

Impact of Early Maladaptive Schemas and Emotion Regulation on Quality of Life in Mothers of Children with Disabilities: A Causal Model

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Submitted: 2022-01-12; Accepted: 2022-03-14; Doi: <https://doi.org/10.22037/jcpr.v7i2.38168>

Abstract

Introduction: Acceptance and action-based therapy has six central processes that lead to psychological resilience. This study aimed to investigate the effectiveness of the acceptance and action approach based on the early maladaptive schemas mediated by emotion regulation difficulties on improving the quality of life in mothers of children with different disabilities. **Methods and Materials:** This research was a cross sectional study. The statistical population of this study included mothers of children with different disabilities which their children were studying in special schools in Kermanshah in 2020. Mothers age range between 25 and 40 with mean±SD (31±3.9) yr. According to Morgan's table, 400 mothers of children with different disabilities who attended the Kermanshah special schools were participated in the study. Structural Equation Modeling method using PLS software version 3 was used to test the model. **Results:** The results showed that the initial maladaptive schemas and the mediating role of emotion regulation difficulties had a negative and significant effect on the quality of life in mothers of children with different disabilities; Disconnection and rejection, impaired self-control, other orientation, deafness and impaired limitation had a positive and significant effect on the difficulty of emotion regulation; Disconnection and rejection, impaired self-management, other orientation, deafness, impaired action and acceptance had a positive and significant effect, and the difficulty of regulating emotion has a positive and significant effect on action and acceptance ($P<0.05$). **Conclusion:** Since early maladaptive schemas as dysfunctional cognitive foundations had negative affect on the perception of phenomena and the formation of the individual's psyche, so by examining and controlling the problems caused by emotion regulation, can plan to increase the quality of life in mothers of=children with different disabilities.

Keywords: Children with Disabilities; Emotional Regulation; Quality of Life

Please cite this paper as: Ghasvandian M, Akbari M, Goudarzi M, Moradi O. Impact of Early Maladaptive Schemas and Emotion Regulation on Quality of Life in Mothers of Children with Disabilities: A Causal Model J Clin Physio Res. 2022; 7(2): e66. Doi: <https://doi.org/10.22037/jcpr.v7i2.38168>

Introduction

Having children with any disabilities in the family often causes irreparable damages. The vulnerability of the family to this problem is sometimes to the extent that the family is severely damaged in terms of mental health (1).

Quality of life is a broad concept that encompasses all aspects of life, including health (2). This term, which is also used in various political, social and economic fields, is often used in medical research and according to most experts it includes different dimensions of physiology, social, physical and even spiritual (3). Gupta and Mehrotra (4) in their study, stated that the quality of life in parent's of children with disabilities is very low and their stress,

especially when the child is a girl, is so high, so that sometimes it is possible to abuse and neglect them, and this stress is higher in families with lower Socioeconomic status.

Children have the greatest impact on families, especially on mothers (4). Among the various disorders, mental retardation like other disorders also affect the parents of these children and parents especially mothers should have good resilience too (5).

Psychological resilience is defined as the ability to adapt to changing environmental stimuli. Some researchers have described psychological resilience as a person's ability to regulate emotions in the face of problems. Mothers who have the ability to regulate high emotions are more capable of performing maternal duties (5).

