

Effectiveness of Emotional Intelligence Training on the Quality of Life of Mothers of Children with Leukemia

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DOI: 10.21859/Spcc-01015

Submitted: 14/02/2017

Accepted: 23/07/2017

Keywords:

Emotional Intelligence
Quality of Life
Mothers
Child
Leukemia

How to Cite this Article:

Taghizadeh B, Masoompour A, Shrinabadi Farahani A, Borumandnia N. Effectiveness of Emotional Intelligence Training on the Quality of Life of Mothers of Children with Leukemia. *Support Palliat Care Cancer*. 2017;1(1):22-27. DOI: 10.21859/Spcc-01015

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Abstract

Introduction: Leukemia is highly prevalent among children and affects the family in addition to the child's quality of life. The present study aimed to assess the effectiveness of emotional intelligence training on the quality of life of mothers of children with leukemia.

Methods: The present quasi-experimental pretest-posttest uncontrolled study was conducted on 35 mothers of children with leukemia, selected by convenient sampling from those attending the selected hospitals affiliated to Shahid Beheshti University of Medical Sciences, Tehran, Iran. Data were collected using mothers' and children's demographic questionnaire and the Persian version of Caregiver Quality of Life Index-Cancer questionnaire. Participants were assessed over 4 two-hour educational sessions using group discussion method (5 to 8 people). Two weeks after the intervention, questionnaires were completed by mothers again. Data were analyzed using paired t-test and generalized Wilcoxon test in SPSS-22.

Results: The results obtained using paired t-test and Wilcoxon test showed significant decreases in the scores of mothers' quality of life two weeks after the intervention in disruptiveness, and mental, physical, and financial concern dimensions ($P < 0.005$) as well as a significant increase in positive adaptation dimension ($P < 0.005$).

Conclusions: The results obtained showed that training emotional intelligence skills can improve the quality of life of mothers of children with leukemia. It is therefore recommended that these skills be taught to mothers in order to improve their quality of lives.

INTRODUCTION

Cancer is one of the most important diseases of the current century and can clearly affect physical, social, psychological, and spiritual aspects of lives of people with cancer and their caregivers [1, 2]. After accidental injuries, cancer is considered as the second leading cause of death in children younger than 14 years of age [3-5]. Leukemia is one of the most common cancers in children younger than 15 years old, and culpable for 25% of all childhood cancers in Iran [6]. According to the family systemic theory, emergence of a disease in a family not only affects one person, but the entire family system. That is why cancer is said to be a family disease, and from diagnosis throughout treatment family is exposed to conflicting roles

as well as financial, social, physical, and emotional concerns, which can diminish satisfaction with life and quality of life [7]. The results of a study by Rahimi et al. showed that 55% of mothers and 41% of fathers experienced high levels of stress, and that parents' stress adversely affected behavioral, emotional, and social adjustment of children with cancer. In fact, child's adjustment with diagnosis and treatment of the disease depends on parents' adjustment with diagnosis and treatment [1, 8]. The results obtained in studies by An et al. and Klassen et al. showed higher levels of depression and despair in families of children with cancer in comparison to families of healthy children, and that these families had poorer quality of life [9,

10]. When children fall sick, mothers are more involved in their care and assume greater responsibility for decision-making about their treatment than fathers. Mothers may lose their jobs or spend less time working in order to stay by their child in the hospital. This leads to wasting time and energy, and consequently limits mothers' ability to pay attention to their own and their family needs, such that they feel they have lost control over their own lives [8, 11]. In patients with cancer, like other diseases, maximizing the quality of life is the primary objective of care [12]. The World Health Organization has defined quality of life as the individual's understanding of economic status according to the culture and value system they live in and goals, standards, and interests that affect their physical health, social status and personal beliefs [13].

One way to improve quality of life is enhancing emotional intelligence. Emotional intelligence is now considered as a new subject in psychology, and relevant studies indicate the role of emotional intelligence and its components in various aspects of individual's life, such as academic achievements, satisfaction with life, social relations, quality of life, and mental and physical health [12, 14-16]. Emotional intelligence was first proposed by Mayer and Salovey, who defined it as the individuals' ability to evaluate, express, and regulate feelings and emotions of their own and others, and properly using it to direct and control their thoughts and actions [17-19]. Interestingly, emotional intelligence is not intrinsic or genetic and can be taught and learned [20, 21]. People with higher emotional intelligence can regulate their own and other people's emotions and thus improve their own quality of life [17]. Since caregivers of patients with cancer play the main role in caring, monitoring and controlling symptoms and in support and follow-up of their treatments, maintaining their psychological health is essential for continuation of these cares [12]. Given the effect of emotional intelligence and its role in regulating emotional states, improving people's quality of life and mental health, emotional intelligence can be used by nurses to reduce the destructive effects of a chronic disease on children and their families. Thus, it is necessary to conduct a study on the effectiveness of emotional intelligence training on the quality of life of mothers of children with leukemia. The present study mainly aimed to answer this question: can training emotional intelligence enhance the quality of life of mothers of children with leukemia?

