

Anxiety disorder of 3-6 year-old children

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Abstract

Context: Anxiety is the most common disorder in childhood. Several factors may play a role in anxiety, such as child's emotional and social behavior and mother employment.

Aims: the present study aims to evaluate the anxiety disorders of 3–6-year-old children of nurses working in the educational hospitals in the city of Qazvin.

Settings and Design: This cross-sectional study was performed in September 2018.

Materials and Methods: This is a descriptive-analytical study. Spence anxiety scale for preschool children was used to collect data. In this self-report instrument, parents are asked to rate the frequency of child behavior on a 5-point Likert scale from Never (0) to Ever (4). The children with a score above 34 were rated as having anxiety disorder. One hundred and fifty-five nurses were willing to participate in the study. Inclusion criteria for children were 3–6 years of age, for nurses were being employed in educational hospitals of Qazvin University of Medical Sciences and the exclusion criteria of this study moving from Qazvin to another city.

Statistical Analysis Used: Data were analyzed using SPSS version 20 (SPSS Inc., Chicago, IL, USA), univariate and multivariate regression coefficients. $P < 0.05$ were considered as significant levels.

Results: The results showed that 32.9% of children of the nurses had anxiety disorder and there was a significant positive relationship between child gender ($P = 0.008$), child care during hospital shifts ($P = 0.013$) and anxiety among in these children. Furthermore, the prevalence of anxiety disorder in girls and child care by other family members were associated with the anxiety.

Conclusions: Nurses are exposed to work-family conflicts due to their occupational conditions, which play an important role in children's anxiety and it declares the need to pay more attention to this large segment of society. To generalize the results, it is suggested that this study be conducted on the statistical population of other regions of the country.

Keywords: Anxiety disorder, Nurse, Preschool children

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INTRODUCTION

Anxiety is an unpleasant emotion caused by one's perception of stress and physical changes of one's body. Anxiety disorder is one of the most common forms of pathological states in children and adolescents.^[1] Children and adolescents experience a wide range of anxieties during their development phase. Various scholars have argued that anxiety, at its moderate level, is seen as an organized response that results in different attitudes toward natural and nonnatural events. There is ample evidence that childhood anxiety disorders chronically lead to anxiety problems in adulthood.^[2] Most postchildhood behavioral disorders are caused by a lack of attention to the sensitive childhood period (especially from birth to age 5) and a lack of proper guidance in the development phase. This negligence leads to noncompliance of children to the environment and various abnormalities in the emotional, social, and educational dimensions of the child.^[3,4] Anxiety disorder in children and adolescents may include separation anxiety, social anxiety, generalized anxiety disorder, confusion disorder with or without agoraphobia, obsessive-compulsive disorder, and specific disorders.^[5-8]

One of the major changes in modern life that can play a role in child care is the increase in the number of mothers working outside the home.^[9] According to studies, the psychological stress caused by the double work pressure on the mother has reduced the physical and emotional health of the mother that such a mother is not able to interact with her child in a broad way and in accordance with the child's development.^[10] Yunos and Talib findings showing that mothers' working conditions had the greatest impact on parents' living conditions and children's behavior.^[11] Another study by Alipour *et al.* also showed that maternal employment plays a role in children's anxiety.^[4] Some studies indicate that the supervisory role of working mothers on different aspects of the child's life is diminished, and as a result of less supervision and differences in parenting styles, the probability of behavioral problems is more likely to increase.^[12]

Nursing is a prominent example of a profession in which a person spends many hours in the service of clients. Studies of occupational burnout of nurses show that in the same working environment, the burnout rate is different among individuals.^[13,14] One of the most common issues for women in high-responsibility and important careers, such as nursing, is how individuals can make a trade-off between the family responsibilities and their intense, meticulous, and tedious job. Since nurses are important members of the health service system and the

