

Efficacy of Family Anxiety Management Training with Mothers of Anxious Preschool Children

Soodabeh Bassak-Nejad,*¹ Fahimeh Poloi-Shaporabadi,¹ Iran Davoudi¹

1. Department of Psychology, Shahid Chamran University, Ahvaz, Iran

Article information	Abstract
<p>Article history: Received: 1 Dec 2011 Accepted: 22 Dec 2011 Available online: 2 June 2013 ZJRMS 2014; 16(5): 45-49</p> <p>Keywords: Family anxiety management Mothers of anxious children Pre-school</p> <p>*Corresponding author at: Department of clinical Psychology, Shahid Chamran University, Ahvaz, Iran. E-mail: soodabeh_bassak@yahoo.com</p>	<p>Background: The aim of this study is to investigate the efficacy of family management training in reducing anxiety difficulties in preschool children (4 to 6 years old) in Ahvaz.</p> <p>Materials and Methods: The present research is a pilot study with pre-test/post-test control group design. A total of 50 mothers whose children scored 1.0 standard deviation above the mean on Spence's children anxiety scale (parent report form) were randomly chosen and then divided into experimental and control groups. According to the treatment plan, the participants underwent ten 120-minute sessions of family anxiety management training.</p> <p>Results: Multivariate analysis of covariance demonstrates that experimental intervention is efficient in reduction of children anxiety ($p=0.03$). Following up the experimental group for a course of one month show that intervention impact can last over the time.</p> <p>Conclusion: The results indicate that family anxiety management training has been effective in reduction of anxiety disorders in anxious children (4 to 6 years old), studying at kindergartens within Ahvaz. Therefore, it can be useful strategy as an educational and preventive program in pre-school and school children.</p> <p>Copyright © 2014 Zahedan University of Medical Sciences. All rights reserved.</p>

Introduction

Anxiety is among the most common psychological disorders in childhood [1]. Barret, Ginsburg, and Bienvenu in their studies show that 10% to 22% of children may experience different levels of anxiety disorders [2, 3]. These difficulties often appear in children's functioning during pre-school and school-age years. Barret and Farrel [4] in a research report demonstrate that one out of every five children encounters with anxiety, but the majority of them are not referred to mental health professionals. Sadock and Sadock [5] in their report estimate 3%, 2.4%, and 1% prevalence of generalized anxiety, panic, and social phobia, respectively, in school-age children. Cartwright-Hatton [6] describe that the development of anxiety in children increases the risk of anxiety and mood disorders, and drug abuse in adulthood, and also disrupt their social, educational, and occupational life. Interaction between biological factors (genetic readiness of sympathetic system response) and psychological factors (experience of disturbing events and child-rearing practices) is effective in anxiety formation in children [7, 8]. Today, especial attention has been given to parent-child relationship practices in etiology and treatment of anxiety disorders in children and teenagers, in that children anxiety management training for parents has found precise position in different treatment programs [9]. Varieties of parent training-oriented therapy methods are concentrated on four basic concepts: recognition of children's emotional anxiety, parental awareness of anxiety provoking situations, anxiety-provoking situations coping

methods, and evaluation of the success rate of coping with anxiety [10]. Findings of McGinn et al. [11], and Khanna and Kendall [12] show that in such treatment programs, parents are responsible for the implementation of children anxiety coping methods, and providing their children with courage, audacity, and positive reinforcement trainings. Bogles and Brechman-Toussaint [13] refer to transfer of control method. Based on this model, parents transfer the anxiety control patterns from therapist to their children. Ogden and Hagen [14], highlight the idea that by learning anxiety coping methods, parents can train their children to control their anxiety by practicing suitable technique, and encourage them to implement those techniques. Cartwright-Hatton et al. [15], Ginsberg et al. [16] maintain that family anxiety management training is among the suitable interventional methods for correcting parent-child anxiety patterns and treating anxious children.

The purpose of this program is to train parents in relational and problem-solving skills, recognition of sensations and emotions of anxious child, and anxiety management practices. The findings of Lundhal et al., [17], and Nixon [18] show that, by this method, parents learn to be aware of antecedents and consequence of their disciplinary behaviors, and also learn the anxiety coping skills. Employing this method of coping children anxiety in training programs by Gastel et al. [19] and Cartwright-Hatton et al. [15] on children aged 4 to 9 years showed that after a 10-week intervention, children's anxiety was decreased and parent-children relationship was improved.

