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## Research Paper

# Prediction of Children's Anxiety based on Mother's Corona Anxiety and Positive Negative Effect



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### ABSTRACT

**Objective** The relation of family factors in patients with anxiety disorders is a new approach with therapeutic applications.

**Methods** The aim of this research was to Prediction of children's anxiety based on The mother's corona anxiety and negative affect. The research method was applied in terms of purpose and in terms of data collection descriptive-correlation. The statistical population of study consisted of all mothers with Corona anxiety going to Aramesh counseling centers at Urmia City. 63 people among them were selected using available sampling method. All subjects completed the Spence children's anxiety questionnaire/a (SCAS), Scale of Positive and Negative Experience (SPANE) and corona anxiety scale (CDAS). Data analysis was done by SPSS23 software with Pearson correlation coefficient and multiple regression methods.

**Results** The results indicated that the mother's corona anxiety and negative affect predict children's anxiety positively and significantly ( $P < 0.01$ ).

**Conclusion** These findings can be effective in the clinical and counseling settings.

## 1. Introduction

Anxiety, as a mental illness, plays an important role in most stressful situations and impairs a person's functioning. Meanwhile, anxiety disorders in children and adolescents as a diagnostic category affect mental health and are associated with significant negative consequences in personal, academic social adjustment (Poursina, Tahmassian and Sadeghi, 2014).

9.5 to 14.5 percent of children experience a variety of emotional and psychological problems. One of the most important of these problems is anxiety. Anxiety

is a vague and unpleasant feeling in the form of anxiety that may harm their socio-emotional and academic ability and function in the coming years, (Ebadynia, Barzegari Esfadan, and Mishti ,2017).The issue of child anxiety is important because childhood anxiety disorders predict a wide range of psychological problems in adolescence (JanicleMasi and Vick, 2009). There are several factors involved in the development of anxiety disorders. An extensive body of studies has emphasized the mother-child relationship as a contributing factor to child anxiety (Gallagher and Cartwright-Hutton, 2008).

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Poursina et al. (2014) stated that the family, as the first and most important factor in child development, has a major impact on the child's mental health on the one hand and his mental injuries on the other. Factors such as parents' personality, their mental and physical health, educational methods applied within the family, affect children (Shaykh al-Islami and Hassannia, 2015). Since December 2019, a new strain of the virus called coronavirus (Covid-19), which originated in Wuhan, China, has received worldwide attention and has become one of the major health crises (Adams and Wall, 2020). It is a new type of infectious disease caused by the acute respiratory syndrome of the coronavirus (Li, Yang, Liu, Zhao, Zhang, and Zhang, 2020).

The wide of the virus has led to a decline in mental health and the occurrence of some psychological disorders in individuals. Conditions associated with severe stress and anxiety, emergencies natural disasters can increase the risk of psychological complications, including anxiety in mothers. Coronary anxiety disorder is an anxiety disorder caused by the spread of the coronavirus. Because the mother is one of the most important pillars of life, mothers' mental health problems are associated with short-term and long-term risks to their children's physical, cognitive and mental development (Meadows et al., 2007).

In their study, Saddik et al. (2020) showed that high levels of maternal anxiety during coronary heart disease increased children's anxiety levels. Another factor influencing anxiety disorders is the person's negative emotional experiences, which can themselves be affected by parent-child interaction. Emotions are one of the aspects of human behavior that play an important role in human life (Harris 2001). Negative emotion means how much one feels unhappy and unpleasant. Negative emotion is a general dimension of inner despair and lack of enjoyable work, which is followed by avoidant moods such as anger, hatred, humiliation, guilt, fear and anger (Sepah Mansour et al., 2013). Results of Abbasi et al. (2017) showed that the experience of positive emotion is negatively related to anxiety disorders and the experience of negative emotion is positively related to anxiety disorders. Also, Siah Mansour et al. (2013) in their research reported a significant positive relationship between negative emotion and anxiety.

Because children are vulnerable and unable to care for themselves, parental support is essential to maintaining a child's physical and mental health. On the

other hand, considering the critical conditions of the virus epidemic, considering the role and effect of children's anxiety on various psychological functions and its more or less stable effects on children's mental health in the future, it seems important to study the important factors influencing the formation of anxiety. It has a special feature (Abbasi et al., 2017).

