



Original Article

Effectiveness of Self-compassion Training on Parenting Stress of Mothers with Visually Impaired Children

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ABSTRACT

Background: This study aims at investigation of the effectiveness of self-compassion training on parenting stress of mothers with visually impaired children.

Methods: This is a quasi-experimental study with pretest-posttest intervention and a control group. The statistical population of the study included mothers with visually impaired children in Isfahan. Thirty mothers between eighteen and forty years old were selected using purposefully and convenient sampling. Subjects were matched in two groups of 15 intervention and control members based on the pre-test score of parenting stress. The intervention group received self-compassion training intervention for eight weeks and the control group did not receive training during this period and was placed on a waiting list. The questionnaire used in this study was the parenting stress index. The findings were analyzed using analysis of covariance by SPSS-23 software.

Results: The results showed that self-compassion training significantly reduced parenting stress in the experimental group compared to the control group ($P=0.002$). Also, in terms of parenting stress in childhood, the mean scores in the experimental group decreased significantly after intervention compared to the control group ($P=0.018$). In terms of parenting stress among parents, the mean scores in the experimental group decreased significantly after intervention compared to the scores in the control group ($P=0.0001$).

Conclusion: Since parenting is associated with stress and parents of visually impaired children suffer more stress, self-compassion training can play an important role in reducing their parenting stress.

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Introduction

Visual impairment, which is referred to as blindness and low vision is one of the most common causes of functional disability among individuals which induces all-around impacts on the individual's functioning [1]. It is estimated that about 217 million people worldwide have moderate to severe visual impairment and about 36 million are blind [2]. In Iran, according to the latest

statistics in 2017, 650,000 individuals are visually impaired and 150,000 are completely blind. According to research of the World Health Organization, with the current trend, about 1 to 2 million individuals will be added to the world's blind population each year, in such a way that the number of blind people will double by 2020 [3]. Visual impairment not only affects the sense of sight, but also all aspects of child's development [4]. Experts state that 80% of what is learned, as well as a third of the processing of the human brain, are available through the sense of sight [4, 5].

Visual impairment in children not only affects their quality of individual life, but also may change the

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family environment and especially the quality of life of parents [6]. A study by LePan et al. showed that the most influential factors on the quality of life of parents with visually impaired children are concerns and worries about services, emotional well-being and adaptation and coping strategies [7]. Accordingly, there is ample evidence that the parents of these children suffer many economic, social and emotional-psychological problems and consequently have lower mental and physical health [8].

Today, one of the best and, in the meantime, most difficult phases of each individual's life is becoming a parent [9]. Parental stress can arise from several factors such as, taking responsibility for meeting the child's basic needs, financing him/her, ensuring his/her health (physical, mental, social, moral and spiritual) and the like. Although the process of childbearing and parenting is instinctively stressful, some parents experience this stress to a greater degree. For example, parents of children with disorders may feel more stressed because their children need more caring services and their increased dependence on parents [10]. In this regard, a study that directly examined the parenting stress shows that high parenting stress, especially in mothers, can increase their psychological problems, disrupt the normal functioning of the family system and would generally lead to undesirable parenting [11]. Parenting stress is a type of extreme anxiety and stress that depends on the role of parent and parent-child relationships, which has three domains: parental behavior, child behavior and parent-child relationships [12].

One of the factors that can be used to manage parental stress and reduce its severity is psychological training. A relatively new concept that has recently attracted lots of attention is self-compassion. Self-compassion is the ability of an individual to take care of himself in difficult situations, so that he can endure negative emotions and at the same time, maintain his relationship with others under painful situations [13]. Arnos defines self-compassion as thinking about one's emotions, behaviors, and thoughts in order to provoke kind behavior [14]. Self-compassion allows individuals to rely on each other, think about their behaviors and personality traits and to forgive themselves when needed [14].

Since mothers of visually impaired children suffer more parenting stress than other mothers [15, 16] and one of the most practical intervention strategies to reduce maladaptation behaviors of the child is the reduction of parental tensions [17] and providing opportunities for communication, play and training between the mother and her child [18], there is a need for optimal health care, especially in the psychological aspect. Also, the need for psychological education to these mothers and the lack of interventional studies in this area intensifies this need. If the positive effects of mothers' self-compassion training on their parenting stress are identified, it may be a contribution to psychologists and other planners for the psychological well-being of mothers. Therefore, the present study seeks to answer the question whether self-compassion training can be effective on parenting stress of mothers with visually impaired children?