Hudson and Rapee [20], Rapee et al. [21] consider this treatment method effective in controlling the quality of maternal parenting practices in dealing with a hyperactive child with specific behavioral disorders, in training mothers who have pre-school children with behavioral disorders, and in controlling aggression in parents with anxious children. In addition, family anxiety management training can be effective in reducing anxiety disorders such as separation-induced anxiety and the nervousness from change in family system. The findings of Hirshfeld-Becker et al. [22], and In-Albon and Schneider [23] show that parents of anxious children can play an effective part in treatment process. Factors such as parental anxiety, child-rearing control system, and parental avoidance strategies have effective role in persistence of anxiety. Findings of Barret [2] demonstrate that by using a combination of cognitive-behavioral and family anxiety management techniques with children aged 7-14 years, parental skills in controlling childhood anxiety and avoidance behaviors can be improved. The aim of this study was to investigate the effect of training mothers in family anxiety management on reduction of anxiety in children aged 4-6 years, studying in kindergartens within Ahvaz.

Materials and Methods

This research was a pilot study with a pre-test/post-test follow-up with control group. The research population included mothers of children aged 4-6 years studying in private kindergartens within Ahvaz, in from 2010 to 2011. Of 167 private kindergartens within four different areas in Ahvaz, seven kindergartens were selected from each area, using multistage random sampling. In addition, three to four classes were chosen from each kindergarten. Next, half of the mothers with children aged 4-6 years were picked. They, then, responded to Spence's pre-school children anxiety scale (parent form) and structured interview based on DSM-IV. For the purpose of ethical standards of the study, researchers provided mothers with required explanations about how to respond to the instruments, confidentiality of information in research questionnaire, the probability of requiring some of them to participate in training programs, and using code in place of real name and family name. After that, among 297 mothers whose children scored 1 standard deviation above the mean on Spence's pre-school children anxiety scale (parent form), 50 person were randomly chosen and divided into experimental and control groups.

According to parental anxiety management training program, the intervention was made over twelve 120-min long sessions. Meanwhile, the control group received no intervention. Based on demographic information, the criteria for inclusion of mothers into training program were: having educational level higher than diploma, not divorced, without history of mental psychological disorders or drug abuse, and tendency to participate and

cooperate in all training sessions. The subjects, in both groups, were evaluated in pre-test, post-test, and one-month following up stages (one month after the end of training program, as off-season was approaching, and so mothers would no longer be accessible).

The psychiatric characteristics of Spence's pre-school anxiety scale (parent form) and structured interview, based on DSM-IV, are as following: this scale was developed and implemented by Spence et al. based on diagnostic and statistical manual of mental disorders (DSM-IV) to assess anxiety [24]. It consists of 28 items with five subscales including separation anxiety disorder (5 items), generalized anxiety (5 items), social anxiety (6 items), specific phobia (7 items), and obsessive-compulsive disorder (5 items). It is a suitable scale for assessing anxiety of children aged 2 to 5 years and should be completed by parents; Items are given a weighted score of 1 (it's never like this) to 5 (it's always like this) based on Likert scale; and higher score indicates higher level of anxiety in children. In the present study, the scale was first translated by the researchers. Then, it was distributed among a group of instructors from psychology department, and they were asked to comment on vague items and to recommend additional ones.

Reliability of this scale, by Cronbach alpha, is equal to 0.89. To assess validity of this scale, two interviewers, who did not have access to the interviewees' information, were asked to carry out diagnostic interviews with 40 mothers with anxious children and 40 mothers with non-anxious children based on the structured interview design. The correlation between the data from this scale and data from interview structured on the basis of DSM-IV, performed by the interviewers, show that validity coefficient for the whole scale is equal to 0.57, which is significant at the level of 0.01. Moreover, negative prediction capacity, positive prediction capacity, and general diagnostic capacity of the test were obtained as 0.85, 0.70, and 0.76, respectively. Of the sub-scales, specific phobia, and social and separation anxieties had greater validity.

The findings of a group of researchers [25] show that structured diagnostic interview with 299 same-day patients, referring to Tehran Psychiatric Centers, was carried out. In order to evaluate the validity coefficient of this diagnostic interview, kappa coefficient was employed to calculate consistency of scores obtained by two psychologists. Kappa coefficient of 0.85 was obtained showing high diagnostic capacity and consistency of this structured interview method. After data collection, they were analyzed using SPSS-16. For data analysis, different statistical methods such as descriptive, single-variable analysis of covariance, and multivariate analysis of covariance methods were deployed. The significant level of 0.05 was set for hypotheses testing.