In general, it can be said that anxiety is one of the most common disorders in childhood that if not paying attention to identifying the causes and treating it, can lead to serious injuries in adolescence and adulthood. Therefore, it is important to study the various factors in the occurrence and exacerbation of children's anxiety to implement policy-making and planning in the field of prevention and family mental health. Therefore, the present study intends to investigate the role of coronary anxiety and mothers' negative motions on children's anxiety. due to the lack of research related to the subject of the present study, especially in our country, Also, given that anxious mothers have predicted potentially ambiguous situations as dangerous and they see these situations as a threat to themselves and their child and following this negative cognitive assessment, negative emotions emerge, the result is increased anxiety in themselves and their children. therefore, the aim of This study- aimed to predict children's anxiety based on coronary anxiety and mothers' negative emotions.

## 2. Materials and Methods:

The present study was a descriptive-correlational study and its statistical population included all mothers with children aged 6 to 12 years who were referred to the Urmia Rehabilitation Counseling Center during the second quarter of 1399 due to anxiety caused by coronary heart disease. In the present study, the available sampling method was used. For this purpose, research questionnaires were provided to the sample group. Finally, by screening the questionnaires based on the inclusion criteria by the researchers, the data of 67 samples were analyzed based on the Krejcie-Morgan table. inclusion criteria were: having a child between 6 and 12 years, no use of psychiatric drugs by the mother or child, no anxiety in the child before the onset of coronavirus. exclusion criteria were; consumption of psychiatric drugs by mothers and their children, suffering from other psychological disorders and participants' lack of interest in continuing the research. the data collection tools in the present study were:

**Spence Child Anxiety Scale (SCAS):** This questionnaire was designed to assess the anxiety of children aged 8 to 15 years based on the 1997 DSM-IV Diagnostic and Statistical Classification by Spence in Australia. The questionnaire has two copies of child (45 items) and parent (38 items). Scoring is based on a 4-point Likert scale never (0), sometimes (1), often (2), always (3), and has 5 scales: separation anxiety, social anxiety, obsessive-compulsive disorder, panic-market phobia Measures generalized anxiety. The score on the whole scale indicates the degree of anxiety. The scale reliability has been reported to be 92% for general anxiety and 60% to 82% for subscales (Spence et al., 2003). In the study of Mousavi et al. (2001), the reliability of this questionnaire was reported between Cronbach's alpha method between 62% and 89%- 5 factors of the questionnaire were confirmed by confirmatory factor analysis (Mousavi Moradi et al., 2006). The reliability of this scale in the present study was obtained using Cronbach's alpha coefficient of 0.93.

**Positive and Negative Emotion Scales (PANAS):** A 20-item measurement tool designed to measure two dimensions of mood, negative emotion and positive emotion (Watson et al., 1988). Each subscale has 10 items. Items are ranked on a five-point scale (1 = very low to very high = 5). Narrative coefficients are 88% for positive emotion and 87% for negative emotion. The reliability of Cronbach's alpha coefficient is 68% positive emotion, negative emotion 71%. These two emotional subscales are independent of each other (Hassani and Nadi, 2016). The reliability of this questionnaire in the present study was calculated using Cronbach's alpha coefficient of 0.83.

**Coronavirus Anxiety Scale (CDAS):** This tool has been developed and validated to measure anxiety caused by the outbreak of coronavirus in Iran. The final version of this tool has 18 items and 2

components. Items 1 to 9 measure psychological symptoms and items 10 to 18 measure physical symptoms. The instrument is the point on a 4-point Likert scale (never = 0, sometimes = 1, most of the time = 2, and always = 3); Therefore, the highest and lowest scores that the respondents get in this questionnaire are between 0 and 54. High scores in this questionnaire indicate a higher level of anxiety in individuals. The reliability of this tool was obtained using Cronbach's alpha method for the first factor ( $\alpha = 879\%$ ), the second factor ( $\alpha = 861\%$ ) and for the whole questionnaire ( $\alpha = 919\%$ ) (Alipour et al., 2019). The reliability of this questionnaire in the present study was calculated using Cronbach's alpha coefficient of 0.85.

