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Original Article (Pages: 2019-2025)

The Prevalence of Anxiety and its related Factors among School-age Children in South West of Iran

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Abstract

Background
Anxiety is one of the most common childhood disorders, so it is necessary to explore extend and its related factors in the students. This study was conducted to determine the prevalence of anxiety and the related factors of anxiety among the children aged 9-12 years.

Materials and Methods
At a descriptive-analytic study 623 children aged 9-12 year- old who were studying in the fourth to sixth grade of elementary school in Dezful city, were selected through multistage random sampling. The data were collected using demographic profile questionnaire and School Anxiety Scale (SAS) using SPSS-16.

Results
Of total 623 students, 36.3% were girls. 232 (37.2%) students had mild anxiety, 304 students (48.8%) had moderate anxiety and 87 students (14%) had severe anxiety. There was a significant relationship between the mean score of children anxiety and the number of children in family (P<0.05). There was a significant relationship between the mean score of children anxiety and the history of hereditary disease (P< .05) and the between the mean score of children anxiety and educational level was not significantly (P>0.0.5).

Conclusion
This study showed that the prevalence of anxiety was higher in boyes, children who were single children, children who had a family history of hereditary disease, and children who experienced corporal punishment at home. It is recommended arranging programs including training, counseling, and psychotherapy ones for these children and their families

Key Words: Anxiety, Iran, Prevalence, School children**.**

*Please cite this article as: Banaeipour Z, Rostami Sh, Zarea K, Cheraqian B. The Prevalence of Anxiety and its related Factors among School-age Children in South West of Iran. Int J Pediatr 2016; 4(6): 2019-25.

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Received date Feb23, 2016; Accepted date: Mar 22, 2016

1- INTRODUCTION

Children are large reserves of human capital and one of the most valuable sources and wealth funds of a society. As we strive for their health and proper growth, we will guarantee the future of a healthy nation and society. According to the statistics published by Iran center of census in 2011, the population of children aged 9-12 years was 4,464,123. The high population of school children multiplies the importance of caring for their physical, psychological, and social health (1-4).

Any changes in living conditions or diseases can endanger children's health; thus, changes may result in their unusual and unbalanced mode. Therefore, in order to prevent the occurrence of problems in children, they should be considered as individuals with physical, psychological, and social needs (1, 4).

Anxiety is one of the most common childhood disorders (6, 7). The prevalence of anxiety during the lifetime has been estimated to be about 29 percent and the average age of its onset is 11 years (7). Studies have shown various statistics about the prevalence of this disorder. The statistics of the prevalence of anxiety in children has been reported as 7% and in some studies up to 15% (4, 6). According to some other studies, about 10% to 20% of children are facing one of the diagnostic criteria of anxiety disorder so that their normal life trend and their daily functions have been disrupted (6, 8).

Although a certain amount of anxiety is necessary to perform daily activities, if it exceeds the normal extent it will create a barrier to get things done. There are different types of anxiety one of which is school anxiety. It is an unpleasant emotional state that is associated with distress and perturbation, is formed under situational factors and features, and its major source is fear of failure and lack of confidence (10). School anxiety includes test anxiety, fear of self-expression, physiological responses, and lack of confidence. The tension and stress students experience in school are the common signs of school anxiety which is the main problem of students. Another sign is usually refusing to go to school (10).

Anxiety can have negative consequences leading to physiological and behavioral symptoms in children, including changes in behavior and being capricious, mood changes, refusing to go to school, sleep problems, irritability, difficulty in concentrating, fatigue, complaining of stomachache and headache (6,16).

Some studies show that children's fear and panic will continue during their adulthood and may become more serious (1, 13). Since nurses have different roles in the area of health particularly school health and due to the anxiety is a common problem among the school-age children, by relying on their knowledge and experiences and enjoying the high probability of communication with children, nurses have a valuable role in reducing anxiety in children (18), which is associated with identifying its prevalence and effective factors. Given the importance of identifying the factors influencing children anxiety, and with regard to the cultural context of Dezful - Iran, and lack of any study on the factors associated with anxiety in school age children the current study was carried out to determine the prevalence of anxiety in school-age children and its related factors the factors associated with in 2015.

