A Comparative Survey of Anxiety Level in Primary School Children with Working and Unemployed Mothers in North of Iran; 2013

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Abstract

Background: Anxiety is one of important disorders of mental health in children and adolescents which is influenced by various endogenous and environmental factors. The aim of this study was a comparative survey of anxiety level in primary school children with working and unemployed mothers in Gorgan in 2013.

Materials and Methods: In this descriptive-analytical and cross-sectional study, 745 male and female primary school students in public and private schools in Gorgan were selected using a combination sampling (stratification and clustering). For data collection were used Spence Children's Anxiety Scale (SCAS) included 38 questions. The collecting data were analyzed using SPSS-21 statistical software and chi-square and t tests. P values of less than 0.05 were considered as the significance level.

Results: The results showed that the average age of students were 9.4 ± 1.65 and in the 38.4% of them were males and 61/6% were female 61/9% of the students had working mothers and 38.1% of their mothers were unemployed. Spence Children's Anxiety Scale total score for the studied sample was 22.74 ± 12.72. A significant difference was observed between two groups of the students with working and unemployed mothers and between two sexes ($P<0.05$). The separation anxiety and fear of physical harm was the most common disorders and the fear of open spaces also had the lowest prevalence. The prevalence of anxiety disorders in children with unemployed mothers with lower education levels, in female, in families with fewer children and public school students was more.

Conclusion: This study showed that the prevalence of anxiety disorders in students whose mothers are unemployed and among the girls was more. Therefore, it's necessary to pay more attention to the mental health of the mothers and students with considering of their important role in family and society.

Introduction

Anxiety disorders in children are common. The investigators in the American Great Smoky Mountains Study found that, during a 3-month period, 2.4% of children ages 9 to 16 years fulfilled the diagnostic criteria for an anxiety disorder [1]. Similar rates were found in the British Mental Health Survey, in which 3.7% of 5- to 15-year-olds had a current anxiety disorder [2]. In the Dunedin birth cohort study, approximately 52% to 55% of young adults anxiety met the diagnostic criteria for a mental health disorder before 15 years of age [3]. Childhood anxiety increases the risk of anxiety, depression, substance misuse and educational underachievement in early adulthood [3]. Systematic reviews have highlighted that anxiety prevention programmers can be effective, although the results have been widely variable [4]. Other than being a common human experience, anxiety may co-occur with some medical disorders such as asthma, or some psychological disorders such as attention deficit hyperactivity disorder (ADHD) [5,6].

The effect of mothers' career on children's social relationships and mother-child relationship plays a significant role in anxiety level. Some authors stress the positive effect of mothers' career on the adjustment of children, while others stress the relationship between mothers' long working hours, lack of parental strong support, and lack of high-quality child-care. Whether a mother is a housewife or is employed, her anxiety level may be the main determinant of positive maternal behavior and adjustment of children [7-9].

Given the wide spectrum of anxiety disorders and their high prevalence in society on the one hand, and the increasing tendency of women to work outside the home and its effects on the anxiety level and children's character on the other hand. Therefore, this paper aims to compare anxiety levels in primary school children of employed and unemployed mothers. Measures of anxiety levels in primary school children are finding and relating to the associated psychometric properties detailed

Method

Participants

It was a cross-sectional study with a descriptive-analytic approach. The study was carried out on 745 primary school students of Gorgan, Iran, in the academic year of 2012-2013 using a hybrid sampling method (stratified and cluster sampling).

With regard to the study of Mousavi et al. in the year [10] prevalence of anxiety disorder was 8 percent in Children 4 to 6 years old (in that

level 95 and 2 accuracy at least) 707 children needed that With regard to the method of selecting, 745 children as the volume of the sample.

Primary schools of Gorgan were divided into four categories: boys' governmental school, girls' governmental school, boys' non-governmental school, and girls' non-governmental school. Out of each category, three schools were selected (12 schools in total).

Inclusion criteria: All elementary students who were ready for complete information...and when they have severe mental health problem they excluded (with Interviews of psychiatrist).