METHODS

Ethical Consideration

The study plan was approved by the ethics committee of Shahid Beheshti University of Medical Sciences and Health Services (project No. IR.SBMU.PHNM 1394 3 24). A written consent including study objectives, the right to participate in the study voluntarily and data confidentiality was received from the participants before taking part in the study.

Study Design

The present quasi-experimental pretest-posttest uncontrolled study recruited 35 mothers of children with leukemia selected by convenient sampling from those attending the selected hospitals affiliated to Shahid Beheshti University of Medical Sciences, Tehran, Iran, from June to February 2015. The inclusion criteria were willingness to take part, at least having one child

with one type of leukemia and minimum of one session of chemotherapy, no use of medicinal or non-medicinal therapy for reducing anxiety, stress and depression, ability to speak, read and write in Farsi, no neuropsychological disorders or other chronic diseases, and no history of participation in emotional intelligence classes or similar programs or treatment programs for improving quality of life. The exclusion criteria were the incidence of a stressful event (divorce, financial crisis, or death of a first degree relative of parents) during the intervention and before the implementation of posttest, absenteeism of two or more sessions, discharge during intervention, transfer to other hospitals, and death of the child during intervention. Convenient sampling method was used in the present study to select two hospitals (Shohada-e-Tajrish and Imam Hossein) and mothers of hospitalized children or referred to the clinics who met the inclusion criteria. Sample size required was estimated as 35, and sampling was conducted in two previously mentioned hospitals.

Setting and Sample

The sample size was determined according to the study objectives. After approval of the proposal and obtaining written permission from the Education Department of School of Nursing and Midwifery of Shahid Beheshti University of Medical Sciences, the researcher obtained written consent from hospital authorities by presenting a letter of introduction. She then attended the pediatric ward, introduced herself, explained the study objectives, and identified the eligible children and parents for participation in the present study. After obtaining their written consents, questionnaires were made available to them. Then, the intervention program was held in the forms of lectures, questions and answers, and group discussion (4-8), and participants were trained in 4 two-hour sessions over 4 consecutive weeks (one session per week). The participating mothers received intervention in a ward classroom, or if not vacant in another room in the ward. The educational program was designed based on Mayer and Salovey emotional intelligence model, and educational sessions were held according to the following table:

Two weeks after the last educational session, CQOLC was completed once again by mothers. Then, qualities of lives of mothers before and after the training were compared. Data were collected using questionnaires, including mothers' and children's demographic questionnaires and the Persian version of CQOLC. The demographic questionnaire contained information related to mothers' age, education, occupation, financial status, number of children, marital status, and time passed since diagnosis, type of child's cancer, frequency of hospitalization, and child's age and gender. CQOLC was developed by Weitzner et al. in 1997, and was translated into Farsi and validated by Khanjari et al. using face, content and construct validities, with a reported reliability of 0.89 through Cronbach's alpha. CQOLC contains 35 items, and each item scores from 0 to 4 points according to 5-option Likert scale from never (0) to always (4). Minimum score is 0 and maximum 140, where higher scores indicate better quality of life. CQOLC contains 4 domains, each with 34 items, including mental and physical suffering (14 items), disruptiveness (9 items), positive adjustment (8 items), and financial concerns (3 items) [22]. Cronbach's alpha in this research was 0.9. In the present study, data were analyzed in SPSS-22 using parametric and non-paramet-

ric tests such as paired t test and Wilcoxon.

RESULTS

Significant differences were observed after the intervention

compared to before that in mean scores of dimensions and overall quality of life of mothers of children with leukemia, using independent t and Wilcoxon tests ($P < 0.005$), indicating the effect of emotional intelligence training on the quality of life and its dimensions (Tables 1-4)

Table 1: Different Interventions During Different Sessions

Sessions	Intervention
Session 1	Introduction and brief explanations about study, getting to know mothers and their problems, discussion about emotional intelligence and identifying emotional states, completion of the demographic questionnaire and implementation of pretest by distributing Caregiver Quality of Life Index-Cancer questionnaire (CQOLC)
Session 2	Talking about understanding emotions of oneself and others and how to manage these emotions
Session 3	Training on how to utilize emotions
Session 4	Synopsis of topics and answering questions

Table 2: Characteristics of mothers of children with leukemia in hospitals affiliated to Shahid Beheshti University of Medical Sciences in 2015

Grouping	Numbers	Percentage
Age (years)		
18-29	7	20
30-39	21	60
Older than 40	7	20
Education		
Below high school diploma	10	28.6
High school diploma	18	51.4
University	7	20
Household income		
Less than ten million Rials	23	65.7
More than ten million Rials	12	34.3
Father's job		
Retired	2	5.7
Manual worker	15	42.9
Employee	5	14.3
Self-employed	13	37.1
Mother's job		
Housewife	33	94.3
Employed	2	5.7
Family structure		
Single-parent	1	2.19
Two-parent	34	97.1
Type of insurance		
Social security	4	11.4
Others	5	15.6
No insurance	26	74.3

Table 3: Characteristics of children with leukemia in hospitals affiliated to Shahid Beheshti University of Medical Sciences in 2015

