Razavi Int Med. 2021 December; 9(4):e1188 doi: **10.30483/RIJM.2021.254363.1188**

Published online 2021 December **Original Article**

Effectiveness of Emotion-Regulation Training in Resilience, Psychological Well-Being, and Quality of Life among Mothers with Mentally Disabled Children

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Received 202 January 10**; Accepted** 2021 October 29

Abstract

Background: Emotion-regulation is a process that helps to adjust emotions either consciously or unconsciously. The present study aimed to assess the effectiveness of emotion-regulation training in resilience, psychological well-being, and quality of life among mothers with mentally disabled children.

Materials and Methods: This quasi-experimental study was conducted based on a pretest-posttest control group design. The statistical population included all mothers with mentally disabled children under auspices of the Welfare Authorities of Bushehr in 2017-2018. A total of 30 mothers were selected by convenience sampling method and assigned to two groups of experimental and control (n=15 in each group). Data collection was conducted using resilience, psychological well-being, and quality of life questionnaires. Data were analyzed in SPSS software (version 26) using descriptive statistics and Multivariable Analysis of Covariance.

Results: The results indicated a significant difference between mean scores of resilience, psychological well-being, and quality of life among subjects in experimental and control groups in the posttest stage ($P<0.05$).

Conclusion: As evidenced by the obtained results, emotion-regulation training seems to be efficient and promising for mothers with mentally disabled children.

Keywords: Emotion-regulation training, Resilience, Psychological well-being, Quality of life

Introduction

Mental disabilities, which are specified by dysfunctional intelligence-based and adaptive actions, are nowadays regarded as a disorder and undesired situation. Such a disorder may be caused by genetic abnormalities and brain damage before or after birth (1). Delayed walking and talking, immovableness, inability to take puerile actions and more are the alarms announcing an abnormal childhood. There is no doubt that mentally disabled children cause great torment for their families (2); moreover, studies suggested that they are deemed as unpleasant experiences in the family, posing physical problems, anxiety, social adjustment problems, stress, and depression (3).

Researchers have examined mental disability from a variety of medical, psychological, and educational perspectives; nonetheless, they eventually recognized it as a social issue. Although the acceptance of this fact and its justification are seemingly difficult for the family, it is not impossible (4). Having a physically/mentally disabled child brings the family and parents suffering, stress, anxiety, depression, and feelings of humiliation. In fact, the disabled child's presence adversely affects family's health and well-being, and since the mother plays the main role in maintaining the family's balance, her tension influences other family members (5).

Historically, preventive studies and the development of interventions on problematic behaviors have mainly focused on the identification of risk factors and high-risk populations; however, mental disability has currently created a wider scope according to its protective role (6). An important protective factor in such a vast field is resilience which increases the ability to withstand and overcome life crises. It also prevents psychological problems among individuals and protects them from the psychological effects of problematic events (7).

Different pieces of evidence suggest that the problems faced by mentally disabled children significantly lead to their parents' resilience reduction (8). The resilient individuals enjoy higher mental health levels, wider self-adjustment skills, higher self-confidence and social support, as well as more appropriate Quality of Life (QoL) and fewer psychological disorders (9). The concept of resilience assumes that although someone is prone to disorders and may confront several risk factors, he/she will suffer no disorder and damage. Accordingly, researchers consider resilience and vulnerability as

two opposite poles of a continuum (10). In a similar vein, high resilience gives rise to higher comparative flexibility, and therefore, lower vulnerability against psychological problems (11).

In addition, the nature and structure of well-being have been an interesting topic for philosophers and scholars of various scientific fields, and well-being has emerged as a centerpiece of positive psychology(i.e., a scientific study of human optimal functions)(12). In general, psychological well-being is defined as involvement in ontological challenges and personal growth efforts as recognized by Ryff's six-factor model (13). Ryff recognizes psychological well-being as an effort to realize individual real potentials (14). In addition, parents of mentally disabled children experience lower emotional health and QoL, as well as higher levels of stress, compared to those with normal children (15).

The QoL is a broad concept covering all aspects of life including health, and family members' QoL is a notable issue within the families taking care of mentally disabled children. In some cases, although caring for a mentally disabled child improves the child's QoL, it may reduce the QoL of other family members (in particular the caregiver) (16). Furthermore, QoL is associated with diseases and conditions endangering health, and therefore, parents with mentally disabled children are exposed to numerous stressors for a long time, making them experience a massive burden of stresses (17).

