports. Pain, fear, and intense consciousness of an uncertain source are deemed as anxiety symptoms. An individual reveals a mild to severe anxiety response to an unexpected event. In mild anxiety, one takes the surrounding environment under his surveillance more than his ability. In the average anxiety, the person does not pay attention to stimulations outside the field of concern selectively. Learning could also occur at this level of anxiety. However, once an individual experiences severe anxiety or fear, learning occurs by no means unless anxiety is reduced; that is because in this situation, the perception of stimulations declines.

Changes in the educational environment and the pressures induced by educational systems with regard to the educational environment are the stressors that cause anxiety among students. According to the researcher's observations and the results of the study, the training of authorities, specifically school counselors, and the provision of suitable conditions for referring students and the students' planned mental support systems in talented and bilingual schools are the items reducing student anxiety compared to the public schools. Moreover, intelligent diagnosis of gifted and bilingual schools in the investigation of factors, such as IQ (Intelligence), by conducting an entrance exam and referring to findings from researchers who have acknowledged that the level of IQ impacts on the decrease or increase of students' anxiety could be counted the other factors observed in the reduction of students'

anxiety in the mentioned schools compared with that in the public ones. An appropriate educational environment, the creation of healthy competition, teaching methods, and training educational skills and study methods by the teachers of talented and bilingual schools and their expectations of students are the other reasons effective on reducing students' anxiety compared to the public schools.

Hence, the particular status of school in the education of students and the role of psychosocial stressors in reducing their educational efficiency necessitate investigations on psychological stresses in the educational environment for getting more familiarized with the psychology of this cortex of the society, as the main founder of the future of society. This could be conducive to success in educating this group and help the authorities to develop educational and training programs.

The present study had certain limitations, including age, sex, and educational level in the population under the study. The data were collected only through questionnaire and the possibility of mean error was carried out. Shiraz is the only city from which the sample was gathered; hence, it is suggested to consider other cities as well.

To improve the current research, it could be suggested that the relationship between the intended components from the teachers' and experts' perspectives be studied in future studies. Moreover, the rate of difference between research variables in the academic environment among the students should be investigated.

One of the most important implications of this study was that the educational system should strongly consider psychological education in high schools to help students manage their anxiety and other painful emotions.

5. Conclusions

As a result, teaching emotion regulation strategies to students would play pivotal roles in the reduction of anxiety, specifically school anxiety, and students in public schools could benefit from these strategies as well as students in talented and bilingual schools, since these strategies are taught in talented and bilingual schools but students in public schools have not been taught how to manage and regulate their anxiety and stress in moments like taking exams. Therefore, this skill should be taught as an essential component in maintaining students' well-being and mental health.

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Reference:

