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Depression, Anxiety, Stress, and Resiliency in Iranian Families with Autistic Children

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ABSTRACT

Background & Objective: Caring for children with autism is associated with parental stress and puts them at risk for depression and anxiety. Increasing resilience may help reduce the parents' stress. The main objective of this study was to investigate the relationship between resilience and anxiety, depression, and stress in families with autistic children in 2018.

Materials & Methods: In this cross-sectional study, 137 members of the target families were selected randomly. The cases were surveyed based on the family resilience scale and DASS-21 questionnaire with the checklist of demographics variables. The collected data were analyzed by the MS Excel and SPSS V.22 software.

Results: There was no significant correlation between age/gender and resilience, but depression and anxiety was related to the level of resiliency. Income and history of mental illness had significant associations with depression. The family size, educational level, income, and history of mental illness had a significant effect on anxiety. The level of education, income, history of mental illness and gender had statistically significant associations with the level of stress among individuals.

Conclusion: Based on the results of this study, family resilience is the factor that directly correlates with the level of depression, anxiety and stress among the family members of the autistic children. It is therefore advisable to increase this ability of individuals in various ways, such as training, counseling and supporting groups.

Keywords: Family Resilience, Depression, Anxiety, Stress, Autism

Introduction

Over the recent decades, resiliency has been considered as one of the components of a person's ability to cope with mishaps and hardships of life. Resiliency is the process of persons' empowerment during stressful situations. Therefore, in most cases, it prevents negative behavior and thinking which would result in positive outcomes (1). It is also known as a protective factor in the science of behavior. Individuals with resilience ability, will often return to their normal behavior after pressurizing situations (2). This concept also applies to family, which is defined as the ability of families to return from crises (3). To understand the basic concept of resilience in this case, resilience is the reason why some families collapse after facing disasters such as the illness, disability or the loss of family members, but others adapt themselves to the new circumstances (4).

From the systemic perspective, a person's illness-/disability has an impact on the whole family which can cause them to make some decisions over time (5). One of these conditions is autism, a disorder characterized by repetitive restricted behaviors and deficits in communication and social skills. Symptoms, based on diagnostic criteria of DSMV, are deficits in social interaction, communication skills, restricted behavior, movements, and interests (6,7,8).

In general, social interactions and the ability to interact with others is not strong in autistic children, so their families are under challenging circumstances, mental pressure and anxiety caused by having children with

disabilities (9, 10). Mothers of these children experience much severe anxiety in a chronic way, which could lead to depression in the long-term (11). This state of depression and anxiety can reduce the mental health of parents, which can lead to ineffective family functioning (12, 13). One of the acquired psychological characteristics that can reduce family anxiety is resiliency. Given the importance of the role of resilience as a protective factor in living conditions of families with autistic children against depression and anxiety, getting to know the families' psychological conditions can play an important role in improving their quality of life. As has been proven in previous studies, psychotherapy can increase resilience which can be used to improve burnout, compassion fatigue, and the mental health of autistic patients (14). So, we decided to examine the resilience of families with autistic children and its relationship with anxiety, depression, and stress.

Materials and Methods

This is an analytical, cross-sectional study that was conducted from September to November 2018. Our study population were the parents of students whose autistic children were studying in a special school for these children. The criteria for entering into this study included informed consent to participate in the research, and parents or family members of children with autism who were responsible for taking care of them. After the Ethics Committee approval, based on the calculated sample size, 137 members of the families of children with autism were selected. Due to the possibility of lack of cooperation of some parents, 160 cases were extracted. The children's files were selected from the ones in the school by simple random sampling. Their parents were contacted and asked to participate in the research. Checking variables were age, sex, resilience score, number of family members, marital status, educational status, income, history of mental and physical illnesses, anxiety, depression, and stress scores. Participants completed three questionnaires in one session. The study was approved by the Ethics Committee of the Iran University of Medical Sciences under number IR.IUMS.REC.1397.110. All participants (members of the families of children with autism) were informed about the study and only those providing written informed consent enrolled in the study.