According to parental anxiety management training program, Cartwright-Hatton et al. [15] implemented a ten 120-min long interventional session.

Table 1. Mean and standard deviation of general anxiety and its five sub-scales from pre-test/post-test in both groups

Variables	Pre-test	Experimental	Post-test	Experimental
	Control		Control	
	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Generalized anxiety	3.85±14.6	3.62±15.86	3.56±14.67	1.95±10.17
Social anxiety	5.47±20.73	4.98±20.92	3.40±19	2.67±14.75
Obsession- compulsion	3.17±14.07	2.8±12.5	3.66±13.6	2.71±8.92
Special phobia	4.97±23.47	6.91±22.83	5.50±21.93	3.51±12.17
Separation anxiety	3.98±17.33	2.43±17.33	3.41±15.73	3.99±11.08
General anxiety	8.72±90.2	10.98±57.08	10.73±84.93	10.98±57.08

The content of the treatment session included: 1) introducing the members and familiarization with training program to afford opportunity for talking about children anxiety difficulties, 2) explanation of children anxiety, causes, and consequences, 3) description of how anxiety transfers from parents to children (the role of biological factors and learning), 4) mental and physical relaxation exercises, and parent and children anxiety management techniques, 5) training in techniques of children anxiety reduction and self confidence improvement, 6) respiration exercises training to reduce children anxiety, 7) discussing examples of children anxiety and its reducing technique to be used in the home by all mothers in the groups, 8) how to control anxiety in mother and transmit peace to child, 9) providing practical exercise in interventional sessions and playing role in anxiety reduction, and 10) announcing the end of the sessions, and discussing and exchanging of views regarding how to reduce children anxiety.

Results

The findings showed that the mean age of the mothers was 26 years and 70% of them were house hold with educational level higher than diploma. In addition, 85% of them had one or two children, and in 50% of cases only their first child was with anxiety. Moreover, the information obtained from structured interview indicated no history of psychological difficulties. Descriptive findings of general anxiety and sub-scales from pre-test/post-test in both groups are presented in table 1. The results showed that mean of experimental group significantly changed after intervention. For carrying out analysis of covariance, examining the assumption of homoscedasticity was performed. This assumption was first examined using Levene's test. The results show that the studied groups possess homogenous variances. The results from single variate analysis of covariance on mean post-test scores of experimental and control groups in general anxiety with pre-test control are presented in table 2. As is can be seen in table 2, after post-test scores were checked, a significant difference was observed in post-test scores ($p=0.001$). Therefore, the experimental intervention has had impact on reduction of anxiety symptoms. The results from multivariate analysis of covariance on mean post-test scores of experimental and control groups in variety of anxiety disorders are presented in table 3. The data in table 3 demonstrate a significant difference between experimental and control

groups ($p=0.001$). Therefore, experimental intervention has caused decrease, at least, in one of the dependent variables of different types of anxiety disorders. Table 4 shows the results from multivariate analysis of covariance on mean post-test scores of experimental and control groups in varieties of anxiety disorders. As illustrated in table 3, in all anxiety sub-scales, the value of f was significant at level range of 0.001 to 0.003.

Table 2. Single variate analysis of covariance on mean post-test scores of experimental and control groups in general anxiety with pre-test control

Indicator	Sum square	df	Mean square	p -Value
Group	5.99	1	5.99	0.001
Error	2.19	24	0.12	
Total	190.91	27		

Table 3. Multivariate analysis of covariance on mean post-test scores of experimental and control groups in varieties of anxiety disorders

Test	Amount	Hypothesis df	f	Error df	p -Value
Pillai trace	0.72	8.25	5	16	0.001
Lambda willks	0.28	8.25	5	16	0.001
Hotelling trace	2.58	8.25	5	16	0.001
The largest root	2.58	8.25	5	16	0.001

Table 4. Multivariate analysis of covariance on mean post-test scores of experimental and control groups in varieties of anxiety disorders

Variable	Sum square	df	f	p -Value
Generalized anxiety	4.86	1	4.86	0.001
Social anxiety	2.78	1	2.78	0.001
Obsession-compulsion	2.08	1	2.08	0.002
Special phobia	2.67	1	2.67	0.003
separation anxiety	4.53	1	4.53	0.001

Table 5. Single variate analysis of covariance on mean general anxiety scores of experimental and control groups with pre-test control at follow-up stage

	Sum square	df	Mean square	f	p -Value
Group	4.57	1	4.75	23.26	0.001
Error	4.90	24	0.20		0.001
Total	180.56	27			0.001

Therefore, this intervention has been effective in all anxiety sub-scales. Table 4 shows the results from single variate analysis of covariance on mean score of general anxiety of experimental and control groups with pre-test control at follow-up stage. As can be seen in table 5, there is a significant difference in follow-up scores between two groups with pre-test control. Consequently, it can be concluded that experimental intervention has had impact on the persistence of anxiety symptoms in experimental group.

