

Efficiency of Logotherapeutic on Quality of Life and Psychic in Mothers of Children with Physical-motor Disabilities

Abstract

The aim of this study was to investigate the efficiency of logotherapeutic concepts training on psychological fatigue, quality of life, and psychological hardiness in the mothers of children with physical disabilities. This study was a quasi-experimental research with a pretest-posttest control group design. The statistic population included all the mothers of the children with physical-motor disabilities referring to the consulting centers under the control of state welfare organization in Sanandaj city during the interval 21 march 2021 to 22 September 2021. Applying a convenience sampling technique, 20 mothers who met the research inclusion criteria were selected as the statistical sample and were randomly categorized into two 10-member test and control groups.

Hedberg's training course was applied to the test group during ten 60-minute sessions. The measurement tools used in the research included the Fatigue Severity Scale (FSS), the Quality of Life Scale, and Hardiness Scale. One-way covariance (ANCOVA) was used to analyze the collected data, applying SPSS 20 software. The obtained results revealed that training the logotherapy was effective in the psychological fatigue, quality of life, and psychological hardiness in the mothers of children with physical disabilities. It means that the test group's scores of life quality and psychological hardiness have been increased in the post-test phase compared to the control group. Further, the psychological fatigue score has been significantly decreased. Therefore, the logotherapeutic concepts can be trained to improve the psychological fatigue, quality of life, and psychological hardiness in mothers of children with a physical-motor disability.

Keywords: *logotherapy, psychological fatigue, quality of life, psychological hardiness, physical-motor disability*

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Introduction

According to World Health Organization reports in 2012, More than one billion people in the world live with some form of disability. Among them, nearly 200 million experience considerable difficulties in functioning (Mohsin and Zaidi, 2013). It is estimated that in addition to their family members, the number of these people is amazingly two billion. The physical disability influences the individual's personal life as well as the performance and process of the family system and members. The impacts of patients or disabled children in the family system can develop the financial burden and disorders in the marital life and social isolation (Aras, Stevanović, Vlahović, Stevanović, Kolarić & Kondić, 2014). The psychological health of the family as the smallest social entity depends on the health of all the family members. Having a child with a disability imposes additional material and psychological damages on the family. The parents might be shocked of having such children and feel a sense of depression, anxiety, aggression, fear, embarrassment, and a plea for innocence (Mirsamadi and Abdi, 2017). Some researchers confirmed the relationship between mental health and having a disabled child. The research was done to compare the public health, coping styles, and happiness of the mothers of children with physical-motor disabilities. The findings revealed a significant difference between the two groups of mothers in terms of public health and happiness. In other words, healthy children's mothers enjoy considerable happiness and public health (Emerson & Brigham, 2016).

As these children get older, their behavior is challenging and, when a child enters the early teens, it involves many issues in terms of social communications. When caring for a disabled child gets longer and most of the physical-motor disabilities last until death, the problems may progress and not be resolved over time and lead to severe psychological fatigue of the mothers and these individuals' primary caregivers (Taghadosi, Afazel, Akbari, & Rahemi, 2012). Fatigue or a sense of fatigue involves a high level of negative effects including anger, depression, and anxiety (Hayes & Watson, 2013). Many studies have reported fatigue as one of the continuous long-term emotional states. Further, fatigue is associated with a low level of life meaning, self-assertion, self-actualization, and satisfaction with life (Boonen, Maljaars, Lambrechts, Zink, Van Leeuwen & Noens, 2014). Fahlman, Mercer, Gaskovski, Eastwood & Eastwood (2009), as existential theorists, believe that fatigue can manifest itself by the increase of mental pressure and environmental expectations in life. In addition, when an individual engages in activities for whom are not valuable, it leads to his fatigue.

Considerable attention has been paid to the care burden in the research literature related to mothers of disabled children, but the nature of psychological burden and observed fatigue and maternal abilities have been ignored. Most of these researches concentrated on the negative effects of these experiences on the caregivers' emotional life (Morlohian and Ghomrani, 2016). As a result, it affects their compatibility and lowers the quality of their life (Valizadeh, 2018). World Health

Organization defines the quality of life as an individual's perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards, and concerns (King & Hinds, 2012). WHO theorists believe that Quality of Life (QoL), like life itself, is an extremely complex and multidimensional concept and both objective and subjective components are taken into account in its study. The studies showed that the quality of autistic children's parents' life is lower (Yamada, Kato, Suzuki, Suzuki, Watanabe, Akechi & Furukawa, 2012). These parents encounter different challenges and experience a higher level of stress in comparison to other children with special needs. The stress and negative emotions often lead to anxiety, depression, and anger that influence the quality of life (Bakhshayesh and Abyari, 2015).