Emotion regulation refers to the ways of effectiveness on experience and expressing emotion, as well as the time of onset of emotion (6). As mentioned, the role of parents in children's mental health is obvious, however, many parents, including mothers, still do not have the skills to deal properly with their children despite profound cultural changes and lifestyle changes; One of the influential factors on children's disorder is parents maladaptive schemas (7). Early maladaptive schemas are memories, emotions, bodily sensations, and cognitions that are tied to the destructive aspects of a person's childhood experiences and are repeated in organized ways throughout life in the form of models. In the schema model, 18 schemas are classified according to 5 unsatisfied emotional needs, which are called schema domains, including disconnection and rejection, impaired autonomy and performance, impaired limits, other /directedness, and over vigilance and inhibition. Therefore, early maladaptive schemas can be considered as an effective factor in choosing a lifestyle and one of the methods that a person chooses and implements in raising his/her children. Since schemas are used as a framework for information processing and determine people's emotional reactions to life situations and interpersonal relationships, they are related to life satisfaction and life expectancy too (8). Khorasanizade *et al.* (9) in a study concluded that teaching the correct models of parent-child relationship to parents, prevent the formation of early maladaptive schemas and damages. In a study, Bricker *et al.* (10) examined the effectiveness of acceptance and action therapy in reducing and preventing negative spontaneous thoughts, dysfunctional attitudes, depression, and anxiety in female students. They found that the eight sessions of acceptance and action therapy could significantly reduce participants' depression and anxiety. Lee *et al.* (11) showed that families of children with developmental disability especially the mother experience more stress. Young (12) argues that early maladaptive schemas are deep and pervasive patterns or themes that are composed of memories, emotions, cognitions, and bodily feelings, formed during childhood and adolescence and continuing throughout life by relationship with others and himself. Some of these schemas, especially those formed as a result of tragic childhood experiences, may be at the core of personality disorders, milder cognitive role problems, and many chronic psychological disorders (13). Acceptance and action-based therapy has six central processes that lead to psychological resilience. These six processes are: acceptance, failure, self as context, present communication, recognition of values and action. In fact, its purpose is not to make a direct change in the clients, but to help the clients to face to their problems in a good manner.

Mothers of children with intellectual disabilities have many challenges in their quality of life and mood. According to that these factors may affect the family structure as well as family relationships and marital issues and may cause problems for them in these areas. Therefore, the perception of quality of life and mood of mothers of children with intellectual disabilities can provide the basis for improving the family environment. However, according to the research gap, this study aimed to investigate the effectiveness of the acceptance and action approach based on the early maladaptive schemas mediated by emotion regulation difficulties on improving the quality of life in mothers of children with different disabilities

Materials and Methods

This is a descriptive-analytical study using the structural equation modeling (SEM). The statistical population of this study includes 650 mothers of children with different disabilities (mild) who are studying in special schools in Kermanshah in 2020. For sampling the available sampling method was used. 400 mothers were selected based on Morgan table. The rate of intellectual disabilities was determined based on the American Association of intellectual disabilities tests in the student file in school. The Mean $\pm$ SD age of students and their mothers were 9.1 $\pm$ 2.01 and 33.4 $\pm$ 6.80 yr respectively.

This study was approved by ethics committee of Islamic Azad University with the ethical code of IR.IAU.SPJ.REC.1399.039.

Data collection tool

1) Quality of life questionnaire

The 26-item quality of life questionnaire (SF-12) which is a shortened form of SF-36 was used to determine the quality of life related to the health of the participants. The SF-12 questionnaire was designed by Ware *et al.* (14). Montazeri *et al.* (15) examined the validity and reliability of this questionnaire in Iran. The reliability of 12 questions of physical and psychological components by Cronbach's alpha reported to be 0.73 and 0.72, respectively. The physical component includes the subscales of general perception of self-health, physical function, physical health and physical pain, and the psychological component includes the subscales of emotional problems, social function, vitality and vital energy, and mental health. The scores of 12-24 indicates a poor quality of life, 25-36 a moderate quality of life and 37-48 a good quality of life.

2) Difficulties in Emotional Regulation Scale (DERS)

The difficulty in emotion regulation scale is a 41-item self-report measurement tool developed to assess clinically difficulties in emotion regulation. The scoring of the item is on a 1 to 5-point Likert scale. One means almost never (0-10%), two means

sometimes (11 to 35%), three means half the time (36 to 65%), four means most of the time (66 to 90%) and five means almost always (91 to 100%). In Persian version one item was removed due to its low correlation with the whole scale and 4 items due to low or dual factor load on two factors. Thus, out of a total of 41 elementary items on the scale, 36 items remained. Based on the data obtained from studies conducted by Azizi *et al.* (16) the Cronbach's alpha of this questionnaire was estimated to be 0.92.

