

The Effect of Spiritual Support on Caregiver's Stress of Children Aged 8-12 with leukemia Hospitalized in Doctor Sheikh Hospital in Mashhad

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Background: Since the caregivers of cancer patients have the main and basic role in caring, supporting and monitoring of treatment of these patients, providing their mental health is essential to continue such a care. Paying attention to spiritual needs is recognized as an indispensable component of the holistic care in nursing. Because of the importance of spirituality in recent years in the field of health, this research is done with the purpose of effect of Spiritual Support on the caregiver's stress of children aged 8-12 with leukemia.

Methods: In this clinical trial study 60 caregivers of children with leukemia participated. The intervention group was instructed 5 sessions based on spiritual intervention, according to the Richards and Bergin pattern and focusing on the rituals of Islam every day during sixty minutes. Research tools consisted of demographic data questionnaires, spiritual health questionnaire, DASS questionnaire that was completed before and after the intervention. Statistical data were analyzed with SPSS version 16.

Results: Based on the results with Paired t-test to compare before and after the intervention, stress in intervention group was significantly lower than the control group ($p = 0.067$).

Conclusions: With respect to the results of this study, the stress in intervention group were meaningfully lower than the control group, as a result the sessions of spiritual support had been able to reduce the stress of caregivers of children with leukemia. So it is recommended, such interventions be done for caregivers of children with leukemia due to the low cost, safety and effectiveness.

Key words: Spirituality, Leukemia, Stress, Caregiver

درمان تأثیر حمایت‌های معنوی علی‌مستوی التوتّر عند مراقبین الاطفال ذو العمر ۸-۱۲ سنة المصابين بسرطان الدم في قسم سرطانات مستشفى دکتر شیخ فی مشهد

التمهيد و الهدف: بما أن هناك دور بارز لمراقبين الاطفال المصابين بسرطان في مجال الحماية و متابعه العلاج، إن تأمين الصحة النفسية لربولاء الأخصاص امر ضروري جدا. يعتبر تأمين الحاجات المعنوية و النفسية من ضروريات المراقبات الكلية في مجال التمريض. و نظرا للاهتمام بربولاء الامر في السنوات الاخير في مجال الصحة و العلاج تم اجراء هذه الدراسة بهدف متابعه تأثير الحماية المعنوية على مستوى التوتّر عند مراقبين الاطفال ذو عمر ۸-۱۲ عام المصابين بسرطان الدم.

الطريقة: اشترك ۶۰ شخص من المراقبين للأطفال المصابين بسرطان الدم الراغبين في المستشفى. في هذه الدراسة السريرية. مجموعة المداخله خضعت لجلسات تثقيفيه مركزة على المداخلات المعنوية على اساس نموذج Richards and Bergin و منحوره حول الدين الاسلامي، كل يوم و بمره ۶۰ دقيقه يوميا. تم جمع المعلومات عبر استمارات المعلومات الديموغرافية، السلامه المعنوية، الكتابه، الاضطراب، التوتّر (DASS)، الذي تم ملؤها عبر المراقبين قبل و بعد المداخله و تم تحليل المعلومات عبر برنامج SPSS النسخه رقم ۱۶.

النتائج: اشارت نتائج هذه الدراسة قبل المداخله و بعدها و استخدام اختبار T المزدوج الى انخفاض مستوى التوتّر بشكل ملحوظ ($P=0.04$).

الاستنتاج: نظرا لنتائج هذه الدراسة، نستطيع القول أن هناك دور ايجابي للحماية المعنوية و تساهم في تقليل مستوى التوتّر عند مراقبين الاطفال المصابين بسرطان الدم و الذين يتلقون علاجات طويله الأمد. نوصي باجراء دراسات مشابه في هذه المجالات و هذه الدراسات ذو تكلفه قليله و ساهه و مؤثره.

كلمات المفتاح: المعنوية، اللوكيميا، التوتّر، المراقب.

بررسی تأثیر حمایت معنوی بر میزان استرس مراقبین کودکان ۸-۱۲ سال مبتلا به لوسمی بستری در بخش انکولوژی بیمارستان دکتر شیخ مشهد

زمینه و هدف: از آنجایی که مراقبان افراد مبتلا به سرطان نقش اصلی و اساسی در مراقبت از بیماران مبتلا به سرطان، حمایت و پیگیری درمان این بیماران ایفا می‌کنند، تأمین سلامت روانی آنان برای تداوم این مراقبت ضروری است. پرداختن به نیازهای معنوی، جزء ضروری مراقبت کل‌نگر در پرستاری شناخته شده است. به دلیل توجه و اهمیتی که در سال‌های اخیر به مقوله معنویت در حیطه بهداشت و درمان معطوف گردیده است این مطالعه با هدف بررسی تأثیر حمایت معنوی بر استرس مراقب کودکان ۸-۱۲ سال مبتلا به لوسمی انجام شد.

