

Group Positive Psychotherapy Effect on Increasing the Happiness of Mothers of Children with Cochlear Implant



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ABSTRACT

Objective: The present study aimed to investigate the effects of group positive psychotherapy on increasing the happiness of mothers of children with cochlear implants.

Methods: This study was a quasi-experimental research with pretest-posttest, a control group, and a 75-day follow-up design. A total of 20 mothers of children with cochlear implants treated in Baqiyatallah Hospital of Tehran City were randomly assigned to 2 groups (10 participants in the experimental and 10 participants in the control group). The experimental group received positive psychotherapy training during 10 sessions, 120 minutes in each session, one session per week and the control group received no interventions.

Results: Research tool was Oxford Happiness Inventory, which was administered in 2 pretest and posttest steps and then the obtained data were analyzed using analysis of covariance method (ANCOVA). The results of ANCOVA showed that group positive psychotherapy was effective on happiness of mothers of children with cochlear implant ($F_{1,17}=31.13, P<0.01$).

Conclusion: Group positive psychotherapy is an appropriate treatment approach to increase the happiness of mothers of children with cochlear implant.

1. Introduction

Parents of children with disabilities are often experience harmful psychological stresses. Birth of a deaf child in a family arises new and challenging problems for parents. Parents of children with disabilities may experience chronic stress. The deaf children are unable to speak and communicate with other people, due

to their hearing impairment. Medical care and educational needs can impact the adaptability of families with deaf children and have some important consequences such as social, economic, and emotional restrictions in the family (Arnaud et al., 2008). Having a deaf child, parents and other family members need to make major adjustments in family structure. Studies have shown that mental health of these families is strongly affected by

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their children's hearing impairment (Schieve, Blumberg, Rice, Visser, & Boyle, 2007).

Approximately, the deaf consist of 1.5% of the population and of every 1000 births, 2 children have hearing deficiency (Ajalloueyan et al., 2011). Over 90% of children with hearing impairment are born to hearing parents and in most cases, there is no family history of hearing loss, so the family is not acquainted with such situation at all. In this regard, parents notice that they should get some information, quickly decide, and choose the best solution for their children, and meet their needed services to support their children in a better way. Facing with all these issues can endanger the mental health of the family, especially mothers (Hintermair, 2006). Therefore, the families do experience high levels of stress, emotional distress, interpersonal difficulties, financial problems, and adverse social consequences (Otarinia, 2008).

Research has revealed that the heavy burden of taking care of these children is mostly on mothers' shoulders not the fathers' (Marks, 1998). In fact, children with disabilities threaten the cooperation specificity and physical and mental health of parents, especially mothers (Emmons & McCullough, 2003) and often have negative effects on them (Saloviita, Itälina, & Leinonen, 2003). Other people do not understand mothers of the disabled children correctly, and the mothers often get negative reactions from others since their knowledge of parenting is different than the parenting style of mothers with normal children (Meirsschaut, Roeyers, & Warreyn, 2010). Notably, the abnormal cognitive development and behaviors, limited emotional, verbal, and hearing abilities of these children put too much stress and pressure on their parents (Davis & Carter, 2008). Mothers of disabled children experience more physical and mental disorders, depression, anxiety, and stress as well as less self-confidence compared to other mothers.

In addition, they feel lonely and have problems in their relationships with other people (Khamis, 2007). Chu and Richdale (2009) reported that mothers of exceptional kids such as deaf children do not sleep well and have depression, anxiety, and stress. Therefore, they face with problems such as accepting the disabled child, accepting the reality, disappointment and depression that decrease their level of mental health, happiness, and hopefulness (Keshavarz, 2012).

Research indicates that parents of disabled children have also much trouble in their marital adjustment and well-being (Dabrowska & Pisula, 2010; Dempsey, Keen, Pennell, O'Reilly, & Neilands, 2009). Studies

carried out in Iran also suggests that mothers of children with hearing impairment and mental retardation have lower mental health and more depression (Kouhsali, Mirzamani, Mohammadkhani, & Karimlou, 2007).

Happiness is experiencing the repetitive pleasant emotions, the relative lack of unpleasant feelings, and a general feeling of satisfaction with life (Biswas-Diener & Dean, 2010). According to Seligman (2002), happiness as a positive emotional phenomenon is essential for human and gives meaning to his or her life. Positive emotions broaden the scope of attention and thus increase the awareness on physical and environmental conditions (Seligman, 2002). Happiness does not stem from one factor, but is influenced by a wide range of variables. The main factors affecting happiness are under personal control of individuals (Biswas-Diener & Dean, 2010). Happiness is a relatively important concept in every individual's life. Understanding and facilitating the happiness and well-being and identifying the factors affecting these 2 states are the main topics of positive psychology (Seligman, 2002).