3) Young Schema Questionnaire (YSQ-S3)

This questionnaire was developed by Young and it is a 90-item self-report tool that is used to evaluate 18 schemas that is in 5 areas. Each item is measured by a 6-point scale (1=it is completely false for me and 6=it is completely true for me. 18 schemas and 5 schematic areas. In this study, Young Schema Questionnaire (90 questions) was used. The Cronbach's alpha of the third version of the Schema Questionnaire (12) (YSQ-S3) for internal consistency was reported by Ghiasi *et al.* (17) to be 0.94. Participants responded to the maladaptive schemas questionnaire and also answered to the submission coping style and a separate questionnaire for the submission style which wasn't not introduced, the average total score of the schema was equivalent to the submission coping style.

4) Acceptance and action questionnaire

This questionnaire is developed by Bond *et al.* (18) 10-item version of the original questionnaire (AAQI) was developed by Hayes. This questionnaire measures the structure that refers to diversity, acceptance, empirical avoidance, and psychological resilience. Higher scores indicates greater psychological resilience. The study conducted by Abbasi and Moloudi, with exploratory factor analysis, has reported two factors of avoiding emotional experiences and controlling life. Additionally, the internal consistency and descriptive reliability coefficient of the questionnaire were 0.89 and 0.71, respectively. In addition, empirical avoidance of emotion has shown a significant relationship with symptoms of depression and anxiety, difficulty in regulating emotion, and distress indicators in the Mental Health Questionnaire.

Table 1. Descriptive information of research variables

Variable	Mean (SD)	Min	Max
Difficulty in emotional regulation	93 (17)	62	132
Action and acceptance	8 (9)	15	38
Disconnection and rejection	69.12 (14.80)	50	98
Impaired self-control	51.49 (8.30)	36	72
Other orientations	50.96 (14.85)	30	69
Awareness	44.49 (6.30)	29	54
Disrupted restrictions	52.96 (12.85)	34	67

Results

Table 1 showed the mean and standard deviation of difficulty in emotional regulation, action and acceptance, disconnection and rejection, impaired self-control, the other is orientation, deafness and impaired constraint.

In order to analyze the developed model, PLS 3.2.8 software was used. In this model, a total of 136 items (operation and acceptance of 10 items, difficulty in adjusting emotion of 36 items and initial maladaptive schemas of 90 items) were included in the model. The difficulty of emotional regulation has six components, the initial maladaptive schemas have six components, and the action and acceptance were one-component, and all of them were of the type of latent reflective variables.

Model analysis was performed in three stages: in the first stage, the external model (measurement model), and in the second stage, the internal model (structural model), and in the third stage, the whole model were examined. Also, the questionnaires items have been hidden using the software features to make the model clearer (a positive sign in the circle of latent variables indicates this).

Measurement model

In the study of external models, three criteria of reliability, convergent validity and divergent validity were used. In the reliability section, it is necessary to check the reliability at the level of the latent identifier and variable. The reliability of the reagent was evaluated by measuring the factor loads and the reliability of the latent variables was evaluated by the combined reliability. Reliability at the representative level is the quadratic factor load of the items, which must be at least 0.50, which means that at least half of the variance of the index is explained by the latent variable. Therefore, factor loads ≥ 0.7 are desirable and loads ≤ 0.4 need to be eliminated. Factor loads between 0.4 and 0.7 can be eliminated if removing them increases the convergent validity. Due to the fact that in reflective variables, the indicators are related to a domain and have a high correlation with each other, it is possible to replace them, deleting one or more items does not have much effect on content validity. The results showed that all preserved items have desirable reliability (≥ 0.7).

Cronbach's alpha and combined reliability were used to evaluate the reliability of latent variables. However, due to the conservative nature of Cronbach's alpha and considering the same weight of all reagents, in the partial least squares method, more combined reliability was used. Combined reliability between 0.7 and 0.9 is considered as satisfactory values and values ≤ 0.6 and ≥ 0.95 are considered as undesirable values. In this model, the difficulty of emotional

Table 2. Reliability and validity indicators of the external model

Concealed variable		Combined reliability (C.R)	Extracted Mean variance (AVE)
Second level	First level		
Difficulty in regulating excitement	Not accepting negative emotions	0.81	0.56
	Difficulty in performing purposeful behaviors in times of helplessness	0.73	0.51
	Difficulty in controlling impulsive behaviors	0.80	0.55
	Limited access to effective emotion regulation strategies	0.75	0.59
	Lack of emotional awareness	0.85	0.52
	Lack of emotional transparency	0.78	0.52
-	Action and acceptance	0.96	0.75
Initial incompatible designs	Disconnection and rejection	0.91	0.57
	Impaired self-control	0.89	0.57
	Other orientations	0.96	0.70
	Awareness	0.83	0.54
	Disrupted restrictions	0.95	0.63