The research method was that the questionnaires were distributed in the sample group for two months and during this time 67 people answered the questionnaire questions. Finally, after removing the incomplete items of the questionnaires, 63 answers were obtained and the data were analyzed using SPSS 23 software in two parts: descriptive (mean and standard deviation) and inferential (Pearson correlation methods and multiple regression analysis). it placed.

### 3. Results

A total of 63 mothers with children aged 6 to 12 years who referred to Urmia Rehabilitation Counseling Center during the second quarter of 1399 due to anxiety caused by coronary heart disease with an average age of 37 years participated in the present study in which 56 subjects (93.7%) ) With a diploma and higher education and 7 subjects (11.1%) were below the diploma level.

Information about the analysis of descriptive statistics based on the mean and standard deviation of the studied variables is given in the table below.

**Table 1. Descriptive findings of research variables**

Variable	M	SD	N
Child Anxiety	41/03	21/43	63
Separation Anxiety	7/62	4/75	63
Social anxiety	9/38	6/06	63
Obsessive-compulsive-practical	6/01	3/95	63
Special fear	9/41	4/71	63
Market Fear	2/26	2/81	63
Pervasive anxiety	6/77	3/83	63
Corona anxiety	19/42	10/87	63
Negative emotion	24/93	7/69	63

Pearson correlation coefficient and multiple regression analysis were used for inferential analysis

and research hypotheses. Table 2 shows the correlation matrix.

**Table 2. Correlation matrix of research variables**

Variable	1	2	3	4	5	6	7	8	9
<b>1. Child Anxiet</b>	1								
<b>2. Separation Anxiety</b>	0/82**	1							
<b>3. Social anxiety</b>	0/90**	0/76**	1						
<b>4. Obsessive-compulsive-practical</b>	0/82**	0/66**	0/70**	1					
<b>5. Special fear</b>	0/67**	0/39**	0/52**	0/40**	1				
<b>6. Market Fear</b>	0/48**	0/18	0/51**	0/38**	0/43**	1			
<b>7. Pervasive anxiety</b>	0/84**	0/69**	0/77**	0/70**	0/46**	0/47**	1		
<b>8. Corona anxiety</b>	0/59**	0/43**	0/42**	0/58**	0/62**	0/40**	0/46**	1	
<b>9. Negative emotion</b>	0/72**	0/51**	0/63**	0/68**	0/48**	0/40**	0/67**	0/63**	1

The results of Table 2 show that child anxiety has a significant positive correlation with coronary anxiety ( $p < 0.01$ ) and negative emotion ( $p < 0.01$ ).

Multiple regression was used to test the hypothesis that coronary anxiety and maternal negative emotion can predict child anxiety. To use multiple regression, the following assumptions must be made:

The distribution of dependent variable data is normal. In this study, the Kolmogorov-Smirnov test was used to evaluate the normality of data distribution of coronary anxiety and negative emotion variables. The results showed that the significance levels

obtained for each of the research variables are greater than 0.05, so the data of all variables are normal and parametric tests can be used to test each of the variables. The variance of the dependent variable at all points of the variables is equal. Test the equality of variances in this study, Leven statistical test was used which also assumed the equality of variances.

Multiple regression analysis was used to determine the contribution of each of the variables of coronary anxiety and negative emotion in predicting child anxiety. Table 3 shows the results of multiple regression.

**Table 3. Multiple regression coefficients to predict child anxiety with coronary anxiety and negative emotion**

Variable	B	SE	Beta	t	F	R	R2	P
<b>Corona anxiety</b>	1/22	0/21	0/59	5/71	32/66	0/59	0/34	0/000
<b>Negative emotion</b>	2/11	0/26	0/72	8/11	65/82	0/72	0/51	0/000

As can be seen in Table 3, the significance value is less than 0.05 and shows the significance of the regression model, ie at least one of the predictor variables has a significant effect on the criterion variable. Given the significance of the whole model, it

must now be examined which of the coefficients is not zero, or in other words, which variable or variables have a significant effect on the model. The t-test is used for this purpose.