Methods

This is a quasi-experimental study with a pre-test-post-test design and a control group. The statistical population of the study includes mothers who had daughters and sons in the age range of 6 to 18 years with various visual impairments and their children were studying in the Tavakol center of Isfahan. The subjects filled out the informed consent form. The study was conducted in 2019. Thirty mothers between 18 and 40 years of age who volunteered to participate in the study were selected using purposeful and convenient sampling. Subjects were matched based on the parenting stress test score in intervention and control 15-membered groups, so that the subjects were adjusted from the lowest to the highest based on the parenting stress score. Then those with number 1 entered the intervention group, number 2 the control group, number 3 the intervention group and number 4 the control group and so on. The intervention group received self-compassion training intervention for eight weeks and the control group did not receive training during this period and were placed on a waiting list. Self-compassion intervention was performed for eight weeks in 90-minute sessions based on self-compassion by a skilled self-compassion psychologist [13]. The Ethics Committee of Islamic Azad University of Isfahan has approved this study with number 23821402961119. Prior to the study, all items were explained to the subjects and they signed the informed consent form. Subjects were assured that the results would remain confidential and analyzed inside groups. The study did not involve any harm or cost to the subjects. Before and after the intervention, the mothers in the study answered the parenting stress index (PSI), the evaluation of which was performed by researchers. It should be noted that mothers did not receive any intervention before this study. Finally, the findings of the study were analyzed using analysis of covariance by SPSS-23 software. The following is a brief description of the self-compassion protocol in the form of Table 1. Thereafter, the tools used in the study are described.

PSI has been provided by Abidin in both short and long forms. The long form of this index has 120 items of 5-point Likert type, from among which, 101 are main items and 19 optional items. This questionnaire has 14 subscales in three areas of childhood (6 subscales), parenting (7 subscales) and general life stress (1 subscale). Childhood subscales include: adaptability (11 items), acceptability (7 items), extravagance (9 items), mood (5 items), inattention and over-reactive (9 items) and reinforcement (6 items). Parental subscales include: Depression (9 items), Attachment (7 items), Limited parental role (7 items), Sense of competence (13 items), Social isolation (6 items), Relationships with spouse (7 items) and Parental health (5 items). Life stress is an optional subscale of this questionnaire with 19 items (6) and was not examined in this study.

Examining internal consistency, the reliability of this questionnaire was estimated to be 0.9 by calculating Cronbach's alpha on 534 American parents, so that this coefficient was reported to be 0.89 in childhood and 0.93 in parents.

Table 1: Self-compassion training protocol (taken from Nef et al. [13])

Sessions	Description
First	Getting acquainted and communicating with group members, discussing confidentiality, getting acquainted with the training process
Second	Giving motivation to take care of oneself and others, reducing suffering, and helping one grow and prosper (Learning to focus on positive things and creating a balanced perspective, cultivating mindful attention and using attention to create compassionate and useful images or feelings of self)
Third	Making one sensitive to the feelings and needs of oneself and others (which is different from vulnerability). Learning to think and reason using the rational mind, seeking evidence and taking a balanced view, writing and thinking about one's own style of thinking and reasoning.
Fourth	Sympathizing, emotional coordination with feelings, anxieties, and the need to (Learning to plan and engaging in behaviors that reduce anxiety, reducing safety behaviors, and moving oneself and others toward life goals and the blossoming of compassionate behavior, which often requires courage).
Fifth	Developing the ability to tolerate (rather than avoiding) the feelings, memories, or situations (including positive emotions). Learning and doing compassion training with the aim of creating a feeling of tenderness and kindness
Sixth	Creating insight and understanding of how the mind works, why they feel this way, why they think this way (learning to focus on the bodily senses for experiencing compassion)
Seventh	Creating an accepting, non-blaming and non-obedient orientation towards oneself and others.
Eighth	Reviewing the experiences of previous sessions and summarizing all sessions

Table 2: Descriptive statistics and comparison results of parenting stress and its dimensions based on the two groups

Variable	Group	Descriptive Statistics		Normality		Difference	
		Mean±SD	Significance level of z test	t statistic	Significance level of t test		
Total stress	Control	Before intervention	322.1±45.21	0.826	-4.197	0.193	
		After intervention	321.8±45.17	0.939			
	Experimental	Before training	309.7±66.14	0.987	-1.406	0.002*	
		After training	267.7±32.14	0.984			
Childhood field stress	Control	Before intervention	146.40±16.453	0.968	0.429	0.678	
		After intervention	146.50±16.298	0.97			
	Experimental	Before training	144.40±17.122	0.99	-2.485	0.035*	
		After training	130.70±18.792	0.484			
Parental field stress	Control	Before intervention	175.70±30.211	0.991	-1	0.343	
		After intervention	175.30±30.306	0.999			
	Experimental	Before training	165.30±12.878	0.932	-5.381	0.0001*	
		After training	136.30±17.864	0.671			

