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Brief Report

The study of the relationship between maternal anxiety and number of children

*Maryam Safara¹; Mojtaba Salmabadi²

¹Assistant professor of Alzahra University, Tehran, Iran

²M.A. in family counseling, Allameh Tabataba'i University, Farhangian University, Birjand, Iran

Abstract

Introduction: The present study aimed to investigate the relationship between the anxiety of mothers and the number of children.

Materials and Methods: The population of the study that conducted in the first three months of 2018 consisted of women in Alborz and Tehran provinces. Through simple random sampling, 384 mothers were selected. The instrument of this study was Spielberger's state-trait anxiety inventory (1970). Data were analyzed by Pearson correlation and regression analysis.

Results: The results showed that there is a positive correlation between the anxiety of mothers and the number of children ($R = 118.0$); and number of children can predict approximately 1.4% of the maternal anxiety variance.

Conclusion: The results of this study demonstrate the need to more attention in the fields of education and health about anxiety and the number of children of Iranian families to reduce the stresses about the more children.

Keywords: Anxiety, Child, Mother

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*Corresponding Author: Alzahra University, Tehran, Iran
safara_maryam@yahoo.com

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Introduction

Humans have tried for long time to express their thoughts, states, emotions, sensations and inner urges with different words and expressions. For this reason, in the course of internal conflict, they use terms such as apprehension, nervousness and distress, which currently is called anxiety in psychology. Anxiety is defined as a vague feeling of fear and worry that has an unknown origin and is of physical, cognitive, emotional and behavioral components (1). Anxiety refers to an unpleasant emotional state that is a product of people's stress and conflicts, and its evident symptom of is fear and worry about future incidents (2). The results of the research indicate that anxiety and depression as two major disruptions endanger the mental health of the individuals and are one of the most common psychiatric disorders in all age groups (3). As anxiety is an unpleasant quality, the sufferer resorts to defenses and reactions that using them is unconscious and excessive use is undesirable and leads to deeper mental-behavioral disorders (4).

On the other hand, today there are different trends in family structure in societies. One of the changes has been the diminished number of families in the past decades. This change in family structure may lead to an increase in single-child families; and the increase in the age of marriage, economic justifications and employment of women are among the most important reasons for families not to have many children (5). The increase in single-child families and their consequences has led to the reflection of many family experts, psychologists, sociologists, and so on. In other countries, various studies have been conducted on single-child families, but in general, the findings are confusing and in some cases contradictory (6). The findings of Ali-

Moradi and Ranjbaran (7) showed that there was a significant relationship between the emotional coping style and the avoidant coping style in the coping styles scale and the high anxiety scores in the anxiety scale with multiplicity of children in mothers, but a significant relationship between single-child and problem solving coping style was not observed. Also, Khojasteh-Nejad (8) showed that the level of depression and stress among household mothers with several children and household mothers with single child is equal, but in the case of anxiety variable, the anxiety level among household mothers with several children was more than household mothers with single child.

Therefore, despite various researches, there is still an inconsistent and vague picture of the effects of having single child on mothers, and the problematic nature of having single child in producing mothers' anxiety compared to mothers with more than one child has not fully proven yet. On the other hand, as far as the researcher knows, a study that has directly addressed the subject in the target community in the country has not been found, so there is a research gap in the field of research literature. Therefore, the present study was carried out to investigate the relationship between the anxiety of mothers and number of children.

Materials and Methods

The study population of this descriptive-correlational study included women from Alborz and Tehran provinces who selected using simple random sampling. So, 384 subjects were selected based on Morgan's table. Two groups of mothers were studied. The first group consisted of mothers with one child and the second group consisted of mothers with two or more children. The instrument to collect data was the State-Trait Anxiety Inventory.

Research instrument

Spielberger's State-Trait Anxiety Inventory (STAI): This inventory was developed by Spielberger has 40 items, including 20 items with four options (1=not at all, 2=sometimes, 3=generally, 4=very high) to measure state anxiety and 20 items with four options (1=almost never, 2=sometimes, 3=most of the time, 4= almost always) to measure trait anxiety. Trait Anxiety Inventory is an instrument with a good reliability and validity that can be used in different populations. Spilberger's reported Cronbach alpha coefficients for Trait Anxiety Inventory equal to 0.92 and 0.91 for its subscales, respectively. Also, the reliability of the state anxiety scale was from 0.16 to 0.62 and the reliability of the trait anxiety scale was 0.73 to 0.86 (9). Naeninian et al. calculated the internal consistency of both scales through a Cronbach alpha on a 600-person group. Cronbach alpha coefficients for state anxiety and trait anxiety have been reported to be 0.91 and 0.92, respectively (10). In the present study, the total reliability of the questionnaire was 0.87 by Cronbach alpha.

Data were analyzed by descriptive statistics such as frequency, percentage, mean and inferential statistics through Pearson correlation and regression analysis. Also, in this study, all relevant ethical principles including the confidentiality of the questionnaires, the informed consent of the participants in the research and the freedom to leave the research have been observed.

