The Effectiveness of the Resiliency Training on the Perceived Stress of the Mothers of the Children with Autism

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Abstract

This study is conducted in order to evaluate the effectiveness of the resiliency training on the perceived stress of the mothers of the children with autism. This study is quasi-experimental with the pretest-posttest design and the control group. The population of this study is consisted of all of the mothers of the autistic children who are aged between 3 to 10 years old and received services at the Tehran Autism Center in 2018. The study sample is consisted of 30 mothers who were selected by the convenient sampling method, and were randomly assigned into the experimental (15 people) and control (15 people) groups. The Perceived Stress Scale of Cohen et al. (1983) was used in order to collect the data. The Resiliency training was given to the study group in nine sessions, and each session lasted for one hour. The SPSS-22 statistical software was used for the data analysis. The results of this study showed that the intervention (the resiliency training) reduced the perceived stress (P=0.000, F=26.862) in experimental group (P <0.05). However, there was no significant difference between the pre-test and post-test in the control group. Totally, it can be concluded that the resiliency training plays an effective role in the management of the stress in the mothers of the autistic children.

Keywords: Resiliency Training; Perceived Stress; Autism

Introduction

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) categorizes the autism spectrum disorders in the Neuro-developmental class. The Autism Spectrum Disorder is a neurodevelopmental disorder that affects the different aspects of a child's development. According to the DSM-V, there is no separate classification for the pervasive developmental disorders as before, and these disorders are all known as the autism spectrum disorders. The Autism spectrum disorders refer to all of the disorders in the pervasive developmental category that encompass a wide range of the functional severity and deficiency. The children with autism have difficulty with verbal and

nonverbal communications, social behaviors and playing games, and they have stereotyped and repetitive behaviors (American Psychiatric Association, 2013; translated by Seyed Yahya Mohammadi, 2017). This disorder is one of the most difficult and unknown childhood disorders. It is likely that multiple biological causes, along with the influence of psychosocial factors, lead to a wide range of the abnormal behaviors in the people with autism. The epidemiological studies of the prevalence of the autism have presented different results based on the different methods of selecting, collecting, and classifying the patients. Accordingly, there are different estimations of the frequency of the autism disorder. The current statistics show the prevalence of 0.5 to 1 percent of this population in each society. Autism is found to be equal in both genders, but it is 3 to 4 times more common in boys than in girls (Rabiee Kenari, Jadidian, Solgi, 2015). The features of this disorder, as well as the late and difficult diagnosis in some cases, the lack of definitive and effective therapies and the unsuitable prognosis, can impose severe psychological stress on the children's family and parents (Kuhn and Carter, 2006). Studies show that the parents of the children with autism spectrum disorders, due to having a disabled child, are more likely to be subjected to the psychological stress and anxiety than the parents of the children with other psychological disorders (Osborne and Reed, 2010). Studies have shown that in addition to the stressful status of the situations and conditions, the coping style of the person with those conditions can have a significant impact on the perceived stress (Dardas, and Ahmad, 2015). The stress coping strategies are divided into the two efficient and inefficient categories. Accordingly, the effective and organized coping strategies have the long-lasting and positive consequences. Therefore, the stress is reduced by the individual's efforts, which leads to the improvement of the level of the self-esteem and skill of the person, and also ensures the person's health. At the same time, the person becomes more resistant to the stressful factors that may happen in the future (Khodayari Fard and Parand, 2007).

