

The Effect of Educational-Spiritual Intervention on The Burnout of The Parents of School Age Children with Cancer: A Randomized Controlled Clinical Trial

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ABSTRACT

Background: Parents of children with cancer experience high levels of stress and discomfort. Religious beliefs are important sources of comfort and support for many cancer patients and their families. The present study aimed to assess the effect of educational-spiritual intervention on burnout of the parents of the children with cancer.

Methods: In this randomized clinical trial, 135 parents of children with cancer were randomly assigned into intervention and control groups. Data were collected through SMBQ (Shirom and Melamed Burnout Questionnaire) from both groups, before, immediately after and one month after the intervention. Educational-spiritual programs were held for six weeks, one session every week. The data were analyzed by SPSS using independent t-test, and repeated measure ANOVA.

Results: The results showed that the mean burnout score before the intervention in the intervention group was 4.28 ± 0.61 and in the control group it was 4.23 ± 0.50 ; most of the parents reported moderate to high burnout. But, there was a significant difference between the intervention and control groups immediately after and one month after the intervention ($t=10.16$, $P<0.0001$). The mean burnout score in the intervention group was less than the control group. Results also showed that there was a significant difference between the two groups in terms of parental burnout in three times of measurements ($F=58.62$, $P<0.0001$).

Conclusion: This study indicated that educational-spiritual intervention was effective on reduction of the burnout of the parents of the children with cancer. Due to high burnout of most of the parents, offering such a program could be beneficial for them. More studies in this regard are recommended.

Trial Registration Number: IRCT2014061818144N1

KEYWORDS: Burnout; Cancer; Parents; Spirituality

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INTRODUCTION

Cancer is the second leading cause of death in children 1-14 years of age.¹ It was revealed that 11,360 new cases of cancer in children 0-15 years of age and 1310 deaths due to cancer in this age group were reported in 2013.² From 2004 to 2008, the prevalence rate of cancer in children 0-14 years of age has been reported to have a slight increase of 5% each year. The mortality rate due to cancer in this age group has been decreased during the last three decades so that from 9.4 per a hundred thousand people in 1975 decreased to 2.2 in 2008. The five-year survival rate for all cancers in children has been increased so that from 58% of diagnosed cases in 1975 to 1977 increased to 83% in 2001 and 2008.¹

Cancer is a debilitating disease and its treatment comprises a part of the lives of the patients and their families. This disease leads to a cycle of psychosocial problems for both patients and their families. Thus, cancer patients and their families need evaluation and support as to their emotional reactions against their life-threatening disease.³

When cancer is diagnosed in a child, his parents experience a crisis. Previous studies have demonstrated that parents encounter high levels of stress which is more than when they themselves suffer from a disease. Furthermore, the treatment of the disease and its complications will be followed by a long period of stress for the parents.^{4,5} Treatment of cancer is a period of chronic stress for the parents of these children. Thus, stress reactions, such as anxiety, depression, and mental symptoms, increase in parents in the active phase of the disease.⁴ Studies showed that parents' reactions to the diagnosis of cancer in their child included feelings of loneliness, loss of control, and instability which even after years after completion of the treatment may stay in the parents of the children with cancer.⁶

Considering the fact that cancer is a chronic disease putting parents under long-term stress, incidence of mental reactions in parents of the children with cancer is not quite

unexpected.⁷ Burnout occurs when a person is exposed to prolonged and severe stress. It interferes with an individual's role forming the core of his character.⁸ Burnout may also occur when a person is exposed to severe emotional stress.⁹ Studies revealed that the parents of children with chronic diseases have shown the symptoms of burnout more than those of healthy children.⁹ Parents struggling to cope with stressful situations depend on availability and use of appropriate sources of support including information, social support, appropriate use of funds and their employment status.¹⁰ Providing the parents with clear information about the disease and its treatment in order to gain a sense of control over the situation and develop an appropriate plan is helpful.¹¹

Religious beliefs are an important source of comfort and support for cancer patients and their families and its role is more important when a child is diagnosed with cancer. When parents face a severe disease, suffering and death of a child, they need something beyond the material world for comfort and solace.¹² Dealing with cancer is a difficult experience for cancer patients and their families. Spirituality plays an important role in coping with life-threatening conditions of cancer patients.¹³

The diagnosis of cancer in children has adverse effects on their parents so psychological support and attention to them is essential. In addition, nurses have more contact with patients and their families and understand the necessity of more attention to their spiritual needs. Since no researches have been done in this field in Iran, we decided to investigate the effect of the educational-spiritual intervention on the burnout of the parents of school age children with cancer.