Table 3. Fornell and Larker matrices for divergent validity

	1	2	3	4	5	6	7	8	9	10	11	12	13
Action and acceptance	0.86												
Impaired self-control	-0.56	0.79											
Difficulty in regulating excitement	-0.77	0.61	0.91										
Other orientations	-0.71	0.26	0.48	0.83									
Effective strategies	-0.51	0.79	0.89	0.21	0.86								
Impulsive behaviors	-0.66	0.71	0.86	0.41	0.66	0.77							
Purposeful behaviors	-0.69	0.66	0.52	0.44	0.73	0.76	0.88						
Lack of awareness	-0.72	0.70	0.95	0.47	0.62	0.67	0.71	0.81					
Lack of transparency	-0.75	0.71	0.80	0.53	0.64	0.68	0.61	0.70	0.72				
Disconnection and rejection	0.78	-0.49	-0.71	-0.70	-0.54	-0.56	-0.64	-0.67	-0.66	-0.93			
Disrupted restrictions	-0.78	0.46	0.67	0.75	0.50	0.51	0.61	0.65	0.63	0.61	0.79		
Negative emotions	-0.70	0.68	0.90	0.43	0.69	0.74	0.82	0.61	0.64	-0.68	0.63	0.67	
Awareness	-0.65	0.42	0.65	0.43	0.51	0.54	0.60	0.63	0.50	-0.79	0.58	0.62	0.55

regulation had a combined reliability of 0.94, the reliability for action and acceptance was 0.96, for initial maladaptive schema of disconnection and rejection was 0.91, for disturbed self-management was 0.89, for other orientation was 0.96, for listening was 0.83, and for disrupted constraint was 0.95. The results showed that the latent variables of the first and second levels have good combined reliability. The next step in evaluating the external model to examine the convergent validity. The mean of extracted variance is the convergent validity evaluation criterion that means the mean of common variance between the latent variable and its references and the minimum acceptable value is 0.50.

In this convergent narrative model, the variables of difficulty of emotional regulation were 0.55, for initial maladaptive schema of disconnection and rejection was 0.57; for disrupted restriction was 0.61, and for practice and acceptance was 0.75. All latent variables of the first and second levels have desirable convergent validity. The results of convergent reliability and validity are presented in Table 2.

Divergent validity is the third criterion for examining the fit of external models. Divergent validity is the extent to which a structure

is properly distinguished from other structures by empirical criteria. This validity is calculated at two levels of latent representative and latent variable. At the reagent level, to calculate the divergent validity, transverse loads are used that the load of a corresponding reagent of the structure should be more than all the loads of that reagent on other structures. This condition is observed for all references, which, of course, has been refused due to the length of the table. At the latent variable level, the Fornell-Larker criterion was used. The second root of the extracted mean variance (AVE), each latent variable must be greater than the highest correlation of that structure with other model constructs. The logic of this structure is that a structure should have more variance with its representations than other structures. The results showed that all latent variables have desirable divergent validity, Table 3. According to the results of reliability, convergent validity and divergent validity, it can be concluded that external models had the ability to measure the latent variables of the research in an optimal way. Therefore, in the continuation of the internal (structural) model, the research was reviewed.

In the internal model section, the relationship between the latent variables of the research was examined. The first criterion for examining the internal model was to examine the linearity of the variables, for which the tolerance index and variance inflation factor were used. Tolerance level ≤ 0.2 ($VIF \geq 5$) indicates alignment between variables. The results in Table 4 showed, the non-alignment condition was met. The second criterion for evaluating the internal model was the path coefficients, which in order to evaluate their significance, the self-governance procedure was used. The results obtained in Table 5 indicated that disconnection and exclusion have a positive and significant effect on the difficulty of emotion regulation

$$(\gamma_{11} = .26, t = 1.51, p > .05)$$

Impaired self-control had a positive and significant effect on the difficulty of emotion regulation