روش: در این کارآزمایی بالینی ۶۰ نفر از مراقبین کودکان مبتلا به لوسمی بستری در بخش شرکت کردند. گروه مداخله، تحت ۵ جلسه آموزشی مبتنی بر مداخلات معنوی بر اساس الگوی Richards and Bergin با تمرکز بر آیین دین اسلام، هر روز و به مدت ۶۰ دقیقه قرار گرفتند. ابزار ارزشیابی این پژوهش پرسشنامه اطلاعات دموگرافیک، پرسشنامه سلامت معنوی، پرسشنامه افسردگی، اضطراب، استرس (DASS) بود که قبل و بعد از مداخله توسط مراقبین تکمیل شد. داده‌ها توسط نرم‌افزار SPSS نسخه ۱۶ تجزیه و تحلیل شد.

یافته‌ها: براساس نتایج یافته‌ها با آزمون تی زوجی برای مقایسه قبل و بعد از مداخله، اندازه استرس در گروه مداخله به طور معنی‌داری کمتر از گروه کنترل بود ($P=0.04$).

نتیجه‌گیری: با توجه به نتایج این تحقیق که استرس گروه مداخله به طور معنی‌داری کمتر از گروه کنترل است، می‌توان نتیجه گرفت که حمایت معنوی می‌تواند استرس ناشی از تشخیص و یا دوره طولانی درمان لوسمی کودک را برای مراقبین کاهش دهد، پیشنهاد می‌شود چنین مداخلاتی با توجه به کم هزینه بودن، ایمن بودن و در عین حال تأثیرگذار بودن برای مراقبین کودکان مبتلا به لوسمی انجام شود.

کلیدواژه‌ها: معنویت، لوسمی، استرس، مراقب

مشهد که ڈاکٹر شیخ اسپتال کے شعبہ سرطان میں آٹھ سے بارہ سال کے کینسر کے مریضوں کی تیمارداری کرنے والے کیڈر کی معنوی حمایت اور اس سے اس کا ذہنی تناؤ دور ہونا۔

بیک گراؤنڈ: چونکہ سرطان میں مبتلا مریضوں کی تیمارداری کرنے والا کیڈر ان کی نگہداشت اور علاج کے جاری رکھنے میں اہم کردار کا حامل ہے لہذا اس کیڈر کی ذہنی اور نفسیاتی سلامتی کینسر کے مریضوں کے علاج کے جاری رہنے کے لئے نہایت ضروری ہے۔ ایران میں حالی برسوں میں میڈیکل شعبے میں روحانیت اور معنویت کو جو اہمیت دی جارہی ہے اس کے پیش نظر یہ تحقیق انجام دی گئی اور اس میں دیکھا گیا ہے کہ آٹھ سے بارہ سال کے کینسر مریضوں کی تیمارداری کرنے والا نرسنگ ک کیڈر کی معنوی حمایت کے کیا اثرات حاصل ہوتے ہیں۔

روش: اس تحقیق میں کینسر میں مبتلا بچوں کی تیمارداری کرنے والے ساتھ افراد نے شرکت کی۔ اس گروہ کو پانچ کلاسوں میں رچرڈز اینڈ برگین کے اصولوں کے مطابق اسلام کی تعلیمات کی اساس پر معلومات فراہم کی گئیں، اس گروہ کو ایک سوالنامہ دیا گیا جس میں ڈیموگرافیک، معنوی اور روحانی سلامتی، افسردگی اور اضطراب و استرس کے بارے میں سوالات تھے۔ ان سوالوں کے جوابات کا تجزیہ ایس بی ایس ایس سولہ سے کیا گیا۔

نتیجے: اس تحقیق سے معلوم ہوتا ہے کہ پانچ گھنٹے کی جو معلومات فراہم کی گئیں وہ اضطراب و استرس کم کرنے میں بہت مفید واقع ہوئیں۔