Measures:

"Family Resiliency Scale":

This scale was used to assess family resilience. The scale has three main domains, including family belief system, family organization system, and problem-solving processes. The questionnaire contained 66 questions. Each question was scored from 1 (lowest) to 4 (highest). Its reference range was from 66 to 264. The higher the score, the more family resilience there was.

"Family Resiliency Scale" was developed in 2005 based on Walsh's theory. Predictive and concurrent criterion validity and reliability were confirmed (15). The Persian version was evaluated by Dr. Dadashi and colleagues in a research and correlational study (16).

"DASS-21 questionnaire": This questionnaire evaluated three domains including anxiety, stress, and depression. The short version of this questionnaire with 21 questions was selected to accelerate the data collection process. Each domain contained 7 questions which could be scored from 0 (never), 1 (slightly), 2 (sometimes), to 3 (Always) (17).

Data analysis:

After data collection, they were analyzed by the SPSS V.24 software. The significance level (P Value) was considered less than 0.05. In the descriptive analysis of the results, the frequency and percentage of central indices of mode and mean as well as the index of distribution of standard deviation and range were calculated to analyze data from single-variable methods such as chi-square and independent T-test.

Results

This study was carried out to review and assess the impact of Family Resilience on depression, anxiety and stress. 137 members of the families of autistic children were enrolled in our study, whose average age ranged from 40 to 67 years. (± 9.12). Participants included 80 females (58.4%), and 57 males (41.6%), most of whom had at least a bachelor's degree (51.7%), and were generally married and lived with their families (78.8%), with no chronic physical (84.7%) or psychological (95.6%) conditions. Most of the participants (42.3%) had approximate income of 10 to 30 million IRR. Based on data from the Statistical Center of Iran, the average income of an urban household in the years 2016 and 2017 was approximately 37 million IRR in Tehran (17). Given the current economic conditions of Iran in 2018, the average income of our study participants was estimated as below-average, and low income.

The number of family members (who are now living together) ranged from 2 to 7 most of whom were married and lived with their families, and did not have chronic medical/psychological conditions. The distributions were as follows (table 1).

Table 1. Distribution of chronic medical/psychological conditions

Condition	Status	Frequency	Percentage
Medical	Currently diagnosed.	19	13.9
	Treated.	2	1.5

Condition	Status	Frequency	Percentage
Psychiatric illness	No history.	116	84.7
	Currently diagnosed.	4	2.9
	Treated.	2	1.5
	No history.	131	95.6

Regarding parents'psychological status, 48.2% had depression (mild to severe), 54% had anxiety, and 56.2% had stress. DASS-21 questionnaires results are collected in table 2.

Table 2. DASS-21 questionnaires results

	Depression Sub-Domain		Anxiety Sub-Domain		Stress Sub-Domain	
Status	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Normal	71	51.8	63	46.0	60	43.8
Mild	14	10.2	11	8.0	17	12.4
Moderate	31	22.6	24	17.5	36	26.3
Severe	14	10.2	16	11.7	15	10.9
Very Severe	7	5.1	23	16.8	9	6.6
Abnormal Total	66	48.2	74	54	77	56.2

To test the parametric characteristics of our variables, we used Kolmogorov-Smirnov test, which reported that only the family resilience score questionnaire had normal distribution (P=0.2). To analyze the relationship among qualitative variables, depression, anxiety, and stress, Chi-square test was used.

