

The Effects of Spiritual Care on Anxiety in Adolescents with Cancer

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Abstract

Introduction: Anxiety is one of the psychological complications of cancer in adolescents and is due to various factors. Since this complication leaves undesirable effects on physical and mental health and also on the adolescents' quality of life, one of the main nursing cares in adolescents with cancer is using various strategies to reduce anxiety. Experience of living with cancer shows spirituality creates purpose and meaning in life for patients. This study aimed at investigating the effects of spiritual care on anxiety in adolescents with cancer.

Methods: This was a quasi-experimental study with one-group time-series design. Overall, 32 hospitalized adolescents were selected by purposeful sampling method based on the inclusion criteria. The spiritual care program was performed for adolescents in 6 sessions of 45 minutes during their hospitalization. Data was collected by the "personal and clinical characteristics" questionnaire and "Speilberger State-Trait Anxiety Inventory". The data were analyzed with the SPSS-19 software using descriptive and inferential statistical tests.

Results: According to the results of this study, the difference between the mean score of pretest (55.96 ± 11.34) and posttest (42.84 ± 6.19) was significant. However the difference between mean scores of posttest and follow up (48.40 ± 7.18) was not significant ($P < 0.001$).

Conclusions: Implementation of spiritual care by nurses may effect the mental status of adolescents with cancer and is a suitable method to reduce anxiety. Therefore, it is necessary for nurses to use spiritual interventions during implementation of comprehensive nursing care.

INTRODUCTION

Cancer is one of the common chronic and non-communicable diseases, which is the cause of 9% of deaths worldwide. In Iran, this disease is the third cause of death after heart disease and vehicle accidents. Almost 1 in 285 child develops cancer before the age of 20 years old [1, 2]. Knowing about having cancer is a shocking and worrying experience. In general, knowing about having a malignant life threatening disease will change one's perception about life and they will try to cope with the new situation [3]. Adolescence is one of the important stages of social and

mental development [4]. Adolescence and puberty is a time in which people are at risk of social and physiological disorders and they pay greater attention to their appearance and body image [5]. Since chronic and life threatening diseases have undesirable consequences [6], adolescents with chronic diseases like cancer face numerous of mental and social problems, including repeated absences from school, declined educational performance, low confidence, feeling of being powerless due to being dependent on others for care, inefficiency in doing normal things, anger, anxiety

due to having unknown and uncertain situations [7], grief due to losing health and independence, limitation in social relationships, distorted body image, and being worried about having immature death, and the thought that their life is different from others has undesirable impacts on their quality of life [4]. Among these problems, anxiety is one of the most common mental health disorders in adolescents with cancer [8, 9]. Anxiety is a response to a threat and cancer is a threatening factor. Therefore, many patients with cancer have anxiety [10, 11]. Being afraid of the relapse of the disease, losing family, disease or treatment complications like amputation, hair loss, nausea, and vomiting are some of the causes of anxiety in these patients [12, 13]. Anxiety would delay recovery and one of the interventions that may reduce anxiety is spiritually-based interventions [14, 15].

Due to the life threatening nature of cancer, diagnosis of this disease remarkably increases the spiritual needs of patients [16-18]. Therefore, strengthening the spiritual aspect has a positive effect on the compatibility, promotion of mental health and reduction of symptoms of the disease. Spirituality is a unique power that harmonizes physical, mental, and social aspects of life [16, 19] and may lead to resistance against physical and mental crisis following diagnosis and treatment of cancer [20]. When people face problems in their lives, they usually tend to search for a higher power as a way of coping and adaptation [21-25]. Therefore, patients whose spirituality is reinforced, adapt to the disease more effectively and even pass their final stages of their lives with greater resilience [4, 26]. The experience of living with cancer shows that spirituality in these patients leads to a purposeful and meaningful life [16]. Meeting spiritual needs is a critical part of comprehensive nursing care. A comprehensive care is described as caring for the body, mind, and spirit. Nursing models emphasize on a comprehensive approach and nurses are asked to be committed to the concept of comprehensive care and in addition to the physical, mental, emotional, and social needs, try to understand the patients' spiritual needs and support them [22]. Spiritual care is an essential part of nursing interventions and for nurses, who work with patients with chronic diseases it is needed as part of care [27]. Spiritual care is an interactive process between patients and nurses. When a nurse finds out the spiritual need of the patient and prepares a suitable intervention, the spiritual care starts [28]. Considering the importance of spirituality in the Iranian society, the role of nurses in providing spiritual care, and the effect of spiritual beliefs and attitudes on reducing anxiety of patients with chronic diseases, such as cancer, and scarcity of studies in this area, the present study was designed to determine the effect of spiritual care on anxiety of adolescents with cancer.