*Significance at the error level of 5% (P<0.05)

Table 3: Preconditions of covariance analysis of self-compassion training on parenting stress and its dimensions

Variable	Precondition	Source of changes	F value	Significance level	Preconditioning
Total stress	Variance homogeneity (Levin test)	-	0.934	0.063	3
	Linearity of correlation	Score before intervention	34.681	*0.0001	3
	Covariate and independent variable				
	Homogeneity of regression slope	Score before intervention * group	1.739	0.206	3
Childhood field stress	Variance homogeneity (Levin test)	-	4.399	0.051	3
	Linearity of correlation	Score before intervention	20.985	0.0001*	3
	Covariate and independent variable				
	Homogeneity of regression slope	Score before intervention * group	1.462	0.244	3
Parental field stress	Variance homogeneity (Levin test)	-	7.691	0.051	3
	Linearity of correlation	Score before intervention	56.065	0.0001*	3
	Covariate and independent variable				
	Linearity of correlation Covariate and independent variable	Score before intervention * group	1.472	0.243	3

*Significance at error level of 5% (P<0.05)

Results

First, in order to evaluate the individuals in terms of parenting stress component, means and standard deviations is shown in Table 2 along with the results of paired t-test to compare scores before and after the intervention in each group.

As indicated in the findings of Table (2), the mean scores of total parenting stress was significantly decreased in the post-test phase in the experimental group (who had

self-compassion training) (267.7) compared to before the training phase (309.7) (P<0.05). This result is also valid for parenting and childhood stress (P<0.05). The results show that the over time, no significant change was observed in parenting stress and its dimensions in the control group compared to the beginning of the period (P<0.05). To investigate the effect of self-compassion training on parenting stress and its dimensions, after confirming the preconditions of variance homogeneity, linearity of covariate, independent variables and

Table 4: Results of analysis of covariance for comparison of means of parenting stress scores by group members

Variable	Source of changes	Mean squares	F Statistic	Significance level	Impact size	Statistical power
Total stress	Pre-test	18565	34.681	0.0001*	0.671	0.99
	Group membership	4684.1	8.75	0.002*	0.507	0.937
	Error	535.316	-	-	-	-
Childhood field stress	Pre-test	3076.4	20.985	0.0001*	0.552	0.991
	Group membership	1010.3	6.892	0.018*	0.288	0.607
	Error	146.602	-	-	-	-
Parental field stress	Pre-test	8546.7	56.065	0.0001*	0.767	0.991
	Group membership	4049.5	26.564	0.0001*	0.610	0.207
	Error	152.443	-	-	-	-

* Significance at the error level of 5% (P<0.05)

homogeneity of regression slope (Table 3), covariance analysis method was used to control the pretest score (Table 4).

The results of Table (4) indicate that by controlling the pre-test scores, self-compassion training has significantly reduced the parenting stress of the experimental group compared to the control group ($F=0.002$, $F=8.75$). So, by controlling the pre-test scores, the mean scores of the experimental group (267.7) decreased by 54.1 after the intervention compared to the control group (321.8). The results show that 50.7% of this decrease (effect size=0.507) was due to self-compassion training.

The results also indicate that by controlling the pre-test scores of parenting stress in childhood, the mean scores in the experimental group after the intervention (130.70) decreased significantly by 15.8 compared to the post-intervention scores in the control group (146.50) ($F=0.892$, $F=6.892$). The results show that 28.8% of this decrease (impact size=0.288) was due to self-compassion training.

The results also show that by controlling the pre-test scores of parenting stress, the mean scores of the experimental group after the intervention (136.30) decreased significantly by 39 compared to the scores in the control group (175.30) ($F=0.0001 < 0.05$, $F=26.564$). The results show that 61% of this decrease (impact size=0.610) was due to self-training.

Therefore, it can be concluded with 95% confidence that self-compassion training has had a positive effect on reducing parenting stress in mothers of children with physical and motor problems. Also, with 95% confidence, this training had a positive effect on reducing parenting stress in both children and parents.

Discussion

As shown in the findings, self-compassion training had a positive effect on reducing parenting stress in mothers of visually impaired children and reduced parenting stress in the intervention group compared to the control group. The results of this study are in line with the findings of Kazemi et al., Atef Vahid et al., Anbishi, Stats et al. and Nef and Faso [11, 19-22].