human community needs their services and they affect the health system with their different roles, it is important to examine the problems of this large group of mothers in the society.^[15] The nursing profession creates a lot of job stress due to the need for high skills and concentration in doing work, strong teamwork, and providing 24-h care.^[16] Many nurses today face the challenge of balancing their working life and family responsibilities. The results of studies indicate a high prevalence and recurrence of this phenomenon.^[17] Nurses are more prone to work-family conflicts due to their working conditions, such as lack of organizational support, number of shifts, hard work, long working hours, etc., Every year, many nurses leave their jobs due to a lack of job satisfaction. This not only wastes the costs of their training and education but also leads to the loss of skills, expertise, and resources.^[18,19] On the other hand, like other parts of society, one's job and career is the most important form of social identity, source of family support, and the forming factors of social relationships. That's why today, occupational environments and working conditions of employees are considered as factors which can enhance work quality, maintain the employee's health and promote better productivity during their working.^[20] Years according to the above, due to specific occupational characteristics of nurses, such as variable shift works, long working hours, and occupational stresses, and also the attention paid to the importance of nurses' health as a key member of the country's health system, and because nurses' health is directly related to their quality of care and their family roles, work-family conflicts and children parenting problems are not uncommon among them. Hence, as a source of stress, these aspects affect the quality of patient care and their occupational and family roles, which, after all, indicates the necessity of this study more than ever.

MATERIALS AND METHODS

This is a descriptive-analytical study that was performed in September 2018. The statistical population consisted of all nurses with 3–6-year-old children who were working in educational hospitals in Qazvin University of Medical Sciences. Given that in the systematic review,^[21] the prevalence of Anxiety Disorders among Children 6.8% to 85% has been reported and Considering the prevalence of 30%, $\alpha = 0.5\%$, $\beta = 80\%$, the less magnitude of the error that we accept 0.06, the sample size was 225 people. Two hundred of those working in the hospitals were qualified for the study, among whom, 155 were willing to participate in the study. Inclusion criteria for children in this study were 3–6 years of age, and the inclusion criteria for nurses were being employed in educational hospitals of Qazvin University of Medical Sciences, having children with the

above-mentioned inclusion criteria, and willingness to fill out self-report questionnaires. The exclusion criteria of this study moving from Qazvin to another city.

Measures

Demographic questionnaires

Data were collected using demographic questionnaires and the anxiety scale of preschool children. The demographic questionnaire is a researcher-made tool designed to access background information including child age, parent age, child gender, number of children, maternal employment history, working shifts, spouse occupation, working shifts of the spouse, babysitting during parent shift, and the birth order.

Anxiety scale

Spence's *et al.* anxiety scale for preschool children was used to assess the anxiety of children. The questionnaire developed a five-factor model for anxiety disorders in preschool children and included separation anxiety disorder, social anxiety disorder, obsessive-compulsive disorder, fear of physical injury, and generalized anxiety disorder. The total anxiety score is calculated from among these six subscales. This scale has 28 subscales that have been validated by Ghanbari *et al.* into the Persian version.^[22] In this self-report instrument, parents are asked to rate the frequency of child behavior on a 5-point Likert scale from Never (0) to Ever (4). The score for each subscale is obtained by summing the scores of the items of each subscale. The sum of the subscales scores indicates the total anxiety score. The children with a score above 34 were rated as having anxiety disorder.^[8] obtained the validity and reliability of this questionnaire to be 69.6, 62.1, 56.6, 0.48, and 58.4 for the subscales of generalized anxiety, social anxiety, obsession, physical injury fear (as a specific phobia), and separation anxiety disorder, respectively. The validity and reliability of this scale for generalized anxiety subscales, social anxiety, obsession, physical injury fear (as a specific phobia), and separation anxiety disorder were reported to be 0.67, 0.57, 0.55, 0.41, and 0.52, respectively.^[23]

In addition to descriptive statistics and table of descriptive indices (mean and standard deviation) of data, univariate and multiple regression analysis were used to evaluate the results in terms of significance, and the $P < 0.05$ was taken as the significance level.

After receiving approval from the Ethics Committee and Research Vice-Chancellor of Qazvin University of Medical Sciences and also, receiving the Code of Ethics related to the research (IR.QUMS.REC.1397.269), written consent was obtained from the nurses before the project, the

necessary information was given to the subjects in terms of confidentiality, and after explaining how the questionnaire was to be completed as well as the research objectives, the subjects were asked to complete the distributed questionnaires.