سفرارش: اس تحقیق سے صاف ظاہر ہے کہ دین و روحانیت کا سہارا لینا کینسر کے مریضوں کے علاج کرنے والے کیڈر کے لئے کافی مفید واقع ہوتا ہے۔ اس پر عمل کرنے کی سفارش کی جاتی ہے۔

کلیدی الفاظ: کینسر کے مریض، تیمارداری کرنا، استرس۔

INTRODUCTION

Cancer is considered as one of the commonest diseases in the world. The reports of the International Health Organization show that cancer will increase in the upcoming decades (1). Leukemia is the cancer of blood producer textures and the commonest cancer during the childhood that has caused 41 % all the malignancies in children less than 15 years old. In 2000 approximately 3600 children suffering from Leukemia equal with the annual emergence of one fourth of new cases out of 100000 children less than 15 years old were recognized and in boys after one year of age more than girls and the peak of its emergence is 2-6 years of age (2). The study done By MAHAK (the Institute of Protecting the Cancerous Children) about the rate of cancer outbreak in Iran demonstrates during different years, the number of children suffering from cancer in the country is 9 out of 100000 children annually. This statistical information rose to 15 children in 2008 (3). Increasing children's health indices are one of the most significant signs of health conditions and the most obvious signs of the quality of providing health services in a society (4). Children suffering from Leukemia experience a severe decrease in their quality of life during all the phases of the treatment. Cancer leaves outstanding effects on corporal, social, psychological and spiritual aspects of the people suffering from cancer and their caregivers and puts them to a challenge from the very early stages of diagnosis, therefore leaves a very destructive effect on the quality of their life (5).

Spirituality and religion sometimes interpreted as spiritual health and religious acts overlap in a way that both present frameworks by which a person is able to understand meaning, objective and supreme values of his or her life (6). Some believe that spirituality goes beyond religion and encompass other concepts such as spiritual health, tranquility and comfort caused by faith and spiritual conformity (7). Findings show that spirituality and religious acts are effective in promoting mental health, in fact praying, generosity and daily spiritual experiences can predict the status of mental health (8). The people enjoying spiritual health are considered strong and mighty and possess authority and social protection (9). Spirituality bestows hope and the value of life to the family caregivers of the patients with acute disease, giving them a sense of balance in their lives, helping them how to cope with the disease of the person suffering from it (10). Spirituality is not separate from corporal or mental aspects of the people and provides an integrating power. Spirituality affects moods, motivations and behaviors. These findings signify that it provides the people suffering from cancer with an effective defense mechanism as a bumper especially when people face a chronic disease or become responsible for looking after a patient suffering from a chronic disease (11). Meanwhile, in some studies different results have been obtained which shows the necessity of the current study, for instance the study done by Velan et al. showed no meaningful relationship between hope and doing religious acts like saying prayers (10). Also in an investigation conducted by Beery et al. In 250 patients in England showed patients who had better and stronger spiritual beliefs, during

nine months of consecutive pursuance, had forewarning and far worse condition compared to other patients (12).

Looking after a person suffering from a chronic disease can cause a lot of stress for a caregiver and the patient's family. Caregivers are susceptible, especially to stress, since biological, social and mental needs of the patient precede their own needs (13). Diagnosing cancer causes profound emotional and sentimental problems such as stress, anxiety and depression in the patient and his family. Studying parents' stress is important for children with respect to their development degree can receive stress and anxiety from their parents (14). Investigations demonstrate that disruption in the parents' emotions affects the development of emotions in children (15). When parents, especially mothers can feel self-sufficiency and mightiness in stressful conditions, they'll be able to protect their own sick child and make possible his treatment. The findings of several studies demonstrate a meaningful statistical relationship between higher levels of spiritual health and mental health variables such as depression, disappointment, request of death sooner than its time and suicidal beliefs (16). Since caregivers of the patients suffering from cancer play a basic role in caring, supervising and managing the symptoms experienced in such patients (17), supporting and following the treatments of such patients, securing their mental health is essential for the continuation of treatments of these patients. Four corporal, mental, emotional and social needs have been recognized and executed, but the ambience of spiritual care is frequently disregarded. Paying attention to spiritual care is an indispensable part of the holistic treatment in nursing (18). Because of the attention given to spirituality in health and treatment and especially spiritual care, as one of the essential duties of the nurses, in recent years because of our religion and our religious beliefs and lack of sufficient investigative evidences, the investigator decided to study the effects of spiritual support of the family on the stress of caregivers of children suffering from Leukemia. Thus the main motivation to conduct this study is helping patients suffering from Leukemia and their families, especially the main caregiver of the child to have better compatibility with Leukemia and decrease of the stress of the caregivers of these patients. We hope that this study is a basis to provide better services and further investigations.