In a more recent explanation for the effectiveness of self-compassion training in reducing parenting stress in mothers of visually impaired children, we may refer to the perception of the biological basis of threat. As referred to as the defense system in the emotion-based theories, it is considered the first brain system reaction to identifying

danger. This system, also known as the old brain, responds to anything that endangers human survival by engaging the amygdala, keeping the body ready to respond to threats in accompaniment with cortisol secretion [23]. Since the activation of this system keeps people away from experiencing pain, whatever keeps this system active has a biological value. So, the minds of people tend to maintain negative experiences (situations perceived to be dangerous and threatening). Hence, attention to negative events and their processing has evolutionary origins [24]. This system is very effective for all creatures (including humans) to encounter the real world and its dangers; however, it should be noted that due to the human nature, in addition to external world factors, people can also be threatened by internal world factors (fear or disturbing thoughts) [23]. Hence, annoying emotions and situations may be induced in a person even after a real world threat has terminated. This, in turn, causes the defense system to become overactive. In fact, although threatening behaviors may be evoked in the form of apt behaviors for fights and escapes, they can also be manifested in the form of ineffective behaviors such as failure, despair and helplessness [25]. Accordingly, self-compassion training based on this and the use of six elements of attention, sensitivity to suffering, empathy, tolerance of anxiety, sympathy and non-judgment could teach people to be able to practice kindness to themselves and others, as well as to help regulate emotions by keeping the security system active (secreting endorphins and oxytocin) [26, 27].

The excitement created by the overactivity of the defense system is difficult to reduce because they basically activate the avoidance of the perceived threat, thus preventing the person from re-experiencing and facing repetitive emotions and thoughts. So, the person is trapped in a vicious cycle of perceived threat (feeling threatened and frightening thoughts) and deterrent (avoidance) behavior. When one learns through self-compassion to respond to events in a different way (activating the security system), the overactivity of the defense system gradually decreases, and thus the resulting excitement subsides [27].

In addition, in explaining the present finding, we can refer to the results of Kazemi et al. (who investigated the effect of self-compassion training on psychological well-being and mental rumination in the presence of 30 mothers of students with learning disabilities. Findings indicate the effect of self-compassion training on psychological well-being and reduction of mental rumination in these mothers [19]. In the study of Stats

et al., who examined the relationship between self-compassion and the psychological effects of perceived stress with the presence of 462 students during 6 months, the results showed that self-compassion modulates the perceived effects of perceived stress, so that individuals with higher self-compassion reported lower levels of depression, anxiety, and negative emotion after 6 months [21]. Researchers have linked the results to the positive attitudes that people with high self-compassion had towards themselves. Also, the findings of Nef and Faso showed that self-compassion had a significant effect on well-being, life satisfaction and stress reduction of mothers of autism children and are in line with the findings of this study [20].

Explaining this finding, we can point to the nature of subscales of parenting (depression, attachment, limitations of parental role, sense of competence, social isolation, and relationship with spouse and parental health). What makes this training intervention effective for parents is paying attention to elements such as sensitivity to suffering, empathy, distress tolerance, sympathy and non-judgment. In this way, by making the mothers mindful about their behaviors and feelings, this method of intervention teaches them to be sensitive to their suffering and related emotions (feelings of having a child with a physical-motor problem), to take these feelings into attention, to empathize and sympathize with themselves, to find their ability to endure the pain, and to think without judgment about themselves and their relationship with the child. If they feel their behavior has been unfavorable in relation to their child so far, they have to stop blaming and reprimanding themselves for their parenting style and make compassionate arguments about their behavior. A compassionate look at their behavior can relieve their pain to some extent and thus reduce their parenting stress. Thus, the effectiveness of self-compassion training on the parenting stress is understandable because behavior and performance variations are relatively easier and done with less effort. It is also possible to observe changes at functional and behavioral levels during a shorter time.

This study faced many limitations. It was only performed on the mothers of visually impaired children and not on fathers. In addition, no follow-up period was used. Considering the necessity of observing ethics (subjects' desire to leave the study in any period) as well as the type of sampling (purposeful), the number of subjects [15] in each group can be considered as another limitation. Therefore, it is recommended to make similar studies by removing these limitations.

Conclusion

Since parenting is associated with stress and parents of children with visual impairment are more stressed, self-compassion education can play an important role in reducing their parenting stress. Considering the findings of this study, it can be suggested that self-compassion intervention programs can be effective in resolving family conflicts, quality of life and well-being of mothers of children with visual impairments.

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