Discussion

The main objective of this research was to investigate the efficiency of family anxiety management training in reduction of anxiety in children aged 4 to 6 years within Ahvaz. Epidemiology of anxiety disorders show that 10-22% of children experience these difficulties with different degrees. The findings of the present study, using Spence's children anxiety scale (parent report form), also showed that 10 percent of the subjects had anxious child, among which 18%, 16.5%, and 16.6% were with specific phobia, generalized anxiety, and separation anxiety, respectively. These findings are in consistent with those of previous studies about the prevalence of anxiety disorders in pre-school ages [1, 3, 6, 7].

In addition, the findings of the present study are in agreement with those of other studies in that family anxiety management is effective in reduction of clinical symptoms of anxiety in pre-school children [12, 16]. The parent-child relationship plays an important part in pathology and treatment of children anxiety disorders, in that today, family anxiety management training approach has become more common in children anxiety reduction [9, 12]. One of the salient points in this study is the recognition of emotional anxiety in pre-school children by the parents. The present study shows that family anxiety management method can help parent to eliminate their concerns about anxiety in their children by training them in appropriate methods of improving parent-anxious child relationship. In addition, family management method can assist parents to teach their children the ways of boldness and assertiveness. After therapeutic intervention and training mothers, the level of children anxiety is decreased regarding general and subscales anxiety, and post-test score drops. One month follow up show that parental awareness of anxiety provoking situation and methods of coping with them, and evaluation of success in coping with anxiety can have persistent impact on

child-parent relationship and can change parent-child relationship uneasiness. The long-term efficiency of family anxiety management training in reduction of children anxiety conforms to the results from other studies [15-17]. Anxious child requires peace and parental behavior patterns, especially in case of mothers, are effective in formation of relation-relaxing behaviors. This study was with a number of limitations including: the experimental group only consisted of children from private kindergartens, and so the results were not generalizable to public kindergartens. In addition, the scale was completed by mother, which could be accompanied with potential distortion of children behavioral disorders. In this study, fathers were also invited to participate, but they were not eager to do. Therefore, only mothers received trainings. This study encountered with the problem of summing up the mothers from different regions in a specific center. However, this problem was solved to some extent by cooperation from Ahvaz Behavioral Sciences Research Center through holding the sessions there. The follow-up period in this study was one month. However, it is recommended to prolong it to four or six months. This research has used family anxiety management training program for the first time in Iran, and the results are justifying with respect to the use of this method for reducing children anxiety. Therefore, clinicians and mental health professionals are recommended to implement this method on school-age children too and train both mothers and fathers. This technique can also be effective in preventing anxiety disorders development through increasing parental awareness of children anxieties and concerns and teaching the methods of coping with daily anxiety-provoking circumstances.

Acknowledgements

This research is the result of master's thesis by Ms Fahimeh Poloi Shapor Abadi. Research Deputy of Shahid Chamran University of Ahvaz is deeply appreciated for its financial and spiritual supports. This thesis #2015460 is registered in National Database for Academic Thesis.

Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

Funding/Support

Shahid Chamran University, Ahvaz.

References

1. Kessler RC, Coccaro EF, Fava M, et al. The prevalence and correlates of DSM-IV intermittent explosive disorder in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2006; 63(6): 669-78.
2. Barret PM. Treatment of childhood anxiety: Developmental aspects. *Clini Psychol Rev* 2000; 20(4): 479-494.
3. Bienvenu OJ, Ginsburg GS. Prevention of anxiety disorders. *Int Rev Psychiatry* 2007; 19(6): 647-654.
4. Barret P, Farrel L. Behavioral family intervention for childhood anxiety. In handbook of parent training: helping parents prevent and solve problem behaviors. 3th ed. Canada: John Wiley Publication; 2007: 156-163.