RESULTS

Demographics

The respondents to the questionnaire included ($n = 155$) parents working in educational hospitals in the city of Qazvin with children ($n = 77$) boys and ($n = 78$) girls ranging from 3 to 6-year-old. According to the parents' report, ($n = 80$; 51.6%) of the children participating in this study were in the age group of 3–4 years with a standard deviation of (1.06). ($n = 78$; 50.3%) of the participants were girls and ($n = 77$; 49.7%) were boys. ($n = 83$; 53.5%) of the mothers were in the age range of 26–35 with standard deviation (4.88). ($n = 82$; 52.9%) of them had only one child. The child participating in the study was the first child of the family in ($n = 71$; 67.1%) of cases. ($n = 114$; 73.2%) of the nurses had a 6–15 working experience. ($n = 138$; 89%) of nurses had variable, rotating shifts. ($n = 97$; 62.9%) of nurses had working spouses. ($n = 63$; 40.6%) of the children in the study were parented by other family members [Table 1].

Prevalence anxiety disorders

The prevalence of five subsets of anxiety disorders included ($n = 55$; 35.5%) generalized anxiety, ($n = 15$; 9.7%) social anxiety, ($n = 55$; 35.5%) obsessive-compulsive disorder, ($n = 28$; 18.1%) physical injury fears, ($n = 66$; 42.9%) separation anxiety, and ($n = 51$; 32.9%) total anxiety calculated from the sum of these five subscales [Table 2].

Relationship between demographic characteristics and anxiety disorders

Table 3 lists only the variables with significant correlations and omits other variables [Table 3].

DISCUSSION

The present study, aimed at determination of the level of anxiety disorders in the 3–6-year-old children of nurses working in educational hospitals of Qazvin, showed that the percentage of anxiety disorder in 3–6-year-old children was 32.9%, where, 35.5% had generalized anxiety disorder, 9.7% social anxiety, 35.5% obsessive-compulsive disorder, 18.1% physical injury fears, and 42.9% separation anxiety. Separation anxiety disorder was the most prevalent and social anxiety the least common.

There was a significant relationship between the gender of the child (girl) and the generalized anxiety and

Table 1: Demographic characteristics of nurses working in educational hospitals of Qazvin

Individual profile	n (%)
Child age	
3- 4	80 (51.6)
4.1- 5	40 (25.8)
5.1- 6	34 (21.9)
6.1- 7	1 (0.6)
Child gender	
Male	77 (49.7)
Female	78 (50.3)
Parent age	
<25	2 (1.3)
26- 35	83 (53.5)
36- 45	63 (44.5)
More than 45	1 (0.6)
Number of children	
1	82 (52.9)
2	71 (45.8)
3	2 (1.3)
Birth order	
First	71 (67.1)
Second	50 (32.3)
Third	1 (0.6)
Maternal employment history	
<5	12 (7.7)
6- 10	57 (36.8)
11- 15	57 (36.8)
16- 20	24 (15.5)
More than 25	5 (3.2)
Working shifts	
Morning	13 (8.4)
Evening	1 (0.6)
Night	3 (1.9)
Rotation	138 (89)
Spouse occupation	
Unemployed	7 (4.5)
Employee	97 (62.9)
Self employed	40 (25.8)
Military	11 (7.1)
Working shifts of spouse	
Morning	49 (31.6)
Morning and evening	60 (38.7)
Rotation	43 (27.7)
Babysitting during parent shift	
Another parent	36 (23.2)
Other family	63 (40.6)
Hospital kindergarten	10 (6.5)
Other kindergarten	22 (4.2)
Other	24 (15.5)

Table 2: Anxiety disorders in the children of nurses working in educational hospitals of Qazvin

Anxiety disorders	n (%)
Generalized anxiety	55 (35.5)
Social anxiety	15 (9.7)
Obsessive-compulsive disorder	55 (35.5)
Physical injury fears	28 (18.1)
Separation anxiety	66 (42.6)
Total anxiety	51 (32.9)

obsessive-compulsive disorders. There was no significant variable with social anxiety and physical injury fears. There was a significant relationship between separation anxiety disorder and variables of gender of the child

and working shifts of the parent. Finally, in the analysis of total anxiety disorder, variables of the gender of the child (girl) and the child care during hospital shifts of parents had a significant relation with this disorder. That is, girls had higher levels of anxiety, and also child care by other family members during hospital shifts of parents had a direct relationship with the anxiety disorder in the children under study.