Results

According to the obtained data, there was a significant difference between the mean scores of anxiety of mothers with one child and that of mothers with more than one child as well as the total score of anxiety. The mean and standard deviation of state anxiety of mothers with one child were 46.44 ± 6.34 , those for trait anxiety were 43.37 ± 6.50 and for total anxiety were 89.82 ± 11.85 . In the mothers with more than one child, these amounts for state anxiety were 47.53 ± 5.08 , for trait anxiety were 44.77 ± 5.52 and for total anxiety were 92.307 ± 8.94 , respectively.

Table 1. Correlation matrix between number of children and anxiety of mothers

	Total score of anxiety	State anxiety scale	Trait anxiety scale
Number of children	0.118	0.094	0.116

The correlation coefficients in Table 1 show that there is a significant relationship between the number of children and the anxiety of the mothers at the level of 0.05 and the value of this relationship is 0.118.

Table 2. Regression analysis model to examine the relationship between the number of children and the anxiety of mothers

Predictor	R	R ²	Modified R ²	F	Sig.
Number of children	0.118	0.014	0.011	5.37	0.021

As Table 2 shows, the value of R is equal to 0.118, this indicates that there is a correlation between the two variables of the number of children and the anxiety of the

Therefore, with 95% confidence, it can be concluded that there is a positive correlation between the anxiety of mothers and the number of children, although, the extent of this relationship is not significant.

mothers, but is not very strong. The value of R² indicates that the number of children variable approximately explains (predicts) 1.4% of the variance in the anxiety of mothers, which is, in fact, not significant. The F-value indicates that the regression model can predict the changes of the dependent variable significantly (and appropriately), so we conclude that the applied model is a good predictor of the anxiety of mothers. Therefore, the

significance level indicates that the regression model is significant.

Table 3. The coefficients of the number of children in predicting the anxiety of mothers

The variables entered in model	Model	B	SE	Beta	t	Sig.
Number of children	1. Source width variable coefficient	87.33	1.695	0.118	51.531	0.000
		2.48	1.072		2.318	0.021

The results of the above table indicate that the significance level of the predictive variable (number of children) and the source width (0.02) are smaller than 0.05, so they remain in the regression model. In column B, the source width and the non-standard coefficient of predictive variable (regression line slope), namely the number of children, are presented that in this hypothesis, respectively, are 87.339 and 2.484. Therefore, the regression line equation is as follows, i.e., for a unit of change in the variable of the number of children, the mother's anxiety increases by 2.484 units. $(Y)=87.339+2.484$ (number of children) is The present study aimed to investigate the relationship between the anxiety of mothers and the number of children among the women of Alborz and Tehran provinces. The results showed that there was a positive relationship between the anxiety of mothers and the number of children, although the extent of this relationship is not significant; the results also showed that the variable of the number of children could predict the anxiety of mothers. The results are consistent with previous studies, including Ali-Moradi et al. (7) who showed that there was a relationship between anxiety and behavioral disorders with the number of children. Also, Sepehr Manesh (11) showed that the mental health of the studied women had significant relationship with age, number of children, history of neuropsychiatric disorders, history of physical illness, education, and economic status. Regarding the relationship between the number of children and the mental health of women, the highest mental disorder was observed among single child women

the predicted anxiety in terms of the beta standard coefficient for evaluating the contribution of each predictor variable in the model based on standard deviation and allows comparison of the effects of several predictive variables on the criterion variable. Here, just we have one predictor variable, i.e., the number of children, which its beta is equal to 0.118. It means that a standard deviation of the change in the predictive variable would result in 0.118 of the standard deviation of the change in the criterion variable, so changes in the number of children lead to slight changes in the anxiety of the mothers.

(56.7%) and the lowest disorder was in women without child (21.6%). But the finding of the present study is not consistent with results of Omidi et al. study, (12) that showed there was no significant relationship between mental disorder and the number of family members.

In explaining the above findings, and according to the results of some researches done as well as the clinical and observational experiences, it can be said that having more children causes inner peace and tranquility for the mother. However, it is clear that this peace, which is due to the presence of more children that each one is, in turn, the life capital of the mothers, will be realized, if the supporting and providing factors of nurture and education are also provided. The safe environment of the family emotionally, psychologically and economically provides a good condition that gives opportunity to mothers to take special advantage of the presence of more children beside themselves, which undoubtedly will

not be comparable to those of mothers with one child in the same conditions.

Also, in the true measurement of this relationship (mothers' anxiety and number of children), it is necessary to control the variable of the type of cognition to life in material and spiritual terms, in order to achieve more reliable results, since undoubtedly the dominant material insight to life can produce anxiety and tension in mothers with several children.

Among the limitations of this research, we can mention the lack of literature in relation to the mentioned variables. Also, according to the results of the study, it is suggested that in order to be more generalizable, the research is carried out in different strata of the society and other communities; also, it is

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suggested that in the future research, the variables that may have moderating or mediating role in this context to be considered.

Conclusion

Overall, the results showed that there was a positive relationship between the anxiety of mothers and the number of children; and the variable of the number of children could predict the mothers' anxiety.

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