**Table 4. Standard non-standard coefficients and t-statistics of the main variables entered in the regression equation**

Predictive variable	Not standardized coefficients	Standardized coefficients	t	Sig	The desired level of significance
<b>Constant</b>	6/78		11/27	0/000	0/05
<b>Corona anxiety</b>	0/21	0/59	4/89	0/000	0/05
<b>Negative emotion</b>	0/26	0/72	8/11	0/000	0/05

The results of Table 4 show that coronary anxiety with a beta of 0.59 at the level of  $P < 0.05$ , and negative emotion with a beta of 0.72 at the level of  $P < 0.05$  and positively predict the tendency to suicide.

#### 4. Discussion and Conclusion:

This study aimed to predict child anxiety based on coronary anxiety and negative emotion in mothers with children aged 6 to 12 years who were referred to Urmia Relaxation Counseling Center during the second trimester of 2021 due to anxiety caused by coronary heart disease. The results of this study showed that child anxiety has a significant positive relationship with coronary anxiety and maternal negative emotion and coronary anxiety and negative emotion predict child anxiety in a positively. These results are consistent with the findings of Saddik et al. (2020), who showed in their study that high levels of maternal anxiety during coronary heart disease have increased levels of anxiety in children. Explaining this finding, it can be said that conditions with severe stress and anxiety, emergencies and natural disasters can increase the risk of psychological complications in mothers. Since the mother is one of the most important pillars of life, it can play an important role in reducing or increasing the tolerance of family members to problem behaviors (Sadeghzadeh et al., 2019). Mothers with anxiety, depression, and poor mental health perceive their children negatively, which affects how they treat their child and how they treat the child (Aslani et al., 2014). The mother's mental stress reduces her physical and emotional health, and such a mother is not able to interact with her child broadly and appropriate to the child's development. Childhood plays an important role (Khanjani et al., 2016). Also, because mothers who feel intense and persistent anxiety about the coronavirus and its dangers, consider everything and everywhere dangerous, so always in a sense of tension, nervousness, lack of control over the environment and constant waiting They are at risk of contracting the virus and as a result cause anxiety in their children (Shirzadi et al., 2020). Another finding of the present study was that negative emotion negatively and significantly predicts the child's anxiety. This finding is consistent with the results of

Abbasi et al. The experience of negative emotion is positively correlated with anxiety disorders. It is also consistent with the results of Siah Mansour et al. (2013) who reported a significant positive relationship between negative emotion and anxiety in their research. Explaining these findings, it can be said that one of the most important and influential factors in the formation of anxiety disorders in children is parent-child interaction (Bradford et al, 2017). When mothers experience positive emotions, they find the situation safer and therefore less anxious in their children. In contrast, mothers who experience negative emotions tend to have negative events and see the situation as unsafe. This provides the basis for more anxiety (Abbasi et al., 2017). Overall, the results of the present study showed that anxiety caused by coronary heart disease and negative emotion in mothers can affect the quality of parent-child interactions by affecting their thoughts and behavior and lead to a variety of mental disorders such as anxiety in children.

Be. Therefore, due to the continuation of the course of coronary heart disease and until the general use of the vaccine, it is necessary to pay attention to this type of anxiety in people, especially in mothers. Therefore, it is suggested that psychologists in the days of quarantine, include the education of families virtually in their program, and in this way while emphasizing on families to follow the news related to coronary heart disease from reliable sources, to teach ways to entertain. It is also suggested that by developing a comprehensive educational program that includes interventions to improve mother-child relationships, steps can be taken to address the anxiety problems of children. Among the limitations of the present study, the limitations of the statistical population, which include only mothers and the type of research (correlation), raise limitations in the field of generalizations, interpretation and etiological documents of the studied variables that should be considered. . In addition, because the study was cross-sectional and the researchers had no control over recent life events of the participants, it is suggested that further studies be conducted longitudinally.

## 5. Ethical Considerations

### Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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### Authors' contributions

All authors have participated in the design, implementation and writing of all sections of the present study.

### Conflicts of interest

The authors declared no conflict of interest.

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