METHODS

This was a one group quasi-experimental study, which was performed with one-group time-series design and aimed to investigate the effect of spiritual care on anxiety of adolescents with cancer at Seyed Al-Shohada hospital affiliated with Isfahan University of medical sciences from January 2013 to September 2014.

Sampling

In the present study, 32 adolescents hospitalized at the oncology department with one type of cancer, were selected according to purposive sampling and study inclusion criteria.

The Inclusion and Exclusion Criteria

Adolescents, who were hospitalized at the oncology ward due to one of the cancers with at least 8 months since their diagnosis and lack of end stage cancer, were selected to participate in the study. They were 12 to 18 years old and did not have any other stressful event, such as divorce of parents and death of one of the close relatives during the previous year. The exclusion criteria were discharge or transfer to other wards during the intervention, death and refusal to continue participation.

Data Collection

The data was collected using "demographic and disease-related characteristics form" including age, gender, education level, order of birth, age at cancer diagnosis time, type of cancer, number of hospitalization times and living with parents, and also the "Speilberger State-Trait Anxiety Inventory". Speilberger State-Trait Anxiety Inventory was designed by Speilberger in 1970 and includes 20 questions with a total score of 20 to 80. The score of 80 showed maximum anxiety, 20 to 39 mild anxiety, 40 to 59 moderate, and 60 to 80 severe anxiety. The scoring method was as follows: in positive questions, very low was scored 4, to some extent 3, moderately 2, and a lot 1, and in negative questions scoring was reversed. Asadi Noghabi et al. used this questionnaire before and evaluated its validity, which was $\alpha = 0.91$. To evaluate the reliability of the questionnaire in this study, methods of internal consistency ($\alpha = 0.81$) and retesting (ICC- 0.87) were used. After obtaining the informed consent from adolescents, spiritual care was performed.

Intervention

Intervention was performed face to face [29] and included 6 sessions [19, 30] every day (considering the hospitalization period of adolescents with cancer, which was maximum of 8 days; the intervention was performed daily during one week) at the oncology ward of Seyed Al-Shohada hospital. Each session took 45 minutes [31]. The questionnaires were filled before the first session, on the sixth session, and 3 weeks after the last session [19, 30]. Sessions of intervention were planned according to the available literatures and references. The intervention was initiated after verification of plans by local and international experts in religious sciences and spiritual therapy. At the first session, the therapist introduced himself to the adolescents and explained the aims and methods of the interventions [19]. Then some information about the number and times of sessions was given to the adolescents. After that an informed consent was obtained from the participants the questionnaires were distributed and filled.

The next sessions included making a calm and suitable place for talking with the adolescents [29], building trust and verbal and nonverbal communication with adolescents [23] and listening to them [29], performing the spiritual assessment

and identification of spiritual needs of patients and investigating adolescent's views about meaning of spirituality and its definition and also investigating their belief in the supreme being by asking questions such as: "how important is God and religion to you?" or "is praying beneficial and helpful for you?" or "what happens when you say a prayer?". Then they talked in detail with the adolescents about spirituality. This was done by asking questions such as: "what is spirituality?", "what are the characteristics of a moral adolescent?", "what is the aim of living?", "what is the definition of religion?", "what are the spiritual methods to cope with problems?", "how much spirituality is important in your life?", in which circumstances do you prefer to use spirituality?", "have you ever complained of God?"[32]. Other measures included identifying spiritual distresses, such as not expressing hope, anger, guilt feeling, poor coping, impaired communication, with respect to spiritual state of adolescents²⁹, directing patient's beliefs, encouraging religious activities [22, 32], helping patients perform religious duties such as prayer [33, 34], encouraging use of coping methods such as prayer and worship [35], talking and listening to patients [36], presenting the concept of eternity and link to infinite power by talking about God and purpose of creation, listing blessings in the individual's life, talking about being tested by God and about patience and mercy, expressing words of hope, boosting patient's moral beliefs, and comforting patients [37], consoling the patient [38], and making available the presence of a cleric to support and counsel the adolescent (if agreed by the adolescent and their family) [39, 40]. In the last session, the effectiveness of spiritual care was assessed and questions were asked to encourage adolescents to speak up [33]. Then, the end of the intervention was announced and again the questionnaire was given to the adolescents to fill. Three weeks after the end of the interventions, State-Trait Anxiety Inventory was filled and the wrap-up was performed.