2- MATERIALS AND METHODS

2-1. Study design and population

At a descriptive-analytical study, the research population included all male and female children (9-12 years old) studying in the fourth to sixth grades of elementary school in Dezful city, South West of Iran. Amongst them, 623 children were selected through multi-stage random sampling. In

the first phase of sampling, 185 elementary schools in Dezful were divided into two groups of boys' school and girls' school. 18 schools including 9 boys' schools and 9 girls' schools were selected out of 185 schools through clustering. Then, all classes in three grades of four, five, and six were selected and finally one-third of students of each class were selected as the sample through systematic random sampling. The research samples were selected in about one month since April 2014 to May 2015 from the public schools and private schools.

2-2. Measuring tools

Data collection materials in this study included both the demographic information questionnaire, which provided information on the participants' gender, age, educational level, etc., and Phillips' School Anxiety Scale (SAS) to assess children's anxiety (12).

The demographic information questionnaire included 9 questions which respectively evaluated age, gender, educational level, number of siblings, children's family history of hereditary diseases, children's living status (i.e., whether living with their parents or not), school truancy, children's experience of corporal punishment at home, and school performance based on grade point average. The School Anxiety Scale (SAS) was designed by Philips in 1978 to quantify students' school anxiety. The questionnaire contains 74 questions and measures four scales in students including: fear of assertiveness and self-expression, test anxiety, lack of confidence in dealing with others and meeting their expectations, and physiological responses related to individuals' low tolerance towards stress (11). Abolma'aly et al. in a research entitled "Stabilization, validation, and standardization of test anxiety scale" reduced the number of questions to 52. Therefore, the questionnaire used in this study was the abridged form of Philips' SAS which contained 52 questions with three possible answers of "Yes, Sometimes, or No". Students received 3 points for every *Yes* response, 2 points for *Sometimes* and 1 point for *No* and the total score was obtained through the sum of the points. The cut-off point of anxiety was 52, so scores above it indicated greater anxiety. The scores obtained from the SAS were analyzed as follows:

- The scores between 52 and 85, indicated mild school anxiety in students.
- The scores between 85 and 120, indicated moderate school anxiety in students.
- The scores above 120 indicated severe school anxiety in students (12).

In the research conducted by Miri and Akbari (2007), the reliability of the questionnaire had been reported as 0.86 using Cronbach's alpha coefficient (19). Abazari (2010) showed in their research that this questionnaire had sufficient reliability and validity (20).

2-3. Methods

The research was conducted after the approval of the research deputy and the ethics committee of Ahvaz Jundishapur University of Medical Sciences (ID number: IR.ajums.rec.1394.194) and after getting verbal consent of the children and written consent of the parents and explaining the objectives of the study to them and keeping their rights such as privacy and the right to withdraw from the study and not imposing any cost to them. After determining the sample size based on the family relationship formula, inclusive criteria were specified for parents such as the consent to participate in the study, residence in the city of Dezful, not having mental retardation, being literate and able to speak Persian, and also for children including the minimum age of 9 and the maximum age of 12 years and the consent

to participate in the study. The samples were selected using multi-stage random sampling. The materials used in the study included both the demographic information questionnaire and Philips' School Anxiety Scale (SAS) which were read to children with the help of parents and completed by the children to examine children's anxiety.

3- RESULTS

The results showed that of total 623 students, 112 (18%) were aged 9-10 years, 255 (40.9%) were aged 10-11 years, and 256(41.1%) of the students were aged 11-12 years. In the selected sample, 226 (36.3%) were female. 286(45.9%) were in the fourth grade, 158 (25.4%) were in the fifth grade, and 179 (28.7%) of students were in the sixth grade of elementary school.

128 students were single child; 19 (3%) students had the family history of hereditary diseases; 158 (20.5%) students had a history of school truancy; 77 (12.4%) students had an experience of corporal punishment at home and 423 (67.9%) students had very excellent Grade point averages (GPAs).

Table.1 shows the relative frequency and percentage frequency of students with different age groups, gender, and number of children in families. This table shows most of the students are in the age group of 10-11 years. Moreover, most of the samples are male and most children live with one sibling.

As it is depicted in the **(Table.2)**, most of the students had moderate level of anxiety. To compare the mean of children's anxiety scores with their gender *t*-test results show that there was a significant relationship between these two variables (P=0.01); the anxiety scores in the boys (95.2) was slightly more than the girls (92.8). Furthermore, to examine the relationship between the mean score of children's anxiety and their educational level, one-way ANOVA was used, but there was not a significant difference in the anxiety scores of three educational levels (P=0.781). Besides, to examine the relationship between the mean score of children's anxiety and the number of children in family, one-way ANOVA showed that there was a significant relationship between these two variables (P=0.002).