MATERIALS AND METHODS

This randomized clinical trial aimed to assess the effectiveness of educational-spiritual intervention on burnout of parents of school-age children with cancer from December 2013

to July 2014.

Based on the study by Norberg⁴ and considering the mean difference with 95% confidence interval, power of 80%, standard deviation of 10.5, and least acceptable difference of 5, a 140-subject sample size was determined for the study (70 subjects in each group). Yet, considering the loss rate, the sample size was increased to 135 subjects (65 in the intervention and 70 in the control group). Thus, 59 fathers and 76 mothers were enrolled in the study.

The inclusion criteria of the study were being 6-12 years old, diagnosis of cancer by a specialist, passage of at least 6 months and at most 2 years from cancer diagnosis, parents' ability to read and write, signing written informed consents for taking part in the research, not being an only child, taking part in all educational sessions, not experiencing stress or other crises within the study period, parents' burnout score >3.75, and being under treatment by chemotherapy, radiotherapy and bone marrow transplantation. On the other hand, the exclusion criteria of the study were child's death, unwillingness to continue participation in the study, and diagnosis of other chronic diseases in children or parents.

In order to select the subjects, all the parents of school-age children with cancer who had inclusion criteria were recruited based on convenience sampling. Then, in order to allocate the parents into the study groups, a simple random allocation was used. At first, random numbers of 1 and 2 were given to the control and intervention group, respectively. Then, numbers 1 and 2 were put in two balls in a box. When the parents who had the inclusion criteria were recruited, from the box, one of the balls was randomly selected. Based on the drawn out number, the subjects were randomly allocated into the control or intervention groups. The study design and protocol are shown in Figure 1.

The method of data collection in this study was interview and recording data from patient records. The researchers referred to the setting of the study, introduced themselves

to the relevant ward, and chose the samples based on qualifications. After obtaining their written informed consents to participate in research, the demographic information and burnout questionnaire was presented to them.

Data were collected by the demographic questionnaire and Shirom and Melamed Burnout Questionnaire (SMBQ). This questionnaire is composed of 22 questions in 4 domains of Physical fatigue, Cognitive weariness, Tension, and Listlessness. Each question has 7 options, from option 1 (almost never) to option 7 (nearly always) and the participant should choose an option among them. Five of the items have reversed scoring, one item in the tension domain three in the listlessness domain, and one in the physical fatigue domain. For each sub-domain, and the scale as a whole, the total score is averaged by dividing it by the number of items in the domain.

The threshold score is equal to 3.37. In other words, scores above 3.37 represent high burnout (scores ≥ 4.47 represent pathologic condition) and those below 2.75 are considered as healthy.¹⁴ At first, the original questionnaire was translated into Persian and investigated by expert professors. Then, it was back-translated into Swedish, the two questionnaires were compared, and the necessary modifications were applied. The evaluation of reliability of the questionnaire was obtained using test re-test=0.9; the internal consistency of the questionnaire using Cronbach's alpha coefficient was 0.91.

Then, the intervention was administered for the intervention group. The intervention method consisted of six educational sessions each lasting 45 minutes of lecture, question and answer in groups of 7 to 10 people; one-week interval was between the sessions and the educational topics included an introduction to cancer disease, the diagnosis and treatment of cancer, the side effects of various treatments and its control, daily activity, diet and spiritual teaching like philosophy of life and death and life after death, divine fate acceptance, patience and fortitude which was held by a religious advisor.