In recent years, with the development of positive psychology, study on happiness has been the major focus of research. The important role of the happiness in mental health, physical health, efficiency, productivity, and social contributions has drawn the attention of researchers in the areas of psychology, biological sciences, and social sciences to the factors affecting happiness (Neshatdoust, Mehrabi, Kalantari, Palahang, & Soltani, 2007). Research suggests that the happier people earn higher income, live longer, lead more durable marriages, enjoy better health habits, and experience fewer days of illness. Positive people seem to be more compassionate, more hopeful, more appreciative, more creative, and practice healthy styles of thinking (Biswas-Diener & Dean, 2010).

The literature shows that treatment with positive psychology approach has effects on increasing mental health and hope (Emmons & McCullough, 2003), increasing positive relationships and emotions (Rashid, 2015), achievement, and happiness motivation (Donaldson, Dollwet, & Rao, 2015). Research shows that happy people, due to use of more efficient strategies, make more effective decisions in their lives (Aspinwall & Staudinger, 2003). Hariri and Khodami (2011) in a study on teaching positive thinking and happiness to the elderly in Tehran found out that positive psychology training can significantly increase their hope and improve their mental health.

Positive psychology is an approach that emphasizes on enhancing human strengths and virtues and creates the

possibilities for individuals to succeed (Seligman & Csikszentmihalyi, 2000). This approach focuses on positive processes and individual's abilities and recommends the therapists to consider the positive processes of their clients rarely occurring in their lives (Seligman, Rashid, & Parks, 2006). The results of Bannink (2008) study showed that positive attitude increased the positive thinking of female students. Studies of Also Lee, Cohen, Edgar, Laizner, and Gagnon (2006) and Alberto and Joyner (2008) showed that training positive attitude increased mental health, hopefulness, self-efficacy, self-esteem, and reduced stress in women.

A new treatment method of hearing disability is cochlear implant surgery. This device provides the possibility to perceive environmental sounds and speech for a deaf person by stimulating the sensory cells of the cochlea. After cochlear implant surgery, the deaf person will be able to hear and communicate with other people. Parents of the children with cochlear implant have a great deal of problems such as financial burdens to obtain the necessary services, rehabilitation programs to improve children's hearing and verbal situation, and mental concerns regarding the future of their children with cochlear implant. These problems endanger mental health of families, especially mothers who spend more time with their disabled kids (Hintermair, 2006). Since mothers are the main pillar of stability and peace and prosperity in the family and society, paying attention to their situation in the family is a must (Hassanzadeh, Farhadi, Daneshi, & Emamdjomeh, 2002).

Considering the above issues, it is notable that mothers of children with hearing disabilities suffer from depression, anxiety, and other related problems while they are in need of mental health, life satisfaction, proper marital relationship, and parent-child relation and mental and social health (Arnaud et al., 2008). Positive approach components have crucial role in reducing anxiety and depression and increasing life satisfaction, mental health, and happiness among people (Dockray & Steptoe, 2010). However, almost no research study investigated the effects of group positive psychotherapy on increasing the happiness of mothers of children with cochlear implant. This question is, therefore, raised that whether positive intervention can be effective in improving the happiness of mothers of children with cochlear implant or not. In this regard, the present study aimed to evaluate the effectiveness of group positive psychotherapy on increasing the happiness of mothers of children with cochlear implant.

2. Methods

The present study is a quasi-experimental research with a pretest-posttest, a control group and a 75-day follow-up design. The research community comprised all mothers

who referred to Cochlear Implant Rehabilitation Center of Baqiyatallah hospital in order to rehabilitate their children. A targeted sample was chosen using Oxford Happiness Inventory (those who obtained lower scores than the mean of population).

Twenty mothers of children with cochlear implant selected among 140 mothers referring to the hospital within the scope of at most 5 months since their children's cochlear implant, when they experienced high depression and frustration. Study mothers experienced lower happiness level. Their education level was from guidance school to high school diploma and their age ranged from 25 to 35 years. All were housewives from different parts of Tehran Province. They were selected randomly and assigned into experimental and control groups (10 subjects in each group). They were all interested in participating in group sessions. Mean and standard deviation were used to analyze the data descriptively. Also, mixed variance analysis method was used at the inferential level. All analyses were done by SPSS-16.