METHODS

This study is a clinical trial whose population included caregivers of children aged 8 to 12 with acute lymphoblastic leukemia hospitalized in the oncology ward of the Dr. Sheikh hospital in Mashhad. The number of samples was 60 people selected by the convenience sampling method. 25 (83/3%) of caregivers in the intervention group and 22 (73/3%) in the control group were mothers and the rest were fathers or other members of the family. Allocation of subjects under study to two groups of intervention and control groups was performed randomly (based on random numbers table). According to a guide study and comparison means formula and regarding the power of 80% and confidence intervals of 95%, the sample size was determined. Inclusion criteria included the following: Having written

informed consent, Iranian citizenship, Mashhad and the surrounding residents, having an ability to read and write, no substance abuse and psychotropic drugs, lack of known mental illness, acute Lymphoblastic Leukemia diagnosis was confirmed by a doctor, children aged 8 to 12. Exclusion criteria: The unwillingness of the individual to participate in the study, the occurrence of an emergency situation and interference in the continuation of the project, the absence of 2 sessions or more, receiving another educational program during the intervention. Assessment tools include: 1. the researcher made demographic questionnaire with 18 questions. 2. Spiritual health questionnaire: in this study spiritual health assessed by Paloutzain & Ellison and Ellison questionnaire containing 20 questions, 10 questions of which existential health and 10 other questions assess person's religious health. The spiritual health score is the sum of these two sub-groups which range between 20-120. The answers to these questions are classified Likert with 6 options from strongly disagree to strongly agree. 3. Depression, anxiety, stress questionnaire (DASS): Each subscale consists of 7 questions. Each question is scored from 0 to 3, then the final score for each of subclass should be doubled. Severe depression is 28, anxiety is 20 and stress is 33. The validity of assessment tools of research was confirmed through content validity and seven faculty members of Nursing and Midwifery Faculty of Mashhad. For determining the reliability of the spiritual health questionnaire, Cronbach's alpha was used and alpha coefficients were calculated for each of existing health and religious health sub-scales respectively, 0.80 and 0.86 and for whole of spiritual health scale was 0.87. Also for DASS questionnaire, reliability was calculated by using Cronbach's alpha for depression, anxiety, stress 0.70, 0.75, 0.85, respectively, for the total scale was obtained 0.90. After obtaining permission from the ethics committee of Mashhad University of Medical Science, for collecting data, researcher attended in the ward. After explaining the purpose of study to the head nurse, at the first course selection chart of the study that included exclusion and inclusion criteria was completed by the researcher through interview with caregivers, and caregivers meet the inclusion and exclusion criteria were selected. Then the necessary explanations about the purpose of the study was presented to each selected person by researcher, face-to-face about 10 to 15 minutes. Everyone wish to participate in the study, written informed consent was obtained and demographic information form was completed with the interview. It should be noted that, before collecting data, researchers trained by religious expert about spiritual support. Spiritual support meetings for caregivers was held by researchers and under supervising of religious experts. Before starting the sessions, DASS and spiritual health questionnaires were completed by caregivers of intervention and control groups in the room is intended in the ward and the time that the researcher was given. Since this study was performed in two groups-intervention and control-, the intervention was done only for intervention group and control group received no intervention. Before the session's beginning, the Interventional group's caregivers

using randomized method are divided into 6 to 8 groups and remained the same until the end of the sessions. Then intervention group was put under 5 sessions based on spiritual intervention on the pattern of Richards and Bergin focusing on the rituals of Islam and includes psycho-spiritual components: prayer, trust and appeal, patience, gratitude and forgiveness, each day was 60 minutes.

In the first session, participants will be asked to put forward their supportive needs in terms of personal experience.

During the second session caregivers will be familiar with the role of trust and appeal in getting along with psychological stress caused by child disease and will be trained to know the theoretical bases of trust and appeal, trust as a contraceptive strategy to deal with stress, ways to achieve the trust and appeal and how one can use trust and appeal as an effective contraceptive strategy to convert inappropriate negative excitements to negative excitements. In the third session the role of prayer in solving their problems and the impact of prayer on the process of problem solving is discussed. Also, some instructions will be given about the value and importance of prayer, its philosophy, familiarity with the correct practical way of praying, and familiarity with the effects of prayer on the relationship of the individual with God, oneself and others.