One of these interventions that can alleviate mothers' stress and help them to control it is the resiliency training intervention. According to Walsh (2015) resiliency is not just a passive resistance to damages or threatening conditions, but a resilient individual is an active participant and the constructor of his/her surroundings. Resiliency is the one's ability to establish a psychosocial and spiritual balance in facing with the risky situations, and is a kind of self-healing manner that is associated with the positive sensational, emotional, and cognitive consequences. Resilient people have the ability to recover and ameliorate; they have optimism and intellectual flexibility; they are skilled in transforming the problems to an opportunity for learning and growth, they have perseverance, self-esteem, and a healthy support network; they are capable of developing the emotional and supernatural abilities, and they have independency in their opinion; also they have sense of humor, and capability of solving the problems and conflicts (Kiani and Arefi, 2015). Although resiliency is partly a subject to the personal attributes, it is also a subject to the environmental experiences of the people. Thus, human beings are not the absolute victims of the environment or heredity, and people's responses to stress, unpleasant events, and difficulties can be modified, so that they can overcome the environmental problems and negative effects (Noone, and Hastings, 2009). Many studies have confirmed the effectiveness of resiliency on the stress and mental pressure. Noone and Hastings (2009) in a study found that developing the resiliency through creating the psychological acceptance will reduce the work stress and increase the mental health of the employees and teachers who interact with the people with intellectual disabilities. Given the increasing number of the people with autism compared to the previous years and also the need of parents, especially mothers, to have the accurate and precise scientific information about the autism disorder and stress tolerance, it is necessary to conduct scientific researches and perform more precise studies to meet their needs in the society. Therefore, using a focused training program for the mothers of the autistic children can greatly help the mothers and their families. According to these claims, it can be inferred that the mothers of the autistic children experience high mental pressure and stress. The high levels of the parents' stress make them to be more inclined to use the inflexible, intimidating and aggressive ways, and have less tendency to benefit from the offered treatments and services for the children, thus they will fail in making decisions about using the most appropriate treatment strategies for their children. This issue has negative effects on the children development process and leads to the more destructive behaviors. In order

to achieve this target, this study is conducted to evaluate the effectiveness of the resiliency training on the perceived stress of the mothers of the children with autism.

Methodology

This study is quasi-experimental with the pretest-posttest design and the control group. The population of this study is consisted of all of the mothers of the autistic children who are aged between 3 to 10 years old and received services at the Tehran Autism Center in 2018. The study sample is consisted of 30 mothers who were selected by the convenient sampling method, and were randomly assigned into the experimental (15 people) and control (15 people) groups. After that the application was submitted to the Autism Center, the researcher installed posters in the welfare and treatment centers. The volunteer individuals that were prepared to participate in the training were divided into the two study and control groups, that each of them included 15 people, and the subjects were divided into two groups with the simple random sampling method.

Research Tools

Cohen *et al* (1983) Perceived Stress Scale: This test was designed by Cohen et al. in order to measure the perceived stress. This test is consisted of 14 items and it is scored to be 0 to 4 based on the Likert point scale, and the sum of the scores on this test shows the level of the perceived stress in the students. In Iran Asghari et al. (2013) conducted this test on 300 students, and calculated the internal consistency of this test to be 0.84 by the alpha Cronbach's method. Also the validity of this questionnaire has been confirmed by the factor, construct and content analyses.

Educational intervention

The resiliency training was given to the study group during nine sessions and each session lasted for one hour; also the curriculum summary (Hosseini Ghomi and Salimi bojestani, 2012) is as follows:

Table 1: the summary of the Resiliency Training Program

Sessions	Purpose and Content
First session	Objective: the Pre-test provides guidelines for the members' participation and the description of the manner of doing the task Steps: 1- Introducing the researcher, 2- Introducing the members, 3- Explaining the general outlines of the sessions to the members
Second session	Objective: To become familiar with the general framework of the discussion Steps: 1- Defining the resiliency, and 2- Introducing the resilient people's characteristic: (1- Happiness 2- Wisdom and insight 3- sense of Humor 4- sympathy 5-rational efficiency 6- having goal in life 7- Stability Solution: Identifying the unpleasant situations in life and improving the compatibility and tolerance in the personal area
Third session	Objective: To become familiar with the internal supporting factors Steps: 1- The concept of optimism, 2- Self-esteem and 3- the Source of control Solution: Recognizing the talents and interests and emphasizing them and the tendency to use them
Fourth Session	Objective: To become familiar with the external supporting factors Steps: 1- Social supporting system, 2- personal responsibility and accepting the meaningful roles Solution: the feeling of attachment and being valuable and have the tendency to

	participate
Fifth Session	Objective: To become familiar with the ways of creating resiliency Steps: 1- Establishing and maintaining relationships with others, 2- giving frame to the different types of stress and 3- Accepting the change
Sixth Session	Objective: the continuance of the ways of creating the resiliency Steps: 1- having purpose and being hopeful for the future, 2- taking action
Seventh Session	Objective: the continuance of the ways of creating the resiliency Steps: self-awareness, 2- developing the self-esteem
Eighth Session	Objective: the continuance of the ways of creating the resiliency, and teaching the ways of taking care of the children
Ninth Session	Objective: putting it all together and reaching the conclusion, and giving the posttest