$$(\gamma_{12} = .57, t = 19.12, p < .05)$$

Another direction had a positive and significant effect on the difficulty of emotion regulation

$$(\gamma_{13} = .08, t = 2.53, p < .05)$$

Awareness had a positive and significant effect on the difficulty of regulating emotion

$$(\gamma_{14} = .37, t = 4.65, p < .05)$$

Impaired limitation had a positive and significant effect on the difficulty of emotion regulation

$$(\gamma_{15} = .37, t = 2.82, p < .05)$$

Disconnection and rejection had a positive and significant effect on practice and acceptance

$$(\gamma_{21} = -.62, t = 3.65, p < .05)$$

Impaired self-governance had a positive and significant effect on action and acceptance.

$$(\gamma_{22} = -.06, t = 1.47, p > .05)$$

Other orientation had a positive and significant effect on practice and acceptance

$$(\gamma_{23} = -.32, t = 8.19, p < .05)$$

Awareness had a positive and significant effect on practice and acceptance

$$(\gamma_{24} = -.41, t = 5.02, p < .05)$$

Impaired restriction had a positive and significant effect on practice and acceptance

$$(\gamma_{25} = -.63, t = 4.15, p < .05)$$

And the difficulty of regulating emotion had a positive and significant effect on action and acceptance.

$$(\gamma_{31} = -.32, t = 4.55, p < .05)$$

Also, based on the results obtained in Table 5, the indirect effect of

disconnection and rejection on action and acceptance was significant with the role of a difficult mediator in emotion regulation

$$(\gamma_{41} = -.09, t = 1.46, p > .05)$$

The indirect effect of impaired autonomy on action and acceptance was significant with a difficult mediating role in emotion regulation

$$(\gamma_{51} = -.18, t = 4.92, p < .05)$$

Another indirect effect of direction on action and acceptance was significant with a difficult mediating role in emotion regulation

$$(\gamma_{61} = -.03, t = 2.55, p < .05)$$

Another indirect effect of listening was significant on action and acceptance with a difficult mediating role in emotion regulation

$$(\gamma_{71} = -.12, t = 3.13, p < .05)$$

And another indirect effect was significant disruption of action and acceptance with a difficult mediating role in emotion regulation

$$(\gamma_{81} = -.12, t = 2.39, p < .05)$$

The third criterion for evaluating the internal model was the effect size (f^2), which indicates a change in value (R^2), after removing a certain latent exogenous variable from the model. Cohen (1988) showed the values of 0.02, 0.15 and 0.35 to show the small, medium and large effects of the latent variable exogenous, respectively.

Criterion, which was the most common evaluation criterion of the internal model, was the coefficient of determination (R^2), which indicated the accuracy of the model prediction. Three values of 0.19, 0.33 and 0.67 were considered as the criterion values for weak, medium and strong values, respectively. The results in Table 4 showed, the coefficients for determining initial maladaptive schemas and the difficulty in regulating emotion were moderate.

The last criterion for evaluating the internal model Q^2 was Stone-Geiser (1974), which indicated the fit of the model predictor. This criterion was calculated by the ignorance procedure, in which data points in the representations of endogenous variables were omitted and the parameters were estimated using the remaining points. A value of $Q^2 \geq 0$ for a given endogenous latent variable indicated the proportionality of the path model predictor for this particular structure. The results of this criterion are presented in Table 5 and also were desirable.

In addition to the above criteria, the criterion that recently has been used in some studies to develop the basic findings of structural equations modeling is the analysis of the importance-performance matrix. This matrix compares the effect of the entire internal model

Table 4. Coherence indices, direct and indirect effects and effect size of the internal research model