Group	Numbers	Percentage
Gender		
Male	15	42.9
Female	20	57.1
Age (years)		
1 to less than 5	10	28.6
5 to less than 10	10	28.6
Older than 10	15	42.9
Type of disease		
Acute leukemia	35	100
Type of therapy		
Chemotherapy	35	100
Duration of illness (years)		
Less than one year	14	40
1 to 2 years	11	31.4
2 to 3 years	6	17.1
Longer than 3	4	11.4
Birth ranking		
First	18	51.4
Second	10	28.6
Third and higher	7	20

Table 4: Mean scores of dimensions and overall quality of life of mothers of children with leukemia before and after the intervention in hospitals affiliated to Shahid Beheshti University of Medical Sciences in 2015

Assessment stage	Mean	Standard deviation	Paired T and Wilcoxon test results
Subscales			
Mental and physical suffering (0-100)			
Before intervention	66.58	18.31	P < 0.001 Paired t test
After intervention	39.49	9.7	
Disruptiveness (0-100)			
Before intervention	46.8	22.6	P < 0.001 Paired t test
After intervention	19.2	11.93	
Positive adjustment (0-100)			
Before intervention	63.25	12.7	P < 0.001 Paired t test
After intervention	76.14	7.4	
Financial concerns (0-100)			
Before intervention	59.8	26.7	P < 0.001 Paired t test
After intervention	41.14	22.5	
Quality of life			
Total quality of life			
Before intervention	59.8	15.52	P < 0.001 Paired t test
After intervention	42.02	7.8	

DISCUSSION

Numerous studies have cited adverse effects of cancer on various dimensions of life. In the study of Rahimi et al., quoting Slopator stated that 55% of mothers and 41% of fathers had high levels of stress [8]. The aim of this study was determining the effect of emotional intelligence training on quality of life among mothers of children with leukemia. The present study results showed that emotional intelligence training can enhance the quality of life and its dimensions. Many studies have investigated the effectiveness of emotional intelligence training on various dimensions of life. Khodayarifard et al. showed that emotional intelligence training was able to enhance social intimacy and adjustment, reduce disruptiveness, and boost quality of life [23]. These results concur with Mayer and Salovey theory that people with high emotional intelligence cope with problems more effectively because they have proper knowledge of their own emotional states and can control their own and other people's emotions and improve their quality of life [19]. Lopes et al. showed a relationship between emotional intelligence and social interactions, such that people with higher levels of emotional intelligence express their feelings and affections better, know people's thoughts and have a wider social network, which in turn improves their health and protects them against stress [24]. Slaski and Cartwright believe that high levels of emotional intelligence can enhance individual's general quality of life and their personal and social achievements, and can be a determinant of life achievements and psychological well-being [25]. In the present study, positive adjustment significantly changed after the intervention. Similarly, the results obtained in Aranda et al. study showed enhanced social adjustment (lower social depression, anxiety and stress and higher self-esteem) as a result of emotional intelligence training. In the present study, mothers had higher positive adjustments after the intervention, such that the mean score of positive adjustment significantly increased. Positive adjustment is one of the domains of quality of life; the result showed that emotional intelligence can improve positive adjustment. The results from other studies have shown that emotional intelligence training can lead to improved mental health in adolescents [26, 27]. The results obtained by Schutte et al., Tsaousis et al. and Aranda et al. suggest a relationship between emotional intelligence and mental and physical health, and training emotional intelligence can lead to improved physical and mental health and improve the quality of life. We observed a significant difference in the mean score of quality of life after the intervention, such that emotional intelligence training was able to enhance the overall quality of life, which agrees with the results obtained by Schutte et al., Tsaousis et al. and Aranda et al. [16, 26-28]. Stress is among the most important causes of physical and mental diseases, and disrupts the individual's performance. One of the skills for controlling stress and its consequences is learnt through emotional intelligence. The results obtained by Imam-Moghadam indicated positive effects of emotional intelligence training on stress, anxiety, and negative emotions. When stress appears, emotional intelligence helps the individual to analyze the situation and wisely deal with their own feelings [29].

CONCLUSIONS

The results obtained showed that training emotional intelligence skills can effectively improve the quality of life of mothers of children with leukemia. The score of quality of life increased two weeks after the training compared to before that. The results obtained confirmed the present study's hypothesis that emotional intelligence training affects the quality of life of mothers of children with leukemia in hospitals affiliated to Shahid Beheshti University of Medical Sciences. The most important limitation in the present study was variables that could not be controlled, which may have affected mothers' quality of life scores, including IQ, self-confidence, interest, motivation, and stress and focus of mothers during training and evaluation. The latter limitation was somewhat controlled through random selection. Since participants in the present study were mothers, the results cannot be extended to fathers. It is therefore recommended that the effect of training emotional intelligence on fathers be studied. Furthermore, long-term effects of training emotional intelligence skills should be assessed.

ACKNOWLEDGMENTS

The results presented were derived from a MSc thesis. We hereby thank authorities of School of Nursing and Midwifery of Shahid Beheshti University of Medical Sciences and nurses in hematology and pediatrics departments of Shohad-e-Tajrish and Imam Hussein hospitals, as well as mothers for their help in the present study.

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