In the fourth session they will be familiar with the concept of thanksgiving and its effect on reducing negative excitements and effective beliefs will be taught about thanksgiving's effect to decrease caregivers' negative excitements and in the last session they will be familiar with the steps of patience and they will be taught about the value of patience, kinds of patience, steps of patience and patience as a strategy to deal with the pressures caused by the child's illness.

Education was conducted through lectures, ask and answer, group discussion and distribution of print papers with information that's presented in each session. Intervention and control groups were matched in terms of the number of caregivers.

Immediately after finishing the sessions, DASS and spiritual health questionnaires were completed by caregivers of intervention and control groups in the room dedicated to the same notion in a ward and in time determined by the researcher. After completion of data collection in terms of compliance of ethical issues in research, all of educational interventions and the executive protocol for the spiritual support was delivered to the control group. Then the collected data were analyzed by SPSS16 software and were processed by using Kolmogorov-Smirnov and Shapiro Wilk tests, paired t-test, analysis of variance and linear regression model with 95% confidence intervals (percent significance level) and power test of 80%.

RESULTS

The average age of the caregivers in the control group was 40.0 ± 6.9 and in the intervention group was 35.7 ± 6.2 . The average number of family members in the control group was 4.6 ± 1.0 and the intervention group was 4.9 ± 1.8 . According to independent t-test, two groups regarding these two variables and the variables of the rank of child with

leukemia, height, age and body mass index were similar and the difference were not significant. The results of linear regression model to examine the effect of confounding variables on the difference of stress scores before and after interventions that just the effect of group on the difference of stress was significant ($P < 0.001$) and the control group shows 8.72 scores of stress more than intervention group (table 1). Also the effect of age of the child on the difference of DASS score was meaningful ($P = 0.032$) so that by increasing the age of children- one year- the difference of DASS score become as low as 0.95. In other words, for children with older age, reducing the effectiveness of the intervention was more on the DASS (table 2); This means that caregivers with older children had suffered from more stress (Stress caused by not studying the lessons, lack of ability to communicate with peers, child abuse in school because of changes in appearance). Intervention reduces their stress score more than caregivers with younger children.

The results of stress tests showed that before the intervention, the difference of stress between two groups was not significant ($P < 0.655$). After the intervention, stress in the intervention group was significantly lower than control group ($P < 0.04$). Comparing the difference of stress between two groups before and after intervention with analysis of covariance showed the intervention group was significantly lower stress scores than the control group ($P < 0.001$) (table3).

The results of the DASS variable test showed that before the intervention, the difference of DASS between two groups was not significant ($P < 0.882$). After the intervention, DASS score in the intervention group was significantly lower than the

control group ($P < 0.032$). Comparing the difference of DASS score before and after intervention between two groups showed decreasing DASS in the intervention group was more meaningful ($P < 0.001$) (table4).

DISCUSSION

In the present study, sessions of spiritual support have been able to reduce the stress of caregivers of children with leukemia. Before the intervention, the difference of stress between two groups was not significant. After the intervention, stress in the intervention group was significantly lower than the control group. Comparing the difference of stress between two groups before and after intervention showed the intervention group was significantly lower stress scores than the control group ($P < 0.001$).

After doing a lot of searches in domestic and foreign articles, we examine the articles that were closer to the results of the present study.

In the study that PahlevanZade et al had done (1388) to investigate the effect of psychological education of family on depression, anxiety and stress of 100 of caregivers (older than 15 years old) of psychiatric patients hospitalized in Noor hospital in Isfahan, training reduced depression, anxiety and stress of these people and was semantically close to present study(19). Najiesfahani et al. (1391) in a study investigated the relationship between Spiritual Wellbeing and Stress, Anxiety, and Depression in Patients with Breast Cancer, and got the same results (20). Bolhari et al. (2012) had conducted a research with the aim of examining the effectiveness of spiritual care on reduction of stress and depression in women with breast cancer, spiritual intervention reduced