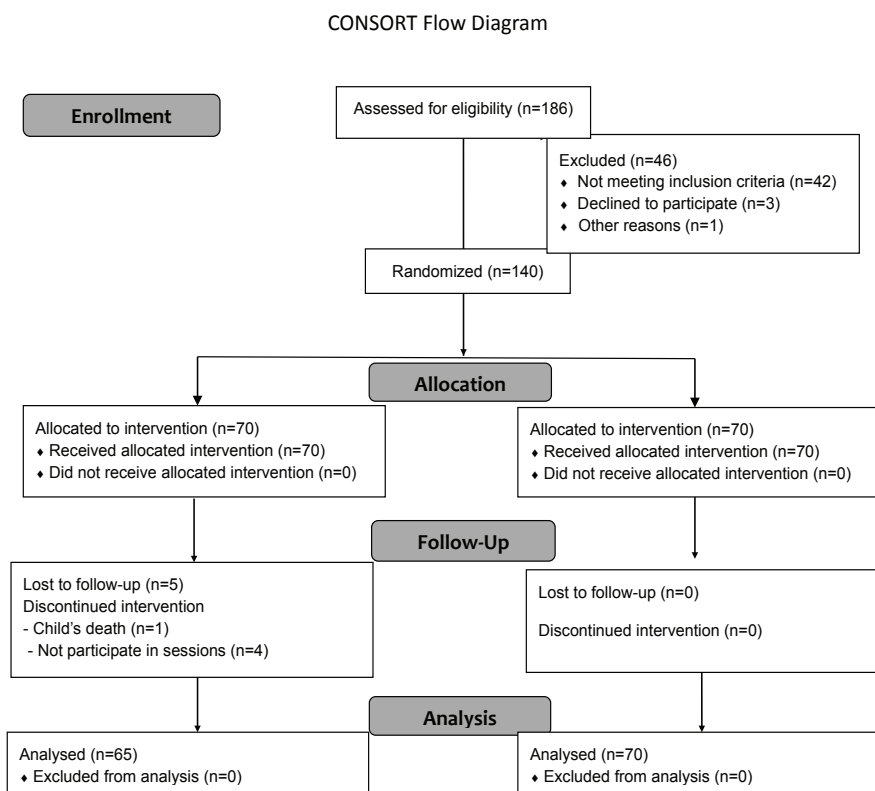


Figure 1: CONSORT Flow Diagram of participants

The outcome measure of this study was the burnout of the parents which was completed before and after intervention and one month after the intervention in both groups. During the study five participants in the intervention group dropped out related to death of the child ($n=1$) and did not attend the intervention sessions ($n=4$). On the other hand, all of the subjects in the control group completed the study period (Figure 1).

This study was approved by the Ethics Committee of Shiraz University of Medical Sciences. The collected data were analyzed by SPSS software, version 18, using statistical methods of t-test, and repeated measure ANOVA.

RESULTS

The results of this study showed that the mean of age of the parents in the intervention and control groups was 34.50 ($SD=9.00$) and 34.30 ($SD=6.77$), respectively. The majority of subjects in the two groups were fathers and had high school and diploma educational levels

(Table 1).

To compare the mean of the burnout scores in the intervention and control groups before, after and one month after the intervention, the results showed that the mean of burnout scores before the intervention in the intervention group was 4.28 ± 0.61 and that in the control group was 4.23 ± 0.50 . Most parents reported moderate to high burnout. Independent t-test results showed that there was no statistically significant difference between the mean of the burnout scores between the two groups before the intervention ($P=0.59$).

Moreover, results indicated that the mean of burnout score right after the intervention in the intervention group was 3.25 ± 0.68 though this score was 4.33 ± 0.56 in the control group. Independent t-tests showed that there were statistically significant differences between burnout scores of the intervention and control groups immediately after the intervention ($t=10.03$, $P<0.0001$) and the mean of burnout score in the intervention group was less than the control group.

In addition, a month after the intervention,

Table 1: Description of the intervention and control parents

Variables	Groups Intervention	Control	test, P value
Parents' age			
Mean±SD	34.50±9.00	34.30±6.77	t*=0.15, P=0.87
Parents sex n(%)			
Male	27(41.5)	32(45.7)	X ² =0.23, P=0.62
Female	38(58.5)	38(54.3)	
Parents' education n(%)			
Primary and second degree	25(38.4)	22(31.4)	X ² =4.64, P=0.20
High school and Diploma	25(38.4)	38(54.3)	
College degree	15(23.2)	10(14.3)	

X²: Chi-square; *Independent t-test

the mean of burnout score in the intervention group was 3.33±0.68 and in the control group it was 4.42±0.57. Independent t-test showed that there was a statistically significant difference in the mean of burnout scores between both control and intervention groups one month after the intervention (t=10.16, P<0.0001) and the mean of burnout score one month after the intervention in the intervention group was less than the control group.

Table 1 shows the comparison of the mean of burnout scores before, immediately after and one month after the intervention in both intervention and control groups. As it can be seen in Table 2 and Figure 2, using repeated measure ANOVA indicated that there was a statistically significant difference between the two groups in parental burnout at three times of the measurement (F=58.62, P<0.0001). In addition, the difference within the subjects

Table 2: The comparison of the mean burnout scores of the parents of children with cancer before, after and one month after intervention in both intervention and control groups

Times of measurement	Groups		Repeated Measure ANOVA	
	Intervention	Control	Between Groups	Within Subjects
	Mean*±SD	Mean*±SD		
Before Intervention	4.28±0.61	4.23±0.50	F=58.62 P<0.0001	F=148.78 P<0.0001
Immediately After Intervention	3.25±0.68	4.33±0.56		
One Month After Intervention	3.33±0.68	4.42±0.57		