Measures

The SCAS is a child self report measure developed to closely align with Diagnostic and Statistical Manual of Mental Disorder diagnoses (e.g., generalized anxiety disorder, separation anxiety disorder, and social phobia; (Association) [11] offering clinical cutoff scores as well as translations into more than 20 languages. Scores on the SCAS differentiate children with anxiety from those with other disorders [12-14].

Spence Children's Anxiety Scale (SCAS) [12,14] comprises 38 items designed to assess child anxiety symptoms across six domains: social phobia, separation anxiety, panic attack/agoraphobia, obsessive compulsive disorder, generalized anxiety, and physical injury fears. For each item, children select the response that best describes how often a given feeling, thought, or behavior is experienced. Items are scored as 0 (never), 1 (sometimes), 2 (often), or 3 (always). Spence, Barrett, and Turner reported internal consistencies for the total and subscale scores ranging from 0.60 to 0.92 and 12 week test-retest reliability estimates ranging between 0.51 and 0.75. The SCAS correlates significantly with the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds and Richmond) (r=0.40 to 0.75, p<0.001; Spence et al.). The internal consistency (alpha) coefficient for the SCAS total scale is 0.93 in this sample. This research instrument was standardized in Iran by Mousavi et al. in a study on 6-12 year-old children [10].

Level of anxiety is a dependent variable and Maternal employment status, maternal education Number of children. Location are in Dependent variables of the study. All of data analysed and they have normal distribution. The trial was performed in accordance with the Declaration of Helsinki and subsequent revisions (World Medical Association. Declaration of Helsinki) and approved by the ethics committee at Gorgan University of Medical Sciences. Written informed consents were obtained from the participants before entering the study.

Analysis

Central indices, including average, frequency, and frequency percentage, and dispersion indices such as standard deviation were used to describe data. To evaluate results in terms of their significance, chi-square test and t-test were used for qualitative and quantitative variables, respectively. All statistical analyses were carried out using SPSS 21 and P valuesless than 0.05 were considered to be significant.

Results

Demographic information

Of 900 questionnaires distributed among subjects, 58 (7%) were filled out incompletely and 117 (13%) selected "Never" in 95% of the cases, which were excluded from data analysis. Finally, 745 questionnaires were analyzed. Results showed that the average student age was 9.4 ± 1.65 (ranging between 6 and 13). Of 745 students, 461 (61.9%) had employed mothers and 284 (38.1%) had unemployed

mothers. According to parent reports, the total mean and standard deviation of children's anxiety scores was 22.74 ± 12.72. Among studied sub-scales, agoraphobia had the highest rate (742) and general anxiety disorder (GAD) had the lowest rate (731) (Tables 1-3).

Anxiety disorder in children with employed mothers

Among 284 employed mothers, 43 had a high school diploma or lower degrees, while 241 had a college degree. In this group, there was a statistically significant difference between mothers' education level and traumatophobia sub-scale (P=0.023). Traumatophobia was the highest among under-diploma mothers, while it was the least among mothers with a bachelor's degree (BA). No statistical difference was observed in terms of other sub-scales (P>0.05).

Moreover, among the group of children with employed mothers, there was a significant difference between the number of children, separation anxiety disorder (SAD) sub-scale (P=0.045), traumatophobia (P=0.021), and the overall score of Spence children's anxiety scale (SCAC) (P=0.033). However, there was no significant difference in terms of the sub-scales such as agoraphobia, social phobia, obsessive-compulsive disorder, and general anxiety disorder (P>0.05). As shown in Table 1, there was also a statistically significant difference in terms of general anxiety disorder, which was higher in governmental schools (P=0.022).

There were 4 types of occupations: housewife, educational occupation, employee, and self-employed. There was a significant difference among the four occupational groups in terms of test for equality of medians (analysis-variance), the overall scale score (P=0.01), separation anxiety disorder (P=0.03), traumatophobia (P=0.002), and obsession (P=0.03). However, no statistically significant difference was observed in terms of other sub-scales. Pairwise comparison using Tukey's post-hoc test showed that there is a significant difference between housewives and mothers with educational careers in terms of traumatophobia (P=0.001), overall scale score (P=0.013), and obsession and compulsion (P=0.007). The rate for the group of children with housewife mothers was the highest, while it was the lowest for children with mothers who had educational occupations.