Table1. The result of Linear regression to examine the effect of confounding variables on difference of stress scores before and after intervention

variable	Test statistics	The standard deviation factor	Standard factor	statistical test	P-value
Constant	-2.15	---	5.62	-0.38	0.704
Group(control ratio intervention)	8.72	---	0.60 1.67	5.23	<0.001
Gender of child(boy ratio girl)	1.79	1.58	0.12	1.13	0.263
Age of child	-0.66	0.49	-0.15	-1.35	0.164
Age of caregiver	-0.04	0.13	-0.04	-0.34	0.738
Linear regression : $P < 0.001$ $\cdot 8.95 = F$					
Adjusted coefficient of determination :0.35					

Table2. The result of Linear regression to examine the effect of confounding variables on difference of DASS scores before and after intervention

variable	Test statistics	The standard deviation factor	Standard factor	statistical test	P-value
Constant	-7.19	4.95		-1.45	0.152
Group(control ratio intervention)	9.77	1.47	0.65	6.65	<0.001
Gender of child(boy ratio girl)	2.49	1.39	0.16	1.79	0.079
Age of child	-0.95	0.43	-0.21	-2.20	0.032
Age of caregiver	0.11	0.11	0.10	1.01	0.319
Linear regression: $P < 0.001$ $\cdot 17.12 = F$					
Adjusted coefficient of determination :0.52					

Table 3. Comparing the difference of stress between two groups before and after test

variable	Intervention	Control	Test between groups ⁽¹⁾
	Standard deviationmean±	Standard deviationmean±	
Stress before intervention	54.3±30.0	58.3±24.9	F (1.58) =0.20 P=0.655
Stress after intervention	45.1±25.5	57.8±23.1	F (1.58) =3.87 P=0.04
the difference of stress before and after intervention	-9.2±7.6	-0.5±3.6	F (1.58) =32.92 P<0.001
within group test ⁽²⁾	t (29) =6.64 P<0.001	t (29) =-0.72 P =0.476	

⁽¹⁾Analysis of variance to compare before and after and control of age of caregiver
⁽²⁾Paired t-test to compare before and after

Table 4. Comparing and testing DASS in caregivers studied before and after the test in two groups of intervention and control

variable	Intervention	Control	Test between groups ⁽¹⁾
	Standard deviation±mean	Standard deviationmean±	
DASS before intervention	43.3±23.9	44.3±21.0	F (1.58) =0.02 P=0.882
DASS after intervention	32.1±17.4	43.6±19.9	F (1.58) =4.81 P=0.032
the difference of stress before and after intervention	-11.3±7.4	-0.7±2.1	F (1.58) =48.24 P<0.001
within group test ⁽²⁾	t (29) =8.38 P<0.001	t (29) =1.92 P =0.065	

⁽¹⁾Analysis of variance to compare before and after and control of age of caregiver
⁽²⁾Paired t-test to compare before and after

stress, tension and depression in the people, which is close to the present study (21). The results of these three studies were consistent with the present study, the reason can be the effect of intervention on depression, anxiety and stress of these people in stressful situations. These studies are somehow the same as the present study in the type of intervention. In this regard Sanaei et al. (2011) believe that spiritual and religious content have numerous consequences cause positive attitude towards oneself, environment and future; as a result, people did not consider themselves vulnerable and feel comfortable in the environment (22). Also spirituality, by targeting individual beliefs help to evaluate negative events in a better manner and have a stronger sense of control of existing conditions (23). Also the sense of control strengthens people in coping with living conditions and after that promoting the mental health and stress reduction (24). Moreover, Fallah et al. (2011) did a study to evaluate the effect of spiritual intervention on the mental health of 60 women with breast cancer, its result shows that spiritual intervention can reduce tension and anxiety in people and increase their public health (25). This study can be consistent with the present study in terms of similarity in the instruction of spiritual self-caring program and the sameness of the culture of two societies which has caused spiritual care to be presented as an effective defense mechanism and as a bumper so as to promote dominance in them.