Route	Alignment (VIF)	Direct effect					Effect size (f^2)
		Values			Assurance distance		
		B	T	Sig	2.5%	97.5%	
Disconnection and rejection-difficulty in adjusting emotion	1.374	0.267	1.510	0.132	-0.081	0.343	0.012
Impaired self-control-difficulty adjusting emotions	2.416	0.571	19.12	0.001	0.508	0.627	0.652
Another orientation-the difficulty of regulating emotion	1.475	0.088	2.530	0.012	0.018	0.155	0.015
Awareness–Difficulty in adjusting excitement	1.751	0.373	4.648	0.001	0.222	0.531	0.172
Impaired Constraints–Difficulty in adjusting emotion	1.086	0.368	2.817	0.001	0.104	0.599	0.112
Disconnection and rejection-action and acceptance	2.957	-0.622	3.648	0.001	-0.725	-0.389	0.061
Impaired self-management-action and acceptance	2.453	-0.060	1.475	0.141	-0.139	0.018	0.006
	2.028	-0.320	8.189	0.001	-0.386	-0.235	0.196
Other orientation-action and acceptance	2.404	-0.413	5.016	0.001	-0.566	-0.296	0.120
	2.086	-0.632	4.153	0.001	-0.743	-0.406	0.102
Awareness-Action and Acceptance	1.012	-0.321	4.552	0.001	-0.451	-0.198	0.100
Indirect effects							
Disconnect and reject the difficulty of regulating the excitement of action and acceptance		-0.086	1.460	0.645	-0.210	0.017	-
		-0.184	4.918	0.001	-0.254	-0.110	-
Autonomy disrupts the difficulty of regulating the excitement of action and acceptance		-0.028	2.555	0.011	-0.049	-0.008	-
		-0.120	3.133	0.002	-0.196	-0.054	-
Another orientation is the difficulty of regulating the excitement of action and acceptance		-0.118	2.394	0.017	-0.228	-0.032	-

Table 5. Indicators R^2 and Q^2 and matrix of significance-performance of the internal model of the research

Variable	R^2	Q^2	Significance Matrix-Function (IPMA)	
			Total effect (importance)	Function
Action and acceptance	0.787	0.545	-	-
Difficulty in regulating excitement	0.794	0.258	0.321	50.424
Disconnection and rejection	-	-	0.708	45.035
Impaired self-control	-	-	0.243	59.711
Other orientations	-	-	0.348	53.852
Awareness	-	-	0.533	55.815
Disrupted restrictions	-	-	0.750	57.433

(significance), and the mean values of the latent variables (performance), to identify areas of importance for improvement. The performance scale is between 0 and 100 and a higher score means more performance. The results in Table 5 showed, impaired restriction, disconnection, rejection and awareness had high performance. The result of this matrix showed that to improve practice and acceptance, experts need to focus more on maladaptive schemas of disrupted restraint, disconnection, and exclusion.

Discussion

The results of present study indicated that disconnection and rejection, impaired autonomy, other/directedness, hypervigilance and impaired limits had a positive and significant effect on the difficulty in emotion regulation; Disconnection and rejection, impaired autonomy had a positive and significant effect on action and acceptance; other/directedness had a positive and significant effect on action and acceptance; hypervigilance had a positive and

significant effect on action and acceptance, impaired limits, difficulty in emotion regulation had a positive and significant effect on action and acceptance. Also, based on the results obtained, the indirect effect of disconnection and rejection on action and acceptance mediated by difficulty in emotion regulation, the indirect effect of impaired autonomy on action and acceptance mediated by difficulty in emotion regulation; indirect effect of other/directedness on action and acceptance mediated by difficulty in emotion regulation; indirect effect of hypervigilance on action and acceptance mediated by difficulty in emotion regulation and indirect effect of impaired limits on action and acceptance mediated by difficulty in emotion regulation were significant respectively.

The results obtained in the field of effectiveness of disconnection and rejection, impaired autonomy, other/directedness, hypervigilance and impaired limits on difficulty in emotion regulation were consistent with the results achieved by the studies conducted of Shafiei *et al.* (19), Tariq *et al.* (20), Soltanmohammadlou *et al.* (21), Baník *et al.* (22), and Asmari

et al. (23), It can be said that the primary incompatible schemas as ineffective cognitive bases affect the perception of phenomena and the formation of a person's psyche and can lead to psychological, social and family damage.

Therefore, the problems of families of children with different disabilities as one damages can have a significant impact on quality of life and can be formed and organized on the basis of these dysfunctional foundations. In fact, schemas influence an individual's interpretations of each event, and the individual has his or her own perception of events based on these preconceived notions. For example, people with abandonment /instability schemas believe that important people do not stay beside him/her and cannot give him the necessary emotional support and encouragement. Their relationships with important people in their life are unstable, it can be said that these people (People who have distrust /abuse schema.) are constantly have stress and worry about rejection by family and friends, so, if they receive an ordinary reminder from someone like their father, they will perceive that their father intends leave him or leave the house, so he will endure a lot of stress and pressure and he or she faces with problems. The findings of the present study are consistent with Yaung schema theory, which assumed that dysfunctional schemas directly or indirectly caused psychological problems and disorders (2).