5. Sadock B, Sadock V. Synopsis of Psychiatry: Behavioral sciences and clinical psychiatry. 5th ed. USA: Wolters Kluwer Press; 2007: 59-63.
6. Cartwright-Hatton S. Anxiety of childhood and adolescence: Challenges and opportunities. Clin Psychol Rev 2006; 26(7): 813-6.
7. Campbell SB. Behavioral problems in preschool children: A review of recent research. J Child Psychiatr 1995; 36(1): 113-150.
8. Bolton D, Eley TC, O'Conner TG, et al. Prevalence and genetic and environmental influences on anxiety disorders in 6 years old twins. Psychol Med 2006; 36(1): 335-344.
9. Victor AM, Bernat DH, Berstein A and Layne AE. Effects of parent and family characteristics on treatment outcome of anxious children. J Anxiety Dis 2007; 21(6): 835-848.
10. Bassak-Nejad S, Niazi Z, Davoudi I. [The effectiveness of Kendall coping cat therapy on reducing anxiety among female adolescent students] Persian. J Behv Sci Res Center 2011; 9(4): 241-249.
11. McGinn LK, Cukor D, Sanderson WC. The relationship between parenting style, cognitive style and anxiety and depression: Dose increase early adversity influence symptom severity trough the mediating role of cognitive style. Cognitive Ther Res 2005; 29(2): 219-242.
12. Khanna MS, Kendall PC. Exploring the role of parent training in the treatment of childhood anxiety. J Consult Clinl Psychol 2009; 77(5): 981-986.
13. Bogles SM, Brechman-Toussaint ML. Family issues in child anxiety: Attachment, family functioning, parenting and beliefs. Clin Psychol Rev 2006; 26(1): 834-856.
14. Ogden T, Hagen KA. Treatment effectiveness of parent management training in Norway: A randomized controlled trial of children with conduct problems. J Consult Clin Psychol 2008; 76(3): 607-621.
15. Cartwright-Hatton S, McNally D, White C. A new cognitive behavioral parenting intervention for families of young anxious children: A pilot study. Behav Cogn Psychoth 2005; 33(1): 243-248.
16. Ginsberg GS, Silverman WK, Kurtines WK. Family involvement in treating children with phobic and anxiety disorders: A look ahead. Clin Psychol Rev 1995; 15(2): 457-473.
17. Lundhal B, Risser HJ, Lovejoy MC. A meta-analysis of parent training: Moderates and follow up effects. Clin Psychol Rev 2006; 26(1): 86-104.
18. Nixon RDV. Treatment of behavior problem in preschoolers: A review of parent training programs. Clin Psychol Rev 2002; 31(7)108: 483-522.
19. Gastel WV, Legerstee JS, Ferdinand RF. The role of perceived parenting in familial aggression of anxiety disorder in children. J Anxiety Disord 2009; 23(1): 46-53.
20. Hudson JL, Rapee RM. Parent-Child interactions and anxiety disorders: An observational study. Behav Res Ther 2001; 39(12): 1411-1427.
21. Rapee RM, Kennedy S, Ingram M, et al. Prevention and early intervention of anxiety disorder in inhibited preschool children. J Consult Clin Psychol 2005; 73(3): 488-497.
22. Hirshfeld-Becker DR, Micco JA, Bruett L and Henin A. Applying cognitive-behavioral therapy for anxiety to the younger child. Child Adol Psych Cl 2011; 20(2): 349-368.
23. In-Albon T, Schneider S. Psychotherapy of childhood anxiety disorders: A meta analysis. Psycho Psychosoma 2007; 76(1): 15-24.
24. Rapee RM, Kennedy S, Ingram M, et al. Altering the trajectory of anxiety in at-risk young children. Amer J Psychiat 2010; 167(12): 1518-1525.
25. Pincus DB, Santucci LC, Ehrenerich JT and Eyberg SM. The implementation of modified parent-child interaction therapy for youth with separation anxiety disorder. Cogn Behav Pract 2008; 15(3): 118-125.
26. Choate ML, Pincus DB, Eyberg SM and Barlow DH. Parent-Child interaction therapy for treatment of separation anxiety disorder in young children: A pilot study. Cogn Behav Pract 2005; 12(2): 126-135.
27. Spence HS, Rapee R, McDonald C and Ingram M. The structure of anxiety sympyom among preschoolers. J Behav Res and Ther 2001; 39(1): 1293-1316.
28. Sharifi V, Asadi M, Mohammadi M, et al. The reliability of structured clinical intevuew for DSM-IV. Cognitive Sciences Novelities 2004; 6(1, 2): 10-12.

Please cite this article as: Bassak Nejad S, Poloi-Shaporabadi F, Davoudi I. Efficacy of family anxiety management training with mothers of anxious preschool children. Zahedan J Res Med Sci (ZJRMS) 2014; 16(5): 45-49.