Before the intervention, mothers agreed to participate in this study signing a written testimonial attached in the first part of the demographic questionnaire. The participants who had a score less than 40 in Happiness scale were chosen to participate in group positive psychotherapy intervention sessions. Of those who were chosen for positive therapy, a group was chosen and assigned randomly in experimental and control group. The experimental group received positive-oriented group therapy training for 10 sessions (once a week for 120 minutes), while the control group remained on the waiting list and got no training. Two weeks after the training sessions and at the end of group treatments, both control and experimental groups were given Oxford Happiness inventory test to complete. After the experimental design finished, the mothers in the control group were invited and given the same treatment of positive psychotherapy.

Interventions: After testing the level of happiness of the two groups, a treatment period of 10 sessions were conducted for the experimental group. Each of these therapy sessions developed with an aim as follows:

Session 1: Getting familiar with other members of the group and the leader, comprehending the benefits of group counseling and the group rules and functions, providing a brief description of positive therapy; carrying out the OHI.

Session 2: The formation of group solidarity, confiding each other, encouraging group members as mothers of

disabled children to practice talking about themselves and to express their own emotions. Emphasis on the abilities and strengths points of the members and their creativity.

Session 3: Reviewing the ideology towards life and the world, reframing of having a deaf child in the family as one of the problems, being a part of the worldly life. Encouraging the members to express their feelings about their ideology toward the world, in relation to their child's disability as a problem or an implausible difficulty.

Session 4: Getting familiar with a positive view to their children activities and their well-being, explaining the relationship between happiness and hope with the attitude towards life, explaining the impact of happiness, and hope as positive processes in life and presenting their life experience.

Session 5: Presenting patterns of hope and positive thinking in their lives, explaining the importance of hope and positive thinking and their effects on life. The group counseling provided mothers with an opportunity to find out the positive relations in their life and helping each other not only to comprehend but also amend their destructive relations.

Session 6: Getting accustomed to the sense of responsibility towards the children suffering from deafness, understanding the importance of helping the child and taking the responsibility and the positive role of a mother having a child with deaf problem. The group counseling provided mothers with an opportunity to find out the positive relations in their lives to express their feelings in a relationship with their deaf children, comprehending taking versus the lack of responsibility with a sense of guilty and frustration.

Session 7: Assigning actual objectives in their lives; the members are encouraged to define their purposes clearly instead of avoiding the problem. Understanding the importance of focusing on the purpose and accepting problem, affecting satisfaction happiness of life. Encouraging members to express their thoughts about the problem acceptance and goal focusing, presenting their lives experience.

Session 8: Focusing on the impacts of expressing appreciation and thanks on individual feelings and behaviors, and social relationships. The group counseling provided mothers with an opportunity to find out the psychological analysis of the role of expressing thanks to increase happiness and improve social communication.

Session 9: Focusing on the pleasure of doing routines, group discussion about the positive emotions in doing the chores. Expressing their feelings about meaningfulness in life, making members ready for completion of group therapy.

Session 10: An overview of issues discussed in the previous sessions and getting feedback from the members and a summary of the training sessions. After completion of the treatment period on the group, the OHI posttest was performed on both control and experiment groups.

In the late 1980s, Argyle, Martin, and Crossland developed Oxford Happiness Inventory (OHI) to measure personal happiness and mostly in order to use in the Institute of Experimental Psychology Department at Oxford University. This scale and its features were revised by Argyle, Martin, and Lu (1995). Since Beck's depression scale is one of the most successful scales in measuring depression, Argyle, Martin, and Crossland (1989) reversed the sentences in this scale. In this way, 21 items were prepared. Then, 11 items were added to include other aspects of happiness. In the end, a 29-item version of OHI was prepared, including questions on life satisfaction, pleasure, self-esteem, relaxation, control, and self-efficacy which the answers are given based on a 4-point Likert-type scale. In response to the test questions, each of the choices of a, b, c, and d is scored respectively 2, 1, 0, and 3. As a result, the final score of happiness scale questionnaire will be between 0 and 87.

Argyle, Martin, and Crossland (1989) reported 90% α coefficient on 347 participants and Garenham and Bervin (1990) reported 87% α coefficient on 101 subjects. In Iran, Liaghatdar, Jafari, Abedi, and Samiee (2008) also evaluated its concurrent validity through correlation with Fordyce Happiness Inventory on 727 participants which the internal reliability of the scale was reported 92% using the Cronbach α coefficient.

3. Results

Table 1 shows the mean and standard deviation of pretest and posttest scores of mothers' happiness in 2 groups. The scores in the experimental group showed an increase in posttest but in the control group, happiness mean of mothers was almost constant. To determine whether the homogeneity of the variance of both experimental and control groups was met, Levene test was performed which was not significant. The results are shown in Table 2. Another assumption of analysis of covariance tests is the equality of regression line slope and the results of examining this assumption are presented in Table 3. According to the results, significance level of interaction (happiness group) is greater than 0.05,

Table 1. Statistical description of the pretest and posttest scores of happiness in both groups.