Psychological hardiness is another personality structure that is of utmost importance in the context of mental pressure in the mothers of children with physical-motor disabilities. Psychological hardiness is a composite of personality characteristics that acts as a source of resistance and a protective shield (Ghafouri, Kamali, & Nouri, 2018). Psychological hardiness is a general orientation toward oneself and the peripheral world and is a composite of interrelated attitudes of commitment, control, and challenge. According to Kubasa (1993), the hard individual has three general characteristics: A. he believes he has the power to control or affect life events (control); B. the individual's abiding sense of commitment to activities s/he does (commitment); C. to expect that change is an amazing challenge for further development and a normal aspect of life (challenge) (Ghafouri, 2018). Studies done in the context of hardiness indicate that these components are intrapersonal resources that can moderate the tensions and their undesirable effects and improve the individuals' mental health by directly affecting the individuals' function in stressful conditions (Avey, Wernsing & Luthans, 2012).

Regarding what was mentioned, the recognition, reduction, or removal of these mothers' psychological problems along with their training are of special importance for developing their psychological hardiness and life quality as well as reducing their mental fatigue. Logotherapy is of effective interferences on the mentioned variables that are defined as a philosophical approach to encounter the problems of those people who challenge finding the meaning in their life. This approach addresses four significant dimensions of death, freedom, loneliness, and meaninglessness in the human beings' nature and considers them as creatures who build their own life meaning (Zecca, Panicari, Disanto, Maino, Singh, Digesu & Gobbi, 2016). Logotherapy as an existential psychotherapeutic approach deals with the human being and his world and gives the individual an opportunity to engage in the fundamental

concerns and concepts of life such as life and death, appointment and disappointment, communication or isolation, freely election, awareness, and sense of responsibility toward oneself and others, self-esteem, and searching for meaning in a period of life that is near to death. In such conditions, after the perception of logotherapeutic concepts the individual feels more responsible for his/her life and experiences basic changes in his/her beliefs (Julom & Guzmán, 2013).

The physical disorders and disabilities impose noticeable undesirable consequences both physically and mentally on the disabled individual and his/her life and consequently on the society. The disabled person's sense of disability to attend to the society and accept his role as a member of family and society is an issue that makes many physically disabled persons feel lonely and its consequences. Accordingly, it requires further research (Lucas-Carrasco et al., 2011). Therefore, planning such programs for these individuals and their families, especially the mothers sounds vital to help them deal with such conditions. This would be impossible unless doing some research and submit their results to the related authorities. Moreover, the parents can use these findings (Pourbaferani, E'temadi, & Jazayeri, 2014). Therefore, such researches sound to be more necessary and applicable. The mothers of children with physical or mental disorders pay less attention to finding meaning and goals in life and are unable to solve their problems and improve their life quality. Accordingly, using such strategies, which lead to findings this meaning and improving the quality of life, is necessary for these individuals since the study of mental health aspects in such persons is of special importance (Shoaa Kazemi and Saadati, 2010). Regarding this significant subject, the present study aims to answer the following question: does training the logotherapeutic concepts affect the psychological fatigue, life quality, and psychological hardiness in the mothers of children with physical-motor disabilities?