Analysis of Data

To analyze the collected data, descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics (analysis of variance with the repeated measures) were performed, using the SPSS-19 software. To use parametric statistical tests, like analysis of variance, data should have normal distribution and if the data is not normally distributed, nonparametric tests (Friedman test) are used. To determine the distribution (if the data is normally distributed) Kolmogorov – Smirnov test and to determine the association between demographic variables and anxiety, T-test, ANOVA, Spearman, and Pearson correlations were used. In the applied tests, the significance level was set at $P < 0.05$.

ETHICAL CONSIDERATIONS

In this study, written informed consent was obtained from all participants. All information about the number and dates of meetings was provided for the participants and they were allowed to stop their participation at any time. All data was kept confidential and solely used for this research. The study was approved by the ethics committee of Shahid Beheshti University of Medical Sciences and Health Services (project No. 1393-1-86-13638).

RESULTS

Demographic characteristics of the participants are summarized in Table 1.

Categories	N	%
Age (yr.)		
12-13	78.2	25
14-15	6.2	2
16-17	12.5	4
18-19	3.1	1
Gender		
Girl	19	59.4
Boy	13	40.6
Education level		
First course of high school	18	56.2
Second course of high school	14	43.8
Order of birth		
First	17	53.2
Middle	10	31.2
Last	5	15.6
Number of being hospitalized		
Less than 15	2	6.2
15 to 30	2	6.2
More than 30	28	87.6
Age at the time of diagnosis (years)		
> 5	2	6.2
5-10	15	46.9
11-16	1	3.1
< 16	1	3.1
Type of cancer		
Leukemia	22	68.8
Gliomas	4	12.5
Neuroblastoma	1	3.1
Nephroblastoma	3	9.4
Osteosarcoma	2	6.2
Number of siblings		
0-1	22	68.8
2-3	8	25
4-5	2	6.2
Living with parents		
With both parents	30	93.8
Father	1	3.1
Mother	1	3.1

The mean and standard deviation of scores of pretest, posttest, and follow up obtained from Speilberger State-Trait Anxiety Inventory are shown in Table 2.

Table 2: The Mean and Standard Deviation of Scores of Pretest, Posttest and Follow Up Obtained From Speilberger State-Trait Anxiety Inventory

Variable	Anxiety (pretest)	Anxiety (posttest)	Anxiety (follow up)
Minimum	26	30	26
Maximum	79	61	67
Mean	55.96	42.84	48.40
Standard deviation	11.34	6.19	7.18
P-value	< 0.001		

Table 3: Status of Adolescents' Anxiety in Pretest, Posttest and Follow Up

Variable	Pretest	Posttest	Follow up
	F*(%)	F (%)	F (%)
Mild anxiety (score less than 39)	2 (6.2)	10 (31.2)	4 (12.5)
Moderate anxiety (score 40-59)	15 (64.9)	20 (62.5)	26 (81.2)
Sever Anxiety (score more than 60)	15 (46.9)	2 (6.2)	2 (6.2)

F* = Frequency , P-value < 0.001

Results of Table 2 show that spiritual care has led to the reduction in the mean score of anxiety in the posttest.

The results summarized in Table 3 indicate that in the pretest, the anxiety status of most of the adolescents was at the moderate and severe level yet at in the posttest and follow up, it was at a moderate level for most of them and the percentage of mild anxiety was increased in comparison with the pretest. This shows that spiritual care has been effective. During the follow up the percentage of mild anxiety had a slight reduction in comparison with the posttest, which indicates the importance and necessity of continuing spiritual care for adolescents. Friedman test was used to compare the means of anxiety during the time and it showed a significant association between mean scores of anxiety during the time ($P < 0.001$). There were not significant relationship between demographic variables and anxiety.

DISCUSSION

In this research which was conducted to investigate the impact of spiritual care on the anxiety of adolescents with cancer, results showed that the mean score of adolescents' anxiety before and after intervention and 3 weeks after that has changed. It means that spiritual care may decrease the anxiety in adolescents. This result is consistent with the result of Ghale Ghasemi et al.'s study conducted in 2012 with the title of "the effect of spiritual care on the anxiety of patients hospitalized in intensive cares unit due to ischemic heart disease- a clinical trial". That study also showed that the mean anxiety score, before and after spiritual intervention had a significant difference ($P < 0.001$) and spiritual based care program had reduced patients' anxiety. Nurses also can use the program of spiritual care to reduce patients' anxiety [14]. In a study conducted by Delaney & Barrere (2008) to investigate the effect of spiritual interventions on the mental situation of patients with heart diseases also revealed a significant positive association between spiritual interventions and the depression and anxiety. Spiritual interventions led to the reduction in depression and anxiety in these patients [15]. In 2006, Villagomez also mentioned the importance of spirituality as a part of care in patients with cardiovascular diseases which leads to