Variable	Group	No.	Descriptive statistics		Central index		Dispersion index		
			Minimum	Maximum	Median	Mean	Range	Variance	SD
Happiness	Pretest	Experiment	22	47	34.50	35.60	25	55.37	7.44
		Control	14	55	32	32.90	41	186.1	13.64
	Posttest	Experiment	36	83	54.50	57.50	47	197.16	14.04
		Control	16	51	34.50	32.80	35	123.73	11.12

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Table 2. Levene test results to evaluate the consistency of the variance in happiness scores.

Variable	df1	df2	F-value	Significance level
Happiness	1	18	0.52	0.47

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Table 3. The results of equality analysis of the slope of regression line in happiness scores.

Sources of variation	Sum of squares	df	Mean of squares	F-value	Sig.
Group	41	1	41	0.49	0.49
Pretest	1309.92	1	1309.92	15.93	0.00
Happiness group	35.53	1	35.53	0.43	0.52
Error	1315.33	16	82.20	-	-
	46709	20	-	-	-

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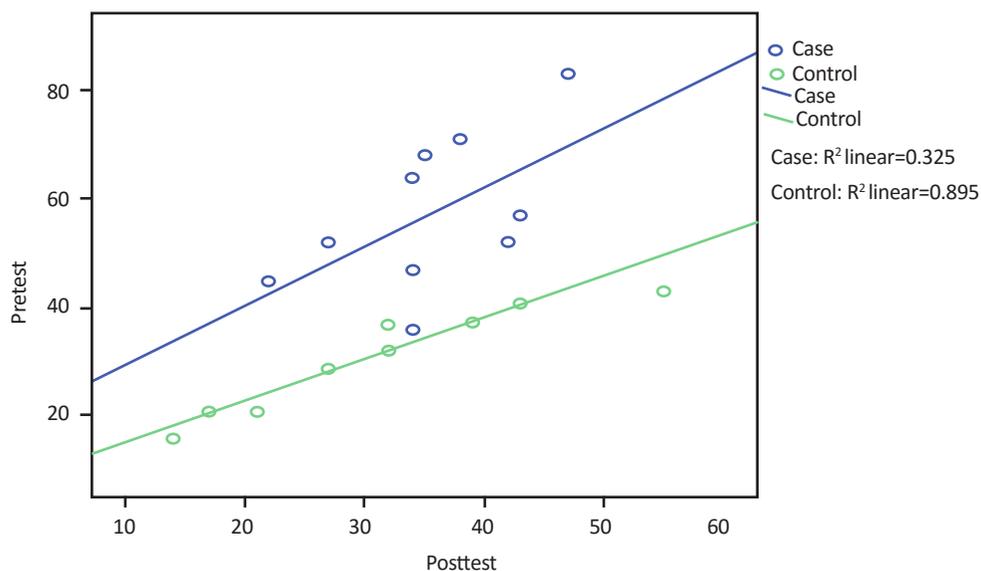


Figure 1. Examining the linearity of the relationship between pretest and posttest results.

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Table 4. The results of Kolmogorov-Smirnov test to assess the normality of happiness scores distribution.

Variable	Groups	K-S Statistics	Sig.
Happiness	Experimental	0.48	0.97
	Control	0.49	0.96

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Sources of variation	Sum of squares	df	Mean of squares	F ratio	Sig.	Volume of effect
Pretest	1537.22	1	1537.22	19.34	0.00	0.53
Groups (Independent)	2473.86	1	1537.22	31.13	0.00	0.64
Error	1350.87	17	79.46	-	-	-
Sum	46709	20	-	-	-	-

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thus the hypothesis indicating the homogeneity of regression line slope is accepted. With regard to the verification of this assumption of variance analysis, we are allowed to use this test. The linearity of the relationship between pretest and posttest was examined that was acceptable (Figure 1). To evaluate the normality of dependent variable distribution in each group (experimental and control), Kolmogorov-Smirnov test was used and the results are shown in Table 4. Based on the results, the distribution of scores in 2 groups is not significant for happiness scores at 95% confidence level ($\alpha=0.05$), i.e. distribution of happiness scores in both experimental and control groups is normal.