In order to explain how early dysfunctional schemas was related, it can be stated that according to this theory, dysfunctional behaviors are created in response to the schema and then evoked by the schemas themselves, and when the dysfunctional schema is evoked, people usually experience high levels of negative emotions such as anger, anxiety, sadness, or guilt. This intensity of emotion is usually unpleasant; therefore, people often use dysfunctional behaviors to avoid provoking schemas to not to experience the emotion associated with these schemas. Thus, individuals engage in dysfunctional behaviors to reduce the unbearable pain evoked by their initial schema (18).

The results also showed that after adjusting the scores of the quality of life pre-test, the educational program based on causal model of action and acceptance was effective on the quality of life of mothers of children with different disabilities.

This result was consistent with the results of Moyer *et al.* (24), and Batink *et al.* (10). In explaining this hypothesis, it can be said that quality of life is a process to achieve health and well-being and a conscious approach to achieve mental and physical health. In other words, a positive or negative evaluation of a person's characteristics of life with the environment shows his quality of life. Quality of life is determined only by the individual. Although quality of life can be broadly defined as happiness or satisfaction, this overall perception is influenced by different aspects of one's life. Satisfaction with life is determined by each person's

understanding of his or her current situation, in comparison with his or her expectations, aspirations, and desired and ideal circumstances. The feeling of quality of life has both emotional and cognitive components. Individuals with feeling of high quality life experience positive emotions and have a positive self-esteem about events and happenings around them, while individuals with feeling of low quality of life assess their events and life situation as unfavorable and experience most negative emotions such as anxiety, depression and anger (25).

Acceptance and action-based therapy played an essential role in the mental health and quality of life of mothers of children with different disabilities and, of course, played a more prominent role when provided at an appropriate developmental stage. Psychology, unlike previous periods, does not merely seek to describe and explain the types of mental illnesses and disorders and the ways of treatment and cure. In the treatment of mothers with exceptional children during the reception and action, as soon as private experiences are labeled "stigmas", efforts are made to eliminate or reduce them. The goal of acceptance and action therapy is to change the type of relationship with problematic private experiences (feelings and thoughts) so that they are no longer perceived as stigma (26). Acceptance and action-based therapy helped mothers of children with different disabilities to experience their thoughts and feelings instead of avoiding it. It is because of using this technique that quality of life scores have increased significantly compared to the control group. Therefore, the goal of acceptance and action therapy was to create more psychological resilience. Acceptance and action based therapy can be performed through any of processes. In this method, clients learn to reduce the impact of unwanted thoughts and feelings through the effective use of pervasive consciousness. Clients learn to stop fighting these private experiences, to allocate them a place, and to allow them to come and go without any effort.

Conclusion

In general, the results indicated that disconnection and rejection, impaired autonomy, other/directedness, hypervigilance, impaired limits had a positive and significant effect on the difficulty in emotion regulation; Disconnection, rejection and impaired autonomy, other/directedness and hypervigilance had a positive and significant effect on action and acceptance. The program of education based on causal model of action and acceptance had been effective on the quality of life of mothers of children with different disabilities. One of the limitations of the present study was the problems related to holding an educational program for the mothers because of pandemic situation of Covid-19, the other limitation was the lack of

control on socioeconomic statuses of the mothers. The results of this study can be used to improve the mood, psychological, quality of life of mothers of children with different disabilities. In this regard, it was suggested that relevant organizations such as the Welfare Organization prepares educational programs to improve the quality of life of mothers of children with different disabilities and uses in-person and distant education strategies too.

Acknowledgement

Hereby, we would like to appreciate all the mothers of children with different disabilities who participated in this study and staff of exceptional schools in Kermanshah province.

Conflict of interest:

None

Funding support:

None

Authors' contributions:

All authors made substantial contributions to the conception, design, analysis, and interpretation of data.

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