After reaching the basic agreement from the welfare organization of Tehran province, the sampling was conducted on the Tehran Autism Center. After giving the pretest, the training was given to the study group, and after conducting the intervention, the posttest was given to both groups, and the data were used for the analysis. The SPSS-22 statistical software was used for the data analysis. The distribution indicators (the mean and standard deviation) were used in order to report the descriptive findings from the descriptive statistics. In the main section, the inferential statistics and the covariance Analysis test were used in order to study the research hypotheses. In this study, the error level was considered to be 0.05 in order to analyze the data.

Findings

At the beginning of the study, 15 people were considered for each group, and all of them have participated in the study during the research. The age mean of the mothers of the study group was 35.40 with the standard deviation of 4.65. Also, the age mean of the mothers of the control group was 37.20 with standard the deviation of 4.09. The result of the independent t - test with the assumption of the equality of variance (p=0.748, f=0.105) has shown that the study and control groups do not have any difference in terms of the age (p=0.270, DF=28, t=-1.125). Also, the age mean of the children of the study group was 6.80 with the standard deviation of 1.65, and the age mean of the children of the control group was 6.73 with the standard deviation of 1.57, and the result of the independent t - test with the assumption of the equality of variance (p=0.937, f=0.006) has shown that the study and control groups do not have any difference in terms of the age mean of the children (p=0.911, DF=28, t=0.113). Also, the mean of the marriage duration of the study group was 9.78 with the standard deviation of 2.47, and the mean of the marriage duration of the control group was 10.53 with the standard deviation of 2.79, and the result of the independent t - test with the assumption of the equality of variance (p=0.206, f=1.676) has shown that the study and control groups do not have any difference in terms of the marriage duration (p=0.499, DF=28, t=0.685). In fact, the variables of the age of the mothers and children and the marriage duration are not a manipulative variable, and they do not need to be controlled. The results of the Fisher's exact test showed that the participants of the control and study groups were categorized in the 4 educational levels of elementary school (up to the sixth grade), middle school (up to the ninth grade), high school (up to the twelfth grade), and B.A degree; the results of the test showed that the groups are not different in terms of the distribution of the educational level (p=0.823, χ^2=0.908). In other words, there is no significant difference in both groups in terms of the distribution of the educational level.

Table 2: The mean and standard deviation of the perceived stress

Variable	Groups	The time of the test	Mean	DS
Perceived stress	Study group	Pre-test	34.26	4.23
		Post-test	26.93	4.25
	Control group	Pre-test	35.66	3.10
		Post-test	34.86	4.03

According to the fact that the control of the concurrent variables (like the previous information of the people in the area of the resiliency) is not possible in the assignment of the participants, so the most suitable test in order to analyze the hypotheses is the Covariance analysis, in which at first the assumptions of this test should be studied in order to conduct this analysis. The results of the Shapiro-Wilk test (in order to study the normality of the data), the Levene's test (for the similarity of the variances), and the Box'M test (for the similarity of the variances' matrix) showed that these three assumptions are confirmed. Also the distribution graph design indicated that there is a linear relationship between the pretest and posttest of each of the variables; therefore, this assumption is confirmed. Finally the results of the study of the Regression slope homogeneity hypothesis showed that the research variables are not statistically significant (at the error level of 0.05); therefore, the optimal conditions e.g. the parallelism of the regression slopes are provided in order to conduct the Covariance analysis. The results of the multivariate covariance analysis test are presented in the following table.

Table 3: the results of the Covariance analysis from the comparison of the study and control groups in terms of the perceived stress

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	485.731[a]	2	242.865	14.042	.000	.510	28.085	.996
Stress	13.697	1	13.697	.792	.381	.028	.792	.138
groups	464.589	1	464.589	26.862	.000	.499	26.862	.999
Error	466.969	27	17.295					
Total	29597.000	30						
Corrected Total	952.700	29						
a. R Squared = .510 (Adjusted R Squared = .474) b. Computed using alpha = .05								

The results of this study showed that the intervention (resiliency training reduced the perceived stress (P=0.000, F=26.862) (P<0.05). However, there was no significant difference between the pretest and posttest of the control group.