To investigate the effect of positive psychotherapy training on the happiness of mothers of children with cochlear implant and given that all hypotheses of covariance analysis are verified (equality of regression line slope, linearity, homogeneity of variance, and normality of distribution), the analysis of covariance removing the effect of pretest between two groups was used and the results are shown in Table 5. The hypothesis that "positive psychotherapy training affects the happiness of mothers of children with cochlear implant" was confirmed with 99% confidence level ($F_{1,17} = 31.13$, $P < 0.01$). According to the results of Table 1, posttest scores mean of the experimental group increased compared to the control group and this was a significant difference. The effect index obtained indicates that positive psychotherapy in groups affects the happiness of mothers of children with cochlear implant as much as 64%.

4. Discussion

The purpose of this study was to investigate the effect of group positive psychotherapy on increasing the happiness of mothers of children with cochlear implant. The results showed that positive approach in the experimental group was effective in increasing the happiness of mothers. Therefore, implementation of positive psychotherapy approach in mothers of children with cochlear implant is a strategy that can increase the happiness of these mothers and in the light of peace of mind, they will be able to better adapt to their children's problems and provide their progress. Moreover, teaching positive thinking to people helps them to identify their abilities and positive features of themselves and other people which is useful in improving their attitudes and relationships with others (Emmons & McCullough, 2003).

These results are consistent with some previous similar studies. Khodadadi Sangdeh, Toulaiian, and Balqanabadi (2014) in their studies concluded that positive psychotherapy can affect the happiness of mothers of children with special needs. Roštami, Younesi, Movaleli, Farhoud, and Biglarian (2014) also found that training positive thinking skills will enhance the happiness of adolescents with hearing loss. Hariri and Khodami (2011) in a study on the use of teaching positive thinking and happiness to the elderly in Tehran found that this training could significantly increase their hope and improve their mental health. Seligman (2002) at Pennsylvania University examined the effects of positive thinking on depression

and found that adopting a positive approach significantly reduced depression. [Algoe, Haidt, and Gable \(2008\)](#) concluded that teaching positive thinking techniques and skills to individuals improved positive relationships with themselves and focusing on the positive aspects increased self-confidence and self-esteem. Furthermore, [Ebadi, Soudani, Faghihi, Hosseinpour \(2011\)](#), [Bannink \(2008\)](#), [Wang and Lim \(2008\)](#), and [Ho, Cheung, and Cheung \(2010\)](#) concluded that teaching positive thinking also increased the happiness and reduces depression.

[Dadsetan, Ahmadi Azghandi, and Hasanabadi \(2006\)](#) showed that in our country (Iran), mothers bore the responsibility of being a caregiver in response to physical, emotional, and social needs of their children and fathers were less involved with the children. Thus, special counseling programs in the experimental group in which people become more familiar with each other's problems and receive necessary trainings is considered essential for mothers.

Since the burden of deaf children's problems is mostly on mothers' shoulders and they play an important role in this field, focusing on mothers' mental health is essential. Hence, it seems that providing private and group counseling services and training families, especially mothers can be really effective on the relaxation of family environment and increasing the happiness of mothers of deaf children having had a cochlear implant surgery. It should be noted that this training was conducted only on mothers of children with cochlear implant; therefore, it is recommended that in future studies the same psychological approach is used for both parents (mother and father). Therefore, positive therapy intervention was able to increase happiness efficiently by focusing on other dimensions of positive thinking, positive interactions, and other positive psychological approaches.

To interpret the above results it can be said that a disabled child puts negative effects on all family members, especially mothers. Through positive thinking psychology, mothers are helped pay attention to positive aspects of life, fulfilling their potential abilities, enjoying and problem solving, instead of overwhelming with disabilities and weaknesses of human beings. Through positive thinking, therefore, people draw their attention on their abilities, virtues, and positive points. They will be able not only to surrender against mind-made negative factors and disappointing feelings, but also to lead a happier and more comfortable life.

Present findings suggest that mothers of the disabled may benefit from programs designed to increase their happiness and hope. Regarding the effectiveness of this

treatment approach, investigating it on the fathers of hearing impaired children and other exceptional groups like mothers with blind and mental retarded children is suggested. The implications would be that hope and happiness can be developed through training programs, and programs designed to increase these variables followed by reality testing may be particularly effective for mothers with disabled children.

Our study results should be interpreted with caution because the geographic area from which the sample was drawn may make the results not generalizable. Samples drawn for different levels and other geographic areas would provide more statistical data with broader results. This study also measured current levels of happiness of the subjects. Thus, a longitudinal study was required to measure the precise mental abilities of the subjects over time. Finally, this study explored the effects of positive psychotherapy in groups on increasing the happiness of mothers with cochlear implants children. Therefore, additional studies examining the influence of other psychological approaches on happiness of the subjects may provide a more accurate results.

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Conflict of Interests

The authors declared no conflict of interests.

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