1. Bahman B, Kiamanesh A, Abolmaali K. Comparison of school anxiety and its components on the fourth-grade students of elementary schools in both traditional and descriptive evaluation systems. *Research in Curriculum Planning*. 2013;10(39):93-107.
2. Cooper KM, Downing VR, Brownell SE. The influence of active learning practices on student anxiety in large-enrollment college science classrooms. *Int J STEM Educ*. 2018;5(1):23. doi: 10.1186/s40594-018-0123-6. PubMed PMID: 30631713; PubMed Central PMCID: PMC6310416.
3. Mogg K, Waters AM, Bradley BP. Attention bias modification (ABM): Review of effects of multisession ABM training on anxiety and threat-related attention in high-anxious individuals. *Clin Psychol Sci*. 2017;5(4):698-717. doi: 10.1177/2167702617696359. PubMed PMID: 28752017; PubMed Central PMCID: PMC5513441.
4. Esteki M, Moinmehr S. Comparison of the relationship between metacognitive states and coping styles with stress in gifted and normal students. *Procedia-Social and Behavioral Sciences*. 2012;32:45-48. doi: 10.1016/j.sbspro.2012.01.008.
5. Trigueros R, Padilla AM, Aguilar-Parra JM, Rocamora P, Morales-Gázquez MJ, López-Liria R. The Influence of Emotional Intelligence on Resilience, Test Anxiety, Academic Stress and the Mediterranean Diet. A Study with University Students. *Int J Environ Res Public Health*. 2020;17(6):2071. doi: 10.3390/ijerph17062071. PubMed PMID: 32245007; PubMed Central PMCID: PMC7143047.
6. Steinmayr R, Crede J, McElvany N, Wirthwein L. Subjective Well-Being, Test Anxiety, Academic Achievement: Testing for Reciprocal Effects. *Front Psychol*. 2016;6:1994. doi: 10.3389/fpsyg.2015.01994. PubMed PMID: 26779096; PubMed Central PMCID: PMC4705295.
7. Awadalla S, Davies EB, Glazebrook C. A longitudinal cohort study to explore the relationship between depression, anxiety and academic performance among Emirati university students. *BMC Psychiatry*. 2020;20(1):448. doi: 10.1186/s12888-020-02854-z. PubMed PMID: 32917172; PubMed Central PMCID: PMC7488388.
8. Hojjat SK, Golmakani E, Norozi Khalili M, Shakeri Chenarani M, Hamidi M, Akaberi A, et al. The Effectiveness of Group Assertiveness Training on Happiness in Rural Adolescent Females With Substance Abusing Parents. *Glob J Health Sci*. 2016;8(2):156-64. doi: 10.5539/gjhs.v8n2p156. PubMed PMID: 26383218; PubMed Central PMCID: PMC4803947.
9. Wen X, Lin Y, Liu Y, Starcevic K, Yuan F, Wang X, et al. A Latent Profile Analysis of Anxiety among Junior High School Students in Less Developed Rural Regions of China. *Int J Environ Res Public Health*. 2020;17(11):4079. doi: 10.3390/ijerph17114079. PubMed PMID: 32521646; PubMed Central PMCID: PMC7312008.
10. Ugwuanyi CS, Ede MO, Onyishi CN, Ossai OV, Nwokenna EN, Obikwelu LC, et al. Effect of cognitive-behavioral therapy with music therapy in reducing physics test anxiety among students as measured by generalized test anxiety scale. *Medicine*. 2020;99(17):e16406. doi: 10.1097/MD.00000000000016406. PubMed PMID: 32332590; PubMed Central PMCID: PMC7220727.
11. Hyseni Duraku Z, Hoxha L. Self-esteem, study skills, self-concept, social support, psychological

- distress, and coping mechanism effects on test anxiety and academic performance. *Health Psychol Open.* 2018;5(2):2055102918799963. doi: 10.1177/2055102918799963. PubMed PMID: 30225094; PubMed Central PMCID: PMC6136113.
12. Park S, Lee D, Jung S, Hong HJ. Four-year trajectory of Korean youth mental health and impacts of school environment and school counselling: a observational study using national schools database. *BMJ Open.* 2019;9(11):e027578. doi: 10.1136/bmjopen-2018-027578. PubMed PMID: 31767576; PubMed Central PMCID: PMC6887064.
 13. Krispenz A, Gort C, Schülke L, Dickhäuser O. How to Reduce Test Anxiety and Academic Procrastination Through Inquiry of Cognitive Appraisals: A Pilot Study Investigating the Role of Academic Self-Efficacy. *Front Psychol.* 2019;10:1917. doi: 10.3389/fpsyg.2019.01917. PubMed PMID: 31481918; PubMed Central PMCID: PMC6710437.
 14. Phillips BN, Pitcher GD, Worsham ME, Miller SC. Test anxiety and the school environment. In: Sarason IG, editors. *Test anxiety: Theory, research, and application.* Hillsdale, NJ: Lawrence Erlbaum; 1980. p. 327-346.
 15. Rahafar A, Maghsudloo M, Farhangnia S, Vollmer C, Randler C. The role of chronotype, gender, test anxiety, and conscientiousness in academic achievement of high school students. *Chronobiol Int.* 2016;33(1):1-9. doi: 10.3109/07420528.2015.1107084. PubMed PMID: 26651154.
 16. Dobson C. Effects of academic anxiety on the performance of students with and without learning disabilities and how students can cope with anxiety at school. Michigan. Northern Michigan University. [Retrieved 2012 April 3]. Available from: <https://pdf4pro.com/view/effects-of-academic-anxiety-on-the-performance-of-5bb4af.html>.