Anxiety disorder in children with unemployed mothers

Among 461 unemployed mothers, 342 had had a high school diploma or lower degrees, and 119 had a college degree. Social phobia was the highest among children with under-diploma mothers, while it was the least for children with BA mothers, which was statistically significant (P=0.046). Obsession sub-scale was the lowest among children with under-diploma mothers, while it was the highest in children of mothers with master's degree (P=0.008).

There was a statistically significant difference among the children with unemployed mothers in terms of students' school and obsessive-compulsive subscales (P=0.006), general anxiety disorder (P=0.026),

Mean ± SD	Frequency	Sub scale
08/2 ± 57/1	742	agoraphobia
62/3 ± 16/5	738	separation anxiety
19/3 ± 31/5	741	traumatophobia
95/2 ± 70/3	736	social phobia,
68/2 ± 03/3	727	obsessive-compulsive disorder
89/2 ± 99/3	731	general anxiety
72/12 ± 74/22	745	overall score of Spence children's anxiety scale

Table 1: The mean scores of anxiety in children based on parental report

P value	Employed Mothers		Unemployed Mothers		Sub scale
	number	Mean ± SD	number	Mean ± SD	
147/.	284	82/1 ± 34/1	461	21/2 ± 69/1	agoraphobia
027/.	284	16/3 ± 47/4	461	84/3 ± 46/5	separation anxiety
005/.	284	03/3 ± 89/4	461	26/3 ± 56/5	traumatophobia
915/.	284	87/2 ± 65/3	461	00/3 ± 73/3	social phobia,
003/0	284	33/2 ± 59/2	461	84/2 ± 29/3	obsessive-compulsive disorder
658/.	284	57/2 ± 82/3	461	07/3 ± 08/4	general anxiety
012/0	284	19/11 ± 97/20	461	47/13 ± 83/23	overall score of Spence children's anxiety scale

Table 2: The mean anxiety scores in the two groups of children with working mothers and unemployed (independent sample t test).

	Unemployed mothers				employed mothers			
	male		female		male		female	
Sub scale	mean	± SD	mean	± SD	mean	± SD	mean	± SD
agoraphobia	1.55	2.06	1.80	2.31	1.35	1.94	1.35	1.75
separation anxiety	5.15	3.73	5.66	3.91	4.25	2.95	4.94	3.27
traumatophobia	5.02	3.23	5.91	3.24	4.29	2.68	5.27	3.19
social phobia,	3.39	2.84	3.94	3.09	3.66	2.96	3.65	2.83
obsessive-compulsive disorder	3.18	2.62	3.36	2.97	2.68	2.21	2.54	2.41
general anxiety	4.12	3.01	4.07	3.11	3.89	2.57	3.78	2.59
overall score of Spence children's anxiety scale	22.36	13.04	24.74	13.68	20.13	11.09	21.51	11.27

Table 3: The mean and standard deviation of anxiety on the job and the sex of the child (Independent sample t test)

and total score of children's anxiety scale score (P=0.015) so that the rates were higher for governmental schools, compared with non-governmental schools. However, this difference was not statistically different in terms of sub-scales such as agoraphobia, separation anxiety disorder, traumatophobia, and social phobia (P>0.05).

Comparing anxiety sub-scales in the groups of children with employed and unemployed mothers

Findings of data analysis showed that there was a statistically significant difference between the two groups of employed and unemployed mothers in terms of the subscales such as separation anxiety (P=0.027), obsessive-compulsive disorder (P=0.003), traumatophobia (P=0.005), and the overall score of Spence children's anxiety scale (P=0.012). This difference was higher in the group of students with unemployed mother, compared to the group of students with employed mothers.

Moreover, there was a statistically significant difference between the groups of girls with unemployed mothers and boys in terms of agoraphobia (P=0.045), traumatophobia (P=0.004), and phobia (P=0.038). However, no significant difference was observed between the two groups in terms of the subscales such as agoraphobia, social phobia, and general anxiety disorder (P>0.05).