*Mean of burnout scores

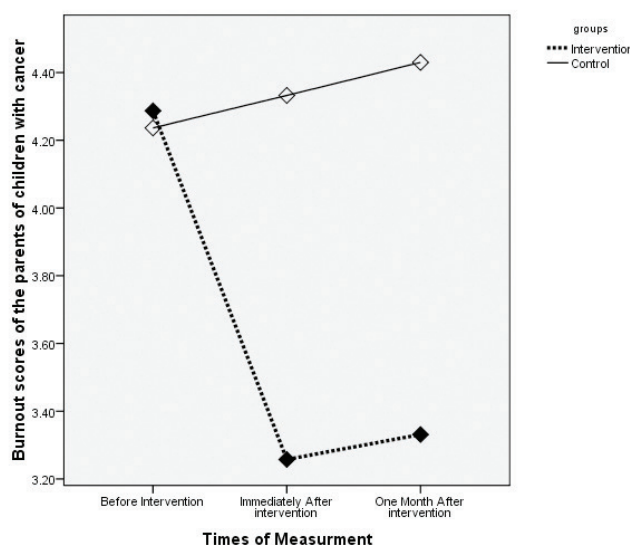


Figure 2: The comparison of the mean burnout scores of the parents of children with cancer before, immediately after and one month after the intervention in both groups.

in parental burnout at three times of the measurement was statistically significant ($F=148.78$, $P<0.0001$).

DISCUSSION

The treatment of cancer is a period of chronic stress for parents. The results of the present study which aimed to evaluate the effect of educational-spiritual intervention on parental burnout of school age children with cancer showed that the spiritual training program leads to reduction of burnout in the parents of school age children with cancer.

The results indicated that the mean burnout score before the intervention in the intervention group was 4.28 ± 0.61 and in the control group it was 4.23 ± 0.50 . The majority of parents reported medium to high burnout. The results of a previous study showed that the prevalence of burnout was higher in parents of children with chronic illnesses compared to those of healthy children.⁷ Also, the results of another study on parents of children with brain tumors demonstrated that more than half of the mothers and 20% of the fathers of these children had symptoms of burnout.⁴ One other study which was conducted on parents of children with cancer revealed that parents mostly used an adaptive approach of spiritual support (96%).¹⁵

The mean age of the parents was 32 years in this study and 30-39 years in the aforementioned one.¹⁵ Nowadays, providing care regardless of spiritual dimension is almost impossible because patient satisfaction is significantly associated with emotional and spiritual care. Studies have shown that 41 to 94 percent of patients have wanted doctors and nurses to pay attention to their spiritual concerns and their trust was more to those medical staff who more focused on their spiritual needs.¹⁶

This study showed that the mean scores of parental burnout reduced from 4.28 ± 0.61 before the intervention to 3.25 ± 0.68 after the intervention in the intervention group. It has been reported in many of the studies that

families having religious beliefs have a better adaptability with their child's cancer. In fact, these families may interpret the disease based on the philosophy of religion and understand it as God's will. These people receive emotional and psychological support from their beliefs. The parents who are faced with the stressful situation, like having a child with cancer, in order to reorganize the family system, seek information from the doctors, nurses, health care workers and various textbooks that help them determine their position. The amount and quality of the information that the parents have about their child's illness, problems that may be encountered and possible effects of the disease on all stages of life all affect the process of adaptation.¹⁷

The results of a previous study showed that most of the parents with children at end stages of life-threatening diseases considered religion and spirituality as an important support during tough times. They believed that God provided them with help and support and participation in religious ceremonies calmed them down. However, some parents were angry with God and were against religion and religious beliefs.¹⁸ One other study also demonstrated that spirituality and religious beliefs reduced disappointment, suicidal thoughts, and depression in the patients at the final stages of cancer.¹⁹

Since nurses have more contact with patients, they understand the necessity of more attention to their spiritual needs. They have noted that if they want to have a holistic view of their action, they can't ignore the spiritual matters. Spirituality is perhaps the most basic and at the same time the least well known holistic nursing dimension.²⁰

According to the treatment group, attention to the spiritual and psychological needs of parents is essential.

CONCLUSION

The results of this study indicated that spiritual-educational teaching can reduce burnout in parents of children with cancer. Due to the close

relationship of nurses with patients and their families, this study helps them by considering the spiritual needs of patients and their families, so they take a major step in reducing the severity of burnout and their psychological and spiritual problems. Since the findings of each study can be a basis for later researches, it is recommended that the researches should evaluate the effects of spirituality on other spiritual psychological problems such as depression.

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Conflict of Interest: None declared.

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