Method

This study was an applied quasi-experimental research with a pretest-posttest control group design. The statistic population included all the mothers of the children with physical-motor disability referring to the consulting centers under the coverage of state welfare organization in Sanandaj city during the interval 21 march 2021 to 22 September 2021. Applying the available sampling technique, 20 mothers who met the research inclusion criteria were selected as the statistical sample and were randomly categorized into two 10-member test and control groups. The inclusion criteria were as follows: Having a child (ages 3-18) with a physical-motor disability, regarding the existing diagnostic criteria; 2- the intention to participate in the training course; 3- to enjoy reading and writing ability; 4- mothers ages 20 to 50; 5- not having the severe mental illnesses such as psychotic disorders including

schizophrenia, severe depression, and other physical or mental disorders which limit the social interactions and prevent the mothers to participate and cooperate the training courses and question the accuracy and reliability of the results. Fatigue Severity Scale (FSS) proposed by Krupp et al. (1989), Life Quality Scale, and Kiamarsi's (2007) Hardiness Scale were used for data collection that is described as follows:

Fatigue Severity Scale (FSS): this scale has been proposed by Krupp et al. (1989) and includes a 9-item extracted from 28-item questionnaire. The questionnaire has been scored on a seven-point Likert type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). The minimum and maximum scores would be 9 and 63, respectively.

The score between 9 and 18: low-level fatigue; score between 18 and 45: average-level fatigue; and score above 45: High-level fatigue. This questionnaire has no subscale and reverses scoring. Krupp et al. (1989) examined the construct validity and reliability of the fatigue severity scale in patients with multiple sclerosis and lupus. Cronbach's alpha of this questionnaire was 0.88 in healthy persons, 0.81 in persons with multiple sclerosis, and 0.89 in persons with lupus. Ultimately, the fatigue severity scale had a high internal consistency. In Shahvaroghi Farahani's (2009) research, internal consistency at the level of items was measured by examining the correlation and Pearson's correlation coefficient between each item and the questionnaire total score after modifying the overlap (correlation of one item with the other items' total scores minus its score) due to lack of bias. 0.4 was considered the optimal correlation level. Furthermore, Cronbach's alpha coefficient was calculated to examine the internal consistency. The alpha coefficient between 0.5-0.7 is desirable on a group scale.

Quality of Life Scale: this questionnaire is the summary of the quality of life defined by the World Health Organization (1998) that was developed by the life quality group of this organization including 15 countries with different cultures around the world. It includes 26 items measuring four domains of physical health, mental health, social relationships, and environmental health by 24 items (7, 3, 6, and 8 items were respectively constructed for every one of these domains. Two items are not related to mentioned domains and generally measure the quality of life and health. All the items have been constructed on a five-point Likert type scale ranging from the first option indicative of worst condition (score zero) to the fifth option indicative of best condition (score 4). This tool was simultaneously designed and translated to different languages in more than fifteen countries. This questionnaire has been translated and standardized by Nejat (2006) in Iran. Cronbach's alpha was reported between 0.66 and 0.84 for the four subscales and the total scale is indicative of optimal internal consistency of the scale (Nasiri, 2006). Wong, Sarour, and

Bidel (2012) used their research the confirmatory factor analysis to evaluate the questionnaire validity. The factor loading for this questionnaire items was obtained from 0.54 to 0.83 which is representative of desirable and acceptable validity in this questionnaire.

Hardiness Scale (Kiamarsi, 2007): the 20-item questionnaire on hardiness was developed by Kiamarsi in 2007. It included three subscales of commitment, control, and challenge. Cronbach's alpha was obtained %76 for all the testees. It was obtained %74 and %76 for the female and male testees, respectively. Except the articles 6, 7, 10, 13, 17, and 21 which have a negative factor loading and are scored reversely, this questionnaire is scored (0, 1, 2, & 3) based on testees' responses to one of four options including never, rarely, sometimes, and often. The score range in this questionnaire is 0-81. In this questionnaire, a high score indicates the individual's great psychological hardiness. Bakhtiari Barati (1997) correlated the scores obtained from this scale with the values of several personality traits (Rotter Internal-External Control Scale, Personal Control subscale, Marlowe-Crowne Social Desirability Scale, and Rosenberg's interpersonal Competency Scale) that the predicted correlation between the scale and size of personality traits was at an average level (it was 0.61 and significant at the level of 0.05) and confirmed the desired component. Further, the reliability coefficient of the scale was obtained respectively 0.76 and 0.79, using Guttman's halving method and Cronbach's alpha coefficient (Shamaeizadeh and Abedi, 2010).