Table 3. Chi-Square test of DASS-21 questionnaire with qualitative variables

	Depression Sub-Domain		Anxiety Sub-Domain		Stress Sub-Domain	
Variable	Significant Relevance	P Value	Significant Relevance	P Value	Significant Relevance	P Value
Number of Family Members	-	0.248	+	0.016	-	0.181
Living Pattern	-	0.447	-	0.629	-	0.648
Education Status	±	0.085	+	0.002	+	0.011
Income	+	0.041		0.000	+	0.023
Medical Condition	-	0.834	-	0.423	-	0.645
Psychological Condition	+	0.000	+	0.000	+	0.000
Sex	±	0.057	-	0.137	+	0.007

In addition, neither age nor sex had any significant correlation with family resilience score according to Kendall's (P=0.562), Spearman's test (P=0.616), and Independent Sample t test (P=0.701), respectively. Due to normal distribution of the family resilience score, One Way ANOVA test was used to determine its relationship with qualitative variables. The analysis of variance is a set of statistical models that can investigate the difference between mean groups (more than three groups) and categories, so the average can be compared. Since in this test, if P value is less than 0.05, it is possible to find a significant relationship between variables, according to the results in the table, it seems that anxiety and depression was highly correlated with resiliency(P=0/000), with mild to moderate resilience rates which is higher among higher groups.(Table 4)

Table 4. **One Way ANOVA test of the family resilience score**

Variable	Significant difference of average family resilience score among the subgroups of variables	P Value
Number of Family Members	-	0.495
Living Pattern	-	0.118
Education Status	-	0.431
Income	±	0.078
Medical Condition	-	0.415
Psychological Condition	-	0.465
Sex	±	0.000
Depression	+	0.002
Anxiety	+	0.000
Stress	+	0.495

Discussion

According to Sadeghirad's study, income, psychological conditions, educational degree, and gender were risk factors for both depression and stress. Regarding the age range of the participants, there was a similarity between this study and ours. Also, Sadeghirad's results were corroborated by ours regarding the educational status effects (18). This study was conducted to measure the prevalence of depression, and its results are more reliable because it was carried out among a larger population. Also, Altemus stated that gender is an important factor for depression, so that the probability of this disorder in women is higher and in the event of illness they show more severe symptoms from the onset (19). Family size, education, income, and psychological conditions had a significant effect on people's anxiety. Other studies such as Mcleen's et al., and Altemus et al., observed that the ratio of male and female in all of the anxiety disorders was not close to each other, which disagrees with the current study results (19,20). In addition, Verma's study stated that stress and stress response differs between men and women (21). In the study of the prevalence of psychiatric disorders in Iran, conducted by Sharifi et al., anxiety disorders were the most prevalent disorders with 15.6% frequency (22), which is much less than our sample statistics. However, due to the fact that the sample size in this study was much higher, it may be more accurate to examine the prevalence in this volume. Also, because the study population were the families of autistic patients who are exposed to various types of stress, the level of anxiety in them is expected.

Sareen et al., also reported that low income or reduction in income can directly lead to mental disorders such as depression and anxiety (23).

Furthermore, our findings showed that family resiliency average score was 193 (±25). There was no significant correlation between age and gender, which is in contrast with Kavaliotis study, indicating that sex has a different relation with the family resilience levels, as men show lower scores in comparison with women (24). However, depression, anxiety and stress were related to the level of resilience, in a way in which normal groups got higher scores than abnormal groups. It appears that having more powerful resilience ability contributes to lower depression, anxiety and stress. In confirmation, Bekhet et al., found that ASD children's parents who have the resiliency indices are able to solve problems associated with child care better than the others (25). In this regard, Duca results showed that families of ASD children experience high levels of stress, but resilient families had lower levels (26). Plus, another study noted resilience as a protective factor for depression or bitter experiences (27).

Finally, one limitation in this research was limited accessibility to sample family members. Nevertheless, the measurements of the variables were based on self-assessment, which makes it less controlled and standardized. We propose the use of different kinds of assessment such as interview for future studies. In addition, this study recommends that future curricula should be designed to increase the level of resilience of individuals with before-after training tests for depression, anxiety and stress to determine their changes. It is also essential to assess family function when resilience increases.

Conclusion

From the results of this study, we can conclude that family resilience is one of the important factors that directly affects the level of depression, anxiety and stress among the family members of the autistic children. Therefore, we recommend ameliorating this ability in family members by various means such as training, counseling, supporting groups, etc.

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Conflict of Interest

The authors declare that they have no competing interests.

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