According to the results the rate of anxiety in single children was more than those who had sibling(s). Also, to scrutinize the relationship between the mean score of children's anxiety and the family history of hereditary disease, *t*-test showed that there was a significant relationship between these two variables (P=0.007); children with a family history of hereditary diseases obtained a higher anxiety score.

Additionally, to inspect the relationship between the mean score of children's anxiety and living with both parents, *t*-test showed that there wasn't a significant relationship between these two variables (P<0.08); children living with both parents get a lower anxiety score. Likewise, to observe the relationship between the mean score of children's anxiety and the history of school truancy, *t*-test showed that there was no significant relationship between these two variables (P=0.011).

To check the relationship between the mean score of children's anxiety and the history of corporal punishment at home, *t*-test showed that there was a significant relationship between these two variables (P=0.001); children with a history of corporal punishment at home got a higher anxiety score. Correspondingly, to examine the relationship between the mean score of children's anxiety and their educational performance based on their GPAs, *t*-test showed that there was a significant relationship between these two variables (P=0.001); so, the children with lower GPA got a higher anxiety scores.

Table 1: The frequency of factors affecting participants' anxiety

Age group	Frequency	Percentage
9-10	112	18
10-11	255	40.9
11-12	256	41.1
Total	623	100
Gender		
Female	226	36.3
Male	397	63.7
Total	623	100
Number of children		
one	128	20.5
two	273	43.8
three	160	25.7
four	35	5.6
More than four	27	4.4
Total	623	100

Table2: The prevalence of anxiety in participants

Level of anxiety	Frequency	Percentage
Low	232	37.2
Moderate	304	48.8
Severe	87	14
Total	623	100

4- DISCUSSION

As the results of this study showed that, boys were more anxious than the girls. There was no significant relationship between school anxiety and the level of education. Single children were more anxious than children who had sibling(s). Children who had a history of hereditary disease as well as those experienced corporal punishments at home had severe anxiety scores. Moreover, children who had lower GPA got higher anxiety scores.

The results of the present study, was to some extent consistent with the findings of Skybo et al. they studied children of the fourth grade of elementary school in Ohio, the U.S., and found that hungriness, headache, and irritability were the major symptoms of stress and anxiety in children (18). The results of the research conducted by Abazari showed that there was no significant relationship between the rates of school anxiety of male and female students in the guidance school. Khosh-Kholgh and Pasha Sharifi (21), Mohammadi Far et al. (22), and Amiri (23) have done some studies on students' anxiety. The results of these three studies demonstrated that some factors may involve in determining school anxiety. Adverse family circumstances, financial problems, illness, and extreme attention to children are amongst the most important causes of anxiety (10, 11).

Each of the above studies was conducted in a different statistical population and with certain age groups, so these two factors (Adverse family circumstances, financial problems) may be the only

reasons for the difference in the findings of abovementioned studies.

4-1. Limitations of the study

In this study, in order to identify students with school anxiety only questionnaire was used and no clinical interview was done. Therefore, it is recommended to use other methods such as the structured diagnostic interview in the future studies for screening and identifying students with school anxiety, so that the results of the research might not be affected by the questionnaire sensitivity towards the incorrect recognition of students with school anxiety. Moreover, further studies with larger sample size are recommended for better identification of factors influencing anxiety.

5. CONCLUSION

The results showed that distraction technique had a good effect on the intensity of pain in children. Given the need for pain control and its effects on the course of treatment, further studies are needed to be done. The prevalence of anxiety in boys was slightly more than girls. Single children, children who had a history of hereditary diseases, school truancy, or corporal punishment at home got higher anxiety scores. The results of present study and other studies indicated that health instructors and school nurses should be able to detect the signs of anxiety in children and to provide the necessary facilities for the prevention and control of anxiety in school-age children. It seems that in addition to educational changes, familiarizing families with the proper upbringing methods and identifying factors causing anxiety in children can lead to the decrease of stress and anxiety in children which requires culture promotion as well as parents' and authorities' cooperation.

6- CONFLICT OF INTEREST: None.

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