Discussion

The findings of this study showed that students with unemployed mothers suffer from anxiety disorders more than those with employed mothers. This can indicate that in Iran, unemployed mothers who are often housewives have more psychological concerns caused by taking the role of a wife and a mother simultaneously and convey such concerns to their children more severely. Moreover, the findings showed that the level of higher education in employed mothers was higher compared to unemployed mothers. This can indicate that increased education level in employed mothers, compared to unemployed mothers, results in increased awareness among them. It can also be considered as a positive confounding factor in playing maternal role, which

consequently decreases the level of anxiety disorders in children. A study by Ahmadifaraz et al. indicated that employed mothers' accepting numerous roles such as a wife and a mother creates expectations in their children, husbands, families, and societies, which forces them to respond to family and work requests and expectations. This leads to role conflict in employed mothers along with high stress and pressure which can in turn affect the physical and mental health of mothers as well as their children's mental health [7].

Our finding showed a lower prevalence of anxiety disorders in children with employed mothers compared to those with unemployed mothers, while the study by Breevaart and Bakker [15] showed that the children of employed mothers are faced with more behavioral problems, and this can be associated with parents' career fatigue and burnout different lifestyle and attention to children's fate in our society and family emotional communication can justify the different results [15].

This study indicated that maternal unemployment can affect children's mental health and behavioral pattern which is inconsistent with the study by Han et al. The first study showed that mothers who often worked night shifts spent significantly less time with their children and had a lower quality of life. These confounding factors were significantly associated with adolescent risk behaviors. Given that in our country the majority of women work day shifts and except for a few jobs, women do not work night shifts, in comparison with other countries, Iranian women and consequently their children are expected to be less affected by the psychological complications of night work including psychological stress caused by sleep disorders, career fatigue, and emotional shortcomings caused by weakened mother-child relationship.

It seems that career patterns and work pressure are harder and more complicated for employed women in other countries, which imposes additional psychological stress on them, compared to Iranian women. On the other hand, in Iran, mother-child emotional relationship is maintained though some mothers are employed. This can serve as a protective factor against psychological and social damage. The role of

other relatives in taking care of children is also of particular importance. Furthermore, the disciplinary patterns of students with employed mothers is designed in a way that it increases students' preparedness over time to encounter problems, psychological trauma, and social disorders. These patterns can also decrease the negative influence of critical conditions on students.

As mentioned above, the findings of our study showed this significant difference, too. However, it was inconsistent in terms of the prevalence of anxiety disorders in children with employed mothers. It should be noted that the study by Mashhad et al. was conducted on the third grade of guidance school, whereas our study was conducted on elementary school students. This age difference justifies the difference in the result. The results of a study on the level of separation anxiety disorder in preschool children with employed mothers and those whose mothers were housewives indicated that there is no significant difference between the level of separation anxiety disorder in preschool children with employed mothers and those whose mothers were housewives.

In the present study, a statistically significant difference was observed in terms of the prevalence of anxiety disorders between the two groups of employed and unemployed mothers, which is inconsistent with the study by Attari. This study showed that anxiety and enuresis in children whose mothers worked evening and night shifts, respectively, was more prevalent compared to other working shifts of employed mothers. However, no significant difference was observed in terms of the prevalence of behavioral disorders between the two groups of employed mothers and housewives [16].

It can be concluded that it seems necessary to pay more attention to the mental health of mothers and students through preparing cultural, social, economic and educational contexts while considering their important role in the family and society. Given the findings of this study, systematic planning for the prevention of mental disorders and behavioral problems are recommended in order to make proper preparations in various areas affecting the health of mothers and their children. On the other hand, considering other factors involved in this issue, a more comprehensive study is recommended to be conducted and other psychological disorders such as depression and psychosis are also recommended to be studied.

Limitation

This study is a cross sectional study and sample size selected just in school so it's needed to study chohort and prospective study with all children not just student. In addition performance was not clearly check in two groups (employed vs. unemployed). The results of this review also may not apply to all children.

Clinical Use

Unemployed mothers and even employed mothers can participate in educational workshops for children to prevent anxiety disorder.

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