Discussion and Conclusion

This study is conducted in order to evaluate the effectiveness of the resiliency training on the perceived stress of the mothers of the children with autism. The results of this study showed that the resiliency training has reduced the stress in the study group; while no significant difference has been made between the pretest and posttest of the control group. This result is consistent with the studies of Naeemi and Tajeri (2017), Almasi et al. (2016), Moghtader et al. (2016), Hoseinin Ghomi and Salimi bojestani (2012), and Dipaz et al. (2018); also in the investigation of the history there was not any study to be contradicted with this study; in other words the research history supports the psychological interventions specially the interventions based on the resiliency in order to reduce the stress of the

mothers of the children with autism. Although stress is considered as one of the most important factors of the advent and creation of the diseases and death of the people, the important point is related to the connection, and the manner of the response or reaction to it, which can play an important role in the person's compatibility. The resilient people usually come back to their normal status after creating positive emotions in confronting with the stressful factors. The resilient people pass the stressful conditions without the reduction of their mental health and experiencing a mental disease; also it seems that in some cases they become improved and successful because of their unpleasant experiences (Waugh, Fredrickson & Taylor, 2011). It seems that the resiliency training improves the psychological flexibility of the people. This characteristic increases people's compatibility with the unpleasant conditions. The people with high resiliency confront with the stressful incidents with more optimism, self-expression, and self-confidence. Therefore, they consider these incidents to be manageable. The optimistic attitude makes the information procedure to be more effective, and the person applies a more active coping strategy, and also the ability to deal with the unpleasant conditions will be empowered. The resilient people are flexible and resourceful, they adapt themselves to the environmental changes, and they can recover so fast after the obviation of the stressful factors (Siebert, 2012). Inzlicht, Aronson, Good & McKay (2010), who agreed with these findings, found that as a result of the resiliency process the unpleasant incidents leave fewer effects, and the high resiliency leads to the mental health. In explaining these findings, Jahedmotlagh, Yunesi, Azkhosh and Farzi (2015) believe that the resilient people have the feeling of self-confidence and efficiency that allow them to pass the life challenges with success. These people have a less feeling of failure and loneliness, and they have the ability to consider an issue as a problem to be explored, changed, tolerated, and solved in other ways; this matter and also their ability to tolerate the problems result in their positive perspective and optimism towards life. Optimism is one of the characteristics of the resilient people. Various studies have shown that the people with high resiliency maintain their psychological health in the stressful conditions and unpleasant situations, and they have psychological compatibility (Tugade & Fredrickson, 2010). Carle & Chassion (2015) in their research have shown that the high levels of resiliency help the person to use the positive emotions and sensations in order to pass the unpleasant incidents and return to the normal status. Wyman (2009) has conducted a research in area of the adjusting role of the resiliency on the mental pressure on a sample that included 82 people. The research results showed that the resiliency mitigates the mental pressure. This adjustment happens through the process of a compatible measurement from the mental pressure. The creation of the resiliency through the creation of the psychological acceptance can reduce the mental pressure (Noone, and Hastings, 2009). The results of the research of Timmerman, Emmelkamp and Sanderman (2016) about the investigation of the effects of the mental pressure management training program showed that this training can reduce the mental pressure, anxiety, and daily occupations, and also it can lead to the more courage and satisfaction.

Every research is accompanied with a series of predictable and unpredictable limitations, and the identification of the limitations can help to comprehend the level of the generalization, and also provides the conditions for the future studies. One of the limitations of this study was the limited number of participants. The other limitations of this study included the low time distance between the pretest and posttest, the use of self-report method in order to collect the data, and also the lack of the follow-up period.

According to the limitations and findings of this study, it is recommended to use the other measurement methods such as interviews along with questionnaires in the future researches. The limited number of participants and also the lack of the follow-up of the stability of the intervention results were some of the other limitations of this study; therefore, it is recommended to use a bigger sample and conduct the follow-up studies in order to check the continuity of the therapeutic effects. It is recommended to conduct this study on the fathers of the autistic children. Since, resiliency is an acquisitive characteristic and its existence in people can play an important and positive role, and also the resiliency training greatly helps the people to reduce their stress, so the consultants and psychologists can

use this method in their therapeutic interventions, and improve its richness and effectiveness with their own knowledge and experiences.

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