World Health Organization recognizes QoL as one's perception of life in terms of culture, the value system he/she lives in, objectives, expectations, as well as standards and priorities which are quite personal, invisible for others, and based on the perception of diverse aspects of life (18). In doing so, emotion has a critical role to play in various aspects of life, such as adaptation to changes in life and stressful events. In fact, it can be regarded as a biological response to important or challenging opportunities, along with the response given to environmental events (19).

Given Gross's model, the emotion-regulation model involves all conscious and unconscious strategies to increase, maintain and decrease affective, behavioral, and cognitive components of an emotional response (20). Therefore, this model includes five steps encompassing a series of compatibles and incompatible strategies. In addition, emotion-regulation training strives to reduce and control negative emotions and how to positively employ the emotions (21). Emotion-regulation is assessed in two important frameworks: 1-the emotion-regulation strategies activated before an accident and 2-those which are activated after an accident or after the emergence of emotions. Accordingly, the former leads to interpret the situation such that corresponding emotional responses reduce (22). In light of the aforementioned issues, the research hypothesis is as follows: emotion-regulation training is effective on resilience, psychological well-being, and QoL of mentally disabled children.

Materials and Methods

This quasi-experimental study was conducted based on a pretest-posttest control group design. The statistical population included all mothers with mentally disabled children under auspices of the Welfare Authorities of Bushehr in 2017-2018. A number of 30 mothers were selected by convenience sampling method and assigned to two groups including experimental and control (n=15 in each group).

Thereafter, the emotion-regulation training was performed on a weekly basis in eight 1-hour sessions on the experimental group, and a post-test was conducted one week after the completion of treatment sessions. The inclusion criteria entailed the provision of informed consent and willingness to participate in research, having a child with a mental disability, an age range of 20-50 years, lack of chronic physical and psychological illnesses, as well as the obtainment of high score in scales (according to the cut-off point). On the other hand, the exclusion criteria included participation in the same treatment sessions and absence from more than two sessions. The training sessions were held in a structured manner (summarized in Table 1). The agenda Sessions are based on Gross's emotion-regulation training model (20, 23). Moreover, the following self-report questionnaires were used to collect data:

2.1. Conner-Davidson's Resilience Scale (CD-RISC)

This inventory which was developed by Connor and Davidson in 2003 contains 25 items to measure resilience on a 5-point Likert scale ranging from 0-4 (0=quite incorrect to 4=always correct). The results of studies on the psychometric properties of this questionnaire among normal and patient samples have confirmed its validity and reliability (24). In the study conducted by Samani et al. (2006), the reliability of this questionnaire was reported as 0.93 and its validity (both convergent and divergent) was approved among diverse ordinary and under-risk groups (25).

2.2. Ryff's Psychological Well-Being Scales (PWB)

The shortened form of PWB was designed by Ryff in 1989. This scale encompasses 18 articles and 6 aspects of psychological well-being, including self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, and positive relations with others on a 7-point scale ranging from "quite disagree" to "quite agree". Ryff used such scales as Bradburn's affect balance, Neugarten's life satisfaction, Rosenberg's self-esteem, Levenson's

locus of control, and Zung's depression to assess the PWB's validity. The correlation test results between each of mentioned scales were reasonable, indicating the concurrent validity of the scale (13). In domestic studies, Cronbach's alpha of 0.43-0.60 shows relatively suitable reliability for subscales of PWB (26).

Table 1. A summary of topics and functions of emotion-regulation training sessions

Session	Content/intervention
1	Introducing group members, expressing logic, intervention stages, framework, and principles of participation in the group.
2	Understating the emotion and stimulating situations through training difference of emotions, short- and long-term emotions effects and, the relationship between emotions, psychological well-being, and QoL
3	Evaluating vulnerability and emotional skills of the members
4	Making a change in the stimulating situation of emotion and training problem-solving and resilience skills
5	Reviewing the former session, discussing QoL, psychological well-being, attention change, and stopping rumination and concerns
6	Reviewing the former sessions, changing cognitive assessments, and training marketing strategy
7	Reviewing the former session, changing behavioral and physiological consequences of emotion and its impact on psychological well-being
8	Reviewing summary of former sessions, concluding, re-evaluation, and elimination of barriers

2.3. World Health Organization Quality-of-Life Scale (WHOQOL)

It is a 26-item instrument to evaluate four aspects of QoL, including physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items) (27). In Iran, this scale was translated into Persian, and its reliability and validity were reported. A Cronbach's alpha coefficient of 0.84 indicates its desirable internal consistency. In addition, Confirmatory Factor Analysis for the 26 items of this scale revealed the presence of the above four aspects, indicating its structural validity (28). The items are rated on a 5-point Likert scale (never, very low, medium, high, very high). It is worth noting that items 3, 4, and 26 are scored negatively. Moreover, minimum and maximum scores are 26 and 130, respectively (28). In addition to descriptive statistics, for data analysis, Multivariable Analysis of Covariance (MANCOVA), Levene's Test for Equality of Variances, Shapiro-Wilk's variance test for normality, and Box-M test were employed using SPSS software (version 26).