positive physiologic, mental and social effects [41]. In a study conducted by Wilkins in 2004, it was shown that there is a significant association between spiritual support and depression and anxiety [42]. Results of this study show that in the pretest, the anxiety status of most of the adolescents has been at the moderate to severe level but in the posttest and during follow up , most of the adolescents have been in the moderate level and the percentage of adolescents with the mild anxiety has been increased in comparison with the pretest. It indicates that spiritual care has been effective in these adolescents. Spirituality gives hopefulness to the patients with cancer and helps them to cope with the disease and increases their quality of life and sense of satisfaction [19]. These results are consistent with results of Yoon and Park study which was conducted in 2002 to investigate the effect of spiritual based nursing cares on the anxiety of hospitalized patients. There was a statistically significant difference before and after spiritual based interventions and after interventions the anxiety had reduced [43]. In a study conducted by Livneh and Antonak in 2005, the psychosocial adaptation with chronic diseases and disability was investigated and the results are consistent with the results of this study. They showed that spirituality as one of the coping strategies has an important role in coping with the stressful situations caused by chronic diseases. Being interested in religion and spiritual resources may be used for psychosocial adaptation after diagnosis and during treatment process and eventually lead to the reduction in depression and anxiety [24]. In a study conducted in 2004, Rowe and Allen also showed that there is a strong association between spirituality and coping with the disease and religious and spiritual beliefs reduce the pain, social isolation, depression and anxiety and increases their satisfaction [44]. Results of the above studies show that to face the tensions caused by diseases and deaths, most people tend to religious and spiritual approaches. The Iranian Palliative Care Association says that one of the aims of palliative care is religious consultation to boost the moral beliefs of patients and their families. In other words, one of the main needs of Iranian patients with cancer and their families is spiritual needs [45]. Findings of this study showed that during the follow up, the percentage of mild anxiety had a slight decrease in compari-

son with the posttest level. This indicates the importance of continuing spiritual care for adolescents. Since coping with cancer is a gradual process and spirituality has the utmost effect on patient's coping and reducing psychosocial symptoms, like depression and anxiety, nurses must consider spiritual care in the holistic care of patients [3, 26, 36]. In Iran, people have rich beliefs and due to the true belief of Iranian people in God, paying more attention to spirituality looks to be the simplest and the most desirable way of care. Using spirituality is the most effective strategy for coping. In addition, culture based care, spirituality and having a comprehensive view towards various aspects of patients may help caregivers provide better care for the patients with chronic diseases, such as cancer. Religious beliefs provide the feeling of hope and having control over destiny and if one really trusts in God, he may cope with any difficulty [46]. It is not surprising that such belief may have strong psychological results. Therefore, nurses should assess spiritual needs as a part of comprehensive care and with regard to the effect of spiritual care on the reduction of anxiety in adolescents with cancer, they should use it in caring for patients.

The principle goal in this study was to use the results to reduce anxiety in adolescents with cancer, and to draw their attention to the importance of spiritual care in nursing practice. It is recommended for nursing students to be further introduced to the subject of spiritual care in their clinical and theoretical trainings, so that they can develop a more comprehensive overview of the patient, enabling them to provide fuller and more appropriate services and care, while maintaining human dignity and moral. Learning how to live with a chronic disease is a process, in which professional caregivers, especially nurses, could play an important role by employing spiritual and inner faith in teaching coping strategies to patients. Planning and performing training courses of spiritual care could lead to better understanding of spiritual needs and worries of the patients.

Considering the existence of spiritual-religious culture in Iran, it seems necessary to pay attention to spirituality and assigning nurses, who are capable of providing spiritual care, to patients with cancer, providing training courses in this regard for nurses, and reducing their workload to give them more opportunity and time to deliver effective healthcare in all aspects. It is also important to provide a refreshing relaxing atmosphere for patients. Today, much like other disciplines, nursing owes its progress to research conducted in this area. Thus, the present study results provide a starting point for further studies to provide essential care according to standards to improve quality of life patients, especially adolescents with chronic diseases.

LIMITATIONS

Sampling, which was objective based and non-random was one of the limitations of this study. Therefore, generalization of findings must be done very carefully. Due to the low number of adolescents with cancer, it was not possible to have a control group. Therefore, it is recommended to have a control group in future studies.

Although participating in the study was completely voluntary, it is still possible for participants to have given unreal answers to the questions, which was out of the researcher's control. The researcher tried to assure them about the con-

fidentiality of their answers to solve this problem as much as possible.

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CONFLICT OF INTEREST

The authors report no actual or potential conflicts of interest.

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