The independent variable in this study was semantic therapy training. The method of execution was that the researcher first invited the subjects to participate in a briefing session and explained the research process to them in full and assured them that their information was confidential. Will remain with the researcher. Also, in order to eliminate any doubts, their questions were answered and the subjects were emphasized by repeating and practicing the teachings learned during the training course. Then, after the pre-test, training sessions were performed on the subjects for ten sessions of 60 to 90 minutes. Semantic therapy training consisted of a modified protocol of treatment protocol according to the guidelines developed based on the proposed package of Headberg (2010), which focuses on what people do with the intent to make desirable behavioral changes, and on the other hand with an emphasis on psychological processes. Guides people to change the feelings and beliefs that cause behavioral problems. It is emphasized that the protocol is completely flexible and can be changed according to the client's condition. In fact, according to the client's ability and tolerance threshold, the time and even the content of the sessions can be changed according to the existing treatment protocol. The therapeutic components and

specific interventions used in each session are presented in

Table (1).

Table 1: Summary of the steps of performing semantic therapy based on the proposed package of Headberg (2010)

1. Set group goals and rules		First session
2. گروه Familiarity of group members with each other and consultant	Target	
3. Defining and expressing meaning therapy and the need for meaning in life		
1. <i>Some people in the group say things about their lives, and other members imagine themselves in that person, and in the next session, they express their opinions and issues similar to those in the group.</i>	task	second session
1. Belief and acceptance of oneself and recognizing one's characteristics		
2. <input type="checkbox"/> Attention to spiritual freedom as one of the dimensions of human existence	Target	
3. <input type="checkbox"/> Introduce awareness, liberation from war and escape and mental traffic caused by worthless things		third session
1. How do others treat you?	task	
2. What caused their behavior?		
1. Teaching meaning-making, understanding the value of life, and avoiding self-harm with reactive behaviors.	Target	fourth Session
2. <input type="checkbox"/> Awareness of responsibility and its role in achieving success.		
1. What is the worst thing that can happen?	task	
2. What role do I play in making this worse?		fifth meeting
1. Recognize the causes of anxiety and ways to deal with it.	Target	
2. <input type="checkbox"/> Recognize existential anxiety.		
3. Evaluation training means avoiding suspicion and judging others.		Sixth Session
1. What do you do if you are alone on an island? Why?	task	
2. What do you do if you live in a land where other people are in control of your thoughts and decisions? Why?		
1. The need to maintain identity and communication with others.		Seventh session
2. معن Find the meaning of love.	Target	
3. <input type="checkbox"/> Teach to be focused, see yourself as a cohesive whole (body, mind, and soul) and adhere to growth and excellence in the direction of lasting truth (God).		
	task	Session 8
1. How can suffering be enjoyable?		
2. <input type="checkbox"/> Examine the meaning of suffering.	Target	
3. Insight training means choosing activities for growth and excellence, and understanding the relative rather than absolute importance of people and things, none of which are the whole or the center of the universe.		session
1. What do you remember after us?	task	
2. What should I do before I die?		
1. Recognize creative values.	Target	Session 8
2. Target training on intangible goals, and intelligent avoidance of reactive actions.		
1. What do I expect from life?	task	
2. What will make my life enjoyable?		Session 8
1. Recognize empirical values	Target	
2. <input type="checkbox"/> Expressing the mission, that is, consciously recognizing the great and ultimate goal of life (closeness and return of the soul of lasting truth), orienting towards it, and not losing it amid low-value goals.		
1. How do you feel about your destiny?	task	
2. <input type="checkbox"/> Can it be anything other than how you feel right now?		
3. <input type="checkbox"/> Exist?		
4. <input type="checkbox"/> Exist?		

1.	Recognize tendency values	Target	The ninth session The tenth session
2.	Explain the unjustifiability of the new stage of "soul" (consciousness) through neurophysiological and justification of consciousness through the connection of the soul to the stable truth (God) as the only meaningful and purposeful way.		
1.	What is the source of my meaning in life?	task	
1.	Review of past topics, final summary, appreciation of participants, and implementation of post-test.	Target	
1.	Final summary	task	

In the present research, descriptive statistics such as mean, variance, and standard deviation were used. Moreover, inferential statistics such as one-way covariance (ANCOVA) were applied and the data were analyzed using SPSS 20 software.

Findings

The research results revealed that 13.3, 33.3, 26.7, 20, and 6.7 percent of the research population were respectively 30-35, 36-40, 41-45, 46-50, and 50-50 years old.