Results

The demographic data showed that the mean age scores of mothers in experimental and control groups were 39.21±10.06 and 39.45±10.62, respectively. The descriptive indices of both groups within pre-test and post-test steps are presented in Table 2.

Table 2 demonstrates an increased total score of psychological well-being, QoL, and resilience after the reception of the emotion-regulation training program. Nevertheless, these conditions were relatively the same for the control group. Before data analysis, the required conditions for MANCOVA were evaluated. The evaluation results indicated that both preconditions, including Levene's Test for Equality of Variances and Shapiro-Wilk's variance test for normality, were met (P>0.05). Box-M test also pointed to the homogeneity of the variance-covariance matrix (F=2.508 and P=0.119). Furthermore, homogeneity of regression gradient supported insignificant conditions and pretest; therefore, the use of MANCOVA was permitted (Table 3).

Table 4 depicts significant differences between experimental and control groups in terms of mean scores of psychological well-being and resilience after training intervention in post-test (P<0.05). Moreover, the results of MANCOVA (Table 5) illustrated that the difference of mean scores of QoL was significant in the post-test (P<0.05). Therefore, emotion-regulation training had a significant impact on psychological well-being, resilience, and QoL scores of the experimental group in post-test (P<0.05).

Table 2. Descriptive pre-test and post-test data of experimental and control groups

Variables		Experimental group		Control group	
		Pre-test	Post-test	Pre-test	Post-test
		mean±SD*	mean±SD	mean±SD	mean±SD
Psychological well-being	Autonomy	2.36±10.00	3.60±13.32	2.50±10.05	2.54±10.11
	Environmental mastery	2.02±8.45	3.33±11.16	2.00±8.40	2.12±8.62
	Personal growth	3.09±10.15	4.26±13.01	3.17±10.13	3.12±10.10
	Positive relations with others	1.89±7.93	3.11±10.55	1.99±8.00	2.03±8.10
	Purpose in life	4.26±11.33	5.08±15.11	3.75±10.73	3.60±10.51
	Self- acceptance	3.27±9.33	4.66±13.05	3.65±9.72	3.42±9.66
	Total Score	7.12±44.25	9.77±48.42	6.91±43.86	6.80±43.82
QoL	Physical health	1.00±12.82	0.26±16.59	1.11±12.65	1.08±12.57
	Mental health	2.62±13.99	3.73±18.61	3.56±13.81	3±13.15
	Social health	0.53±8.10	0.88±10.09	0.42±7.46	0.54±7.60
	Environmental health	1.66±10.06	2.24±13.00	1.44±9.83	1.34±9.75
	Total Score	6.17±51.49	6.85±63.20	5.94±50.22	5.87±50.03
Resilience		5.46±18.74	7.00±23.15	5.17±18.20	5.03±18.16

Table 3. Results of Levene and Shapiro-Wilk's test in terms of statistical conditions

	Levene's test				Shapiro-Wilk's test		
Variable	Coefficient of F	Degree ofFreedom		Sig	Statistics	Degree of Freedom	Sig
		1	1				
Psychological well-being	2.323	1	28	0.137	0.146	15	0.251
QoL	2.052	1	28	0.122	0.127	15	0.203
Resilience	1.422	1	28	0.331	0.198	15	0.416
Box M Test							
Coefficient of F				Sig			
2.508				0.119			

Table 4. MANCOVA results for psychological well-being and resilience in post-test