In the study on anxiety disorders in elementary school students in Gorgan, anxiety disorder in the study population was 14.5% of which 18% had obsessive-compulsive disorder, and social phobia and separation anxiety were the most common disorders with 17.6%, and agoraphobia with 11% was the least common types.^[24] In another study on the role of demographic characteristics and mother's employment on the anxiety of 6–5 year-old children, the results showed that mother's employment, in general, had a significant relationship with children's anxiety.^[4] In another study in Gorgan, the prevalence of social phobia was 10.5%, 12.2% panic disorder, 12.8% generalized anxiety disorder, 11.9% obsessive-compulsive disorder, 15.7% separation anxiety disorder, and 18% fear of physical injury.^[25] In the results of this study, also, the most common disorder was separation anxiety which is similar to the results obtained in this study. The present study showed a higher prevalence of anxiety disorder in girls and was significantly different from boys, consistent with the study by Schimmenti and Bifulco.^[26] The results of our study are in line with Yunos and Talib findings showing that mothers' working conditions had the greatest impact on parents' living conditions and children's behavior^[11] This result is also consistent with the results of the present study.

CONCLUSIONS

In relation to health centers, due to specific occupational characteristics of nurses, such as variable shift work, long working hours and occupational stresses, and also attention paid to the importance of nurses' health as a key member of the country's health system, and because nurses' health is directly related to their quality of care and their family responsibilities, the work-family conflicts and children parenting problems are not uncommon among them. So, as a source of stress, these aspects affect the quality of patient care and their occupational and family responsibilities. In addition to the fact that preschool children are not cognitively experienced enough to reason independently and to influence their peers, and parents are more influential at no other time than in childhood or adolescence, identification and

Table 3: Significant relationship between demographic characteristics and anxiety disorders

Anxiety disorders	Variable	Crud β coefficient	Adjusted
Generalized anxiety	Child gender	0.52 (0.26- 1.02)*	0.50 (0.25- 0.99)* 1.06 (0.98- 1.14)
	Parentwork experience		
Social anxiety	Child gender	0.45 (0.14- 1.39)	0.49 (0.24- 0.97)* 1.52 (0.90- 2.54)
	Obsessive-compulsive disorder	0.46 (0.23- 0.91)*	
Physicalinjury fears	Another parent shift		0.41 (0.20- 0.81)** 0.96 (0.89- 1.03)
	Child gender	0.47 (0.20- 1.10)	
Separation anxiety	Child gender	0.37 (0.19- 0.71)***	1.07 (0.40- 2.82) 0.42 (0.14- 1.28)
	Mother's age	0.93 (0.87- 1.00)	
Total anxiety	Numberof children	0.56 (0.30- 1.04)	1.55 (0.96- 2.52) 0.51 (0.23- 1.15)
	Birth order	0.37 (0.18- 0.77)***	
Total anxiety	Shift	1.51 (0.95- 2.40)	1.57 (0.88- 2.77) 1.38 (1.07- 1.79)**
	Child gender	0.39 (0.19- 0.78)***	
Total anxiety	Birth order	0.52 (0.24- 1.099)	
	Shift	1.56 (0.91- 2.68)	
Total anxiety	Babysitting during parent shift	1.35 (1.05- 1.72)**	

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

treatment of this disorder can be effective in preventing further problems.

The main limitations of this study are not considering the type of work departments of nurses, which is suggested to be considered in future studies. Furthermore, to generalize the results, it is suggested that this research be conducted on the statistical population of other regions of the country.

Conflicts of interest

There are no conflicts of interest.

Authors' contribution

Study concept and design: R. Z., and S. Z.; analysis and interpretation of data: R. Z., S. Z. and Z. H; drafting of the manuscript: R. Z., S. Z. and M. S; critical revision of the manuscript for important intellectual content: R. Z., S. Z., and M. S; statistical analysis: R. Z., S. Z. and Z. H.

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