Table 2: mean and standard deviation of scales in pretest and posttest stages

Variable	Group	Stage	Mean	Standard deviation
Psychological fatigue	Control	Pretest	56/36	6/80
		Pretest	57/81	7/66
	Test	Pretest	57/30	6/45
		Pretest	48	7/21
Quality of life	Control	Pretest	4/60	1/19
		Pretest	4/53	1/15
	Test	Pretest	4/60	1/04
		Pretest	6/20	1/66
Psychological hardiness	Control	Pretest	31/60	8/48
		Pretest	31/99	8/88
	Test	Pretest	32/53	8/94
		Pretest	37/47	9/23

According to Table 2, the mean total score of mental fatigue in the experimental and control groups is as follows, the average of the experimental group was 57.30 and the control group was 56.36 in the pre-test, and after training, the average of the experimental group was 48, ie decreased. And the control group showed 57/57, which means a slight increase. The mean score of total quality of life in the experimental and control groups was as follows, the mean of the experimental group was 4.93 and the control group was 4.60 in the pre-test. Control 4.53 means almost unchanged. The mean score of total

psychological toughness in the experimental and control groups is as follows, the mean of the experimental group was 32.53 and the control group was 3.60 in the pre-test. 31/99 control means reduction has been shown.

Therefore, the univariate analysis of variance (ANCOVA) test was used to evaluate the significance of this decrease in scores in the variables of mental fatigue, quality of life, and psychological hardiness, the results of which are presented in Table 3.

The significance level	The value of F	Average squares	Degrees of freedom	Total squares	Sources Change
0/001	2/833	125/586	1	125/586	constant number
0/011	2/730	3/008	1	3/008	group
0/017	2/373	1/536	1	1/536	Pretest

		4/118	19	107/080	Error	
			20	2787	total	
0/001	18/640	13/917	1	20/673	constant number	
0/011	7/394	8/201	1	8/201	group	Quality of Life
0/017	2/881	5/413	1	5/413	Pretest	
		1/109	19	28/836	Error	
			20	5924	Error	
0/001	23/567	23/466	1	34/567	constant number	
0/011	8/298	11/345	1	11/345	group	psychological hardiness
0/017	4/567	6/789	1	6/789	Pretest	
		1/234	19	30/780	Error	
			20	4691	Error	

As can be seen in Table 3, after adjusting the pre-test scores of mental fatigue, quality of life, and mental toughness, there is a significant difference between the scores of mothers in the experimental and control groups. Therefore, the null hypothesis that there is no difference between the two groups is rejected and as shown in Table 2, the adjusted means of the experimental groups had a significant difference from the control group. Therefore, according to the test results, it can be inferred that teaching the concepts of semantic therapy affects mental fatigue, quality of life, and mental stubbornness in mothers in the experimental group.

Discussion

This study aimed to teach the concepts of meaning therapy on mental fatigue, quality of life, and mental stubbornness in mothers with children with physical disabilities. The results of univariate analysis of variance showed that teaching the concepts of meaning therapy to the mothers of the experimental group. The results of this study with the research of Yari (2013), Stiger, Shim, Barnes, and Sheen (2014) and Eutzen and Papantonio (2014), Moloudi (2014), Hamid et al. (2011), Shojaeian (2009), and Smith (2012)) Has been consistent. The results of their research have also shown that the concepts of meaning therapy have significantly reduced mental fatigue and quality of life and mental hardiness and can be used as a useful method for people with many problems.

The results of this hypothesis can be explained as follows: According to the results of studies, mothers with children with physical disabilities are not in a good position in terms of quality of life and mental well-being due to the difficult conditions in which they are, and more than Emotional disturbances such as depression and anxiety have been reported to be associated with increased mental fatigue (Kessler and Altonj, 2012). On the other hand, teaching meaning therapy strategies such as changing attitudes toward life, changing the direction of attention, and using a higher

meaning for life makes these people in relation to managing their emotions, especially those unpleasant emotions that are caused by the child's problems. They are more successful, as a result of this model, the negative burden of emotions is reduced and they can deal with their emotions, including feeling tired more logically and more efficiently (German and Stanton, 2016). Fatigue is also one of the main complications of the disease that is formed and persists due to chronic emotional disturbances while learning to regulate emotion is associated with time management and adjustment of emotion and prevents the aggravation of the disturbance and its continuation (Asghari, Issapour Haftkhani, and Ghasemi Jobneh, 1397). Meaning therapy is a technique by increases responsibility, changing the beliefs of these people about life and increasing life expectancy leads to improving the quality of life in physical and psychological dimensions.