Scale		Variable	Degrees of Freedom	Mean squares	Coefficient of F	Possibility	Impact	Statistical power
Psychological well-being	autonomy	Pre-test	1	49.74	15.33	0.012	0.345	0.445
		Group membership	1	54.95	17.45	0.000	0.602	0.597
	Environme ntal mastery	Pre-test	1	27.68	11.24	0.041	0.526	0.386
		Group membership	1	33.00	16.79	0.002	0.669	0.600
	Personal growth	Pre-test	1	21.34	12.17	0.022	0.421	0.436
		Group membership	1	28.96	17.53	0.001	0.594	0.564
	Positive relations with others	Pre-test	1	44.12	10.33	0.017	0.255	0.342
		Group membership	1	48.62	16.54	0.002	0.660	0.612
	Purpose in life	Pre-test	1	38.82	11.90	0.019	0.398	0.496
		Group membership	1	40.47	22.76	0.003	0.612	0.600
	Self- acceptance	Pre-test	1	32.51	15.83	0.010	0.164	0.422
		Group membership	1	38.41	19.44	0.000	0.603	0.602
	Total score	Pre-test	1	78.99	21.28	0.033	0.488	0.597
		Group membership	1	85.13	33.67	0.002	0.672	0.615
Resilience		Pre-test	1	36.28	14.54	0.025	0.177	0.366
		Group membership	1	41.52	19.62	0.001	0.613	0.599

Table 5. MANCOVA results regarding emotion-regulation training impact on QoL in post-test

Scale		Variable	Degrees of Freedom	Mean squares	Coefficient of F	Possibility	Impact	Statistical power
Psychological well-being	Physical health	Pre-test	1	24.05	5.096	0.034	0.012	0.141
		Group membership	1	31.99	16.711	0.004	0.577	0.666
	Mental health	Pre-test	1	87.63	9.113	0.082	0.015	0.153
		Group membership	1	105.94	13.607	0.621	0.649	0.566
	Social health	Pre-test	1	117.52	6.872	0.023	0.079	0.161
		Group membership	1	138.89	15.800	0.004	0.598	0.602
	Environme ntal health	Pre-test	1	42.865	13.09	0.039	0.344	0.322
		Group membership	1	69.25	17.45	0.002	0.612	0.598
	Total score	Pre-test	1	136.31	23.07	0.016	0.023	0.278
		Group membership	1	154.100	34.19	0.001	0.640	0.613

Discussion and conclusion

The present study was conducted to assess the effectiveness of emotion-regulation training in the resilience, psychological well-being, and QoL among mothers with mentally disabled children. The MANCOVA results indicated a significant difference between the two groups in terms of mean scores of psychological well-being components (i.e. autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance), as well as resilience, after training intervention in post-test ($P<0.05$). This finding is in line with the results of previously conducted studies (29-32).

This finding can be justified on the ground that emotions are socially useful and can be constructive in transmitting feelings to others, social interaction, as well as creating, maintaining, and disconnecting relationships with others. Therefore, emotion-regulation training can effectively enhance the resilience and psychological well-being of mothers with mentally disabled children since emotions are regarded as solutions to tackle challenges, frustrations, and problems of having a disabled child. In other words, due to the critical role of emotions in life, emotion-regulation can help to achieve resilience and psychological well-being by teaching positive and negative emotions, as well as their timely acceptance and expression (33).

Due to the use of such techniques as awareness of emotions, acceptance of emotions and marketing, and proper expression of emotions, it can be argued that emotion-regulation training can modify positive and negative emotions. Consequently, it can adjust judgment and positive perception of oneself among mothers of children with mental disabilities; moreover, it can be effective in the enhancement of individuals' resilience and psychological well-being.

Based on another finding of this study, there was a significant difference between the two groups in terms of mean scores of QoL components (i.e. physical, mental, social, and environmental health) after treatment sessions in the post-test, indicating a significant impact on the experimental group ($P<0.05$). This finding is in agreement with those obtained in previous studies (34-37); consequently, the hypothesis of the present study is approved.

This finding can be explained on the ground that emotion-regulation skills are of paramount importance for several reasons. Firstly, negative emotions that are unnecessarily addressed to the diagnosis of a the particular disorder often refers to the behavioral patterns associated with that disorder. Secondly, the mentioned negative emotions often intervene in effective adaptive methods and the use of strategies trained in the treatment. Therefore, the promotion of skills used to regulate more than one emotion can target the improvement of QoL and any of its components. There are many empirical pieces of evidence suggesting that emotional regulators are involved in the creation, maintenance, and treatment of psychological problems. Longitudinal studies have also concluded that emotion-regulation skills predict one's mental health in later life steps.

Limitations and Suggestions

Among the notable limitations of the present study, we can refer to the sampling method which limits the generalizability of results, and the impossibility of the follow-up stage. Moreover, data collection with a questionnaire (self-reporting tools) can result in bias and distortion of subjects' responses. In addition to questionnaires, clinical interviews are suggested to be used in future studies. Furthermore, it is proposed to compare the

effectiveness of emotion-regulation training to third-wave treatment behavioral therapies regarding psychological constructions of mothers with mentally disabled children.

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