Meaning is one of the variables related to growth that creates situations in which it brings happiness and satisfaction to the person. Therefore, meaning can contribute to the happiness and satisfaction of all people. Therefore, giving meaning to mothers' lives reduces their suffering and alleviates the psychological pressures and unfortunate consequences of having a disabled child, and improves their quality of life and adjustment. In fact, meaning therapy helps these mothers not to focus on the loss despite the frustration, but to seek meaning. As a result, life is meaningful in terms of the meaning of therapy under any circumstances. What is significant in semantics is that it bears witness to the potential and unique ability of a man in the best way that he can turn a tragedy into a personal victory and turn an unfortunate situation into a human situation. When we are unable to change a situation, we should try to change ourselves (Shapiro, 2016). In this regard, the social support that is provided through the positive feedback of group members in training sessions has a positive effect on psychological toughness. According to Bandura, high

and close social relationships affect mothers' stubbornness through the indirect effect of modeling (common parenting methods by observing the correct parenting behavior of inefficient friends and relatives). Also, meaning therapy by training and improving coping strategies and techniques allows people to build and repair themselves, which in turn increases the triumphant attitude to the unfortunate consequences of life. Increases the power of realistic attitude and communication with others, strengthens a sense of social worth, and makes people feel resilient in challenging situations, which increases stubbornness.

Another explanation is that semantic therapy, due to learning a higher meaning and more than instantaneous values, causes mothers to value themselves more when expressing problems by directly expressing their thoughts and feelings, and with irritability, irritability. Reduce fear, danger, impatience, and restlessness caused by dealing with problems (Sequis, Samson, Simpson, and Versicik, 2014). The last explanation is that in the method of meaning therapy, people are taught to improve their life situation, reach personal values and avoid unavoidable problems, instead of avoiding intellectual and practical thoughts and social situations by increasing their psychological acceptance of their inner experiences. Take steps to increase their mental health and well-being. Active and effective confrontation with emotions, avoidance of avoidance, change of self-attitude and challenges, review of values and goals and meaning of life, and finally commitment to a social goal can be considered as the main factors for the success of this method (Hayes and Et al., 2006). As a result, meaning therapy with applied educational strategies increases the stubbornness of individuals.

Conclusion

Mothers are responsible for the daily care of children (especially when children are younger) and in case of problems for these children, mothers feel more failure and unhappiness (Kamyabnejad, Seif Naraghi, and Khoshkalam, 1397). Among these, are the mother's confrontation with the physically or mentally disabled child, the child's need for constant care, the importance of providing special developmental conditions, the experience of parental stress due to ritual behaviors, language problems, barking, and lack of self-care skills in This group of children all provide the ground for the weakening of the natural function of the mother. The presence of such problems will increase the average of mental disorders in mothers of exceptional children compared to mothers of normal children. Also, having expectations and expectations far from the ability of children and not meeting them causes parental failure (Kakabraei, Afrooz, Hooman, and Moradi, 2011). One of the limitations of this research is the limitation in controlling factors and variables such as the needs, attitudes, and interests of mothers and their cultural, social, and political views, etc.,

which should be observed with caution. Since, in addition to mothers, other family members also somehow deal with mental health issues and problems related to the mentally ill in the family, it is suggested that these effects be investigated in future research. In this regard, it is suggested that educational programs in the field of mental health promotion for parents with such children, such as programs to increase resilience by relevant organizations and officials be included in the list of services provided to them and educational interventions for parents as Consider part of rehabilitation programs for children with physical disabilities.

Conflict of interest

The authors declare that they have no competing interests.

Financial support

The study was supported by Sanandaj Branch, Islamic Azad University, Sanandaj, Iran

Ethical statement

Before data collection, the aims of the research were explained to the participants, and informed consent was then obtained. This study was performed according to the principles expressed in the Declaration of Helsinki and was approved by deputy of research of Sanandaj Azad University.

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