It seems that religious and spiritual obligations protect the individual against stress caused by life's uncontrollable incidents such as death and severe diseases that can produce anxiety, nervousness and depression (26). Having studied the other papers extensively, in addition to the consistent results, some studies were obtained whose results were different from the results in the present study. Tuck (2012) in a study named examining spiritual interferences reached different results about interference and spiritual care which demonstrate this interference causes augmentation of the improvement in life quality and decrease of the response to the stress, tension and depression. But in general, the results obtained from his study show limited effects of the spiritual care and its interferences on the people (27). Likewise, the results of Hart et al. (2012) on 1362 patients suffering from cancer demonstrate limited effects of the spiritual interferences on the symptoms and warning of the cancer in the people suffering from it (28) and the incongruity of the results of this study with the present study can be caused by the inconsistency of the circumstances of the participants of the mentioned study- individuals suffering from various types of cancer participating in Hart study versus caregivers of the children aged 8-12 suffering from acute leukemia lymphoblastic in the present study- can be different society being examined so that the individuals in both of the studies were culturally and socially different. Also in the study

carried out by Qahari et al. (2012) which examined the effect of spiritual interference on 45 women suffering from cancer, this interference did not have any meaningful effect on the tension, anxiety and depression of these people and did not have any consistence with the results of the present study (29). The reason of this difference may be related to the limited size of the sample or difference in the people's disease, background problems, not having any emotional supporter or difference in the society being examined. The number of educational sessions in the mentioned study is more than the present study; furthermore, these studied did not employ similar means.

In this study, there were limitations including caregivers' spiritual beliefs and these beliefs were different in every caregiver and out of the researcher's control so that they could be effective factors on the stress of the caregivers of the children suffering from leukemia.

In spite of the fact that caregivers did not have behavioral-cognitive disruptions, some of the caregivers did not have high focus while others were able to focus their attention on their child and themselves, something that can affect the results of the study. Consequently, in order to remove this problem, it was better if the caregiver could be instructed in an appropriate time in a day having good conditions for

listening and receiving the information. Likewise the existence of caregivers with stronger beliefs in two groups of control and interference was monitored.

Therefore, it can be concluded that spiritual support sessions had been able to reduce the stress of caregivers of children with leukemia. Regarding to this point that spiritual support can reduce the stress of diagnosis or long period of treatment for caregivers of children with leukemia and the results showed that the intervention group had significantly less stress than the control group, so it is recommended that such interventions be done for caregivers of children with leukemia due to the low cost, safety and effectiveness.

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REFERENCES

1. Taghizadeh Kermani A, Hosseini S, Salek R, Pourali L. Improving Knowledge and Attitude of Nurses Working in Chemotherapy Wards through a Short Educational Course: A Successful Experience in Mashhad. *FMEJ*;4.2015.
2. Hashemizadeh H, Jafarzadeh A, Broumand H. Risk Factors and the Most Common Initial Symptoms of Acute Lymphoblastic Leukemia in Children. *Iran Journal of Nursing*. 2011; 24(72): 67-77.
3. Sajjadi H, Roshanfekar P, Asangari B, Zeinali Maraghe M, Gharai N, Torabi F. Quality of life and satisfaction with services in caregivers of children with cancer. *IJN*. 2011; 72(24): 8-17.
4. Sargolzaie N, Khalili M, Jahantigh M, Kiani F, Naderi A. Effect of Integrated Management of Childhood Illness Training on Medical Student's Knowledge and Clinical Skills. *FMEJ*. 2015.
5. Meraviglia MG. Critical analysis of spirituality and its empirical indicators. Prayer and meaning in life. *J Holist Nurs*. 1999 Mar; 17(1): 18-33.
6. Cotton S, Larkin E, Hoopes A, Cromer BA, Rosenthal SL. The impact of adolescent spirituality on depressive symptoms and health risk behaviors. *Journal of Adolescent Health* 2005; 36: 529.e7-529.e14.
7. Pierce, L., Stiener, V., Havens, H. & Tormohlen, K. (2008). Spirituality Expressed by Caregivers of Strorie Survivors. *West J Nurs Res.*; 30 (5): 606-619.
8. Lyon, B & Bright, P.R. The role of religious/ spirituality in cancer patients and their caregivers. 2004. www.the-free-library.com.
9. Penman J, Oliver M, Harrington A. Spirituality and spiritual engagement as perceived by palliative care clients and caregivers. *Australian journal of advanced nursing*, 2009; 26(40): 29-35.
10. Vellone E, Rega ML, Galletti C, Cohen MZ. Hope and related variables in Italian cancer patients. *Cancer Nurs*. 2006 Sep-Oct; 29(5): 356-66.16.
11. Boyd MA. *Psychiatric Nursing Contemporary Practice*. 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2001.
12. Beery TA, Baas LS, Fowler C, Allen G. Spirituality in persons with heart failure. *J Holist Nurs* 2002; 20(1): 5-25.
13. Teymouri F, Alhani F, Kazemnejad A. The effect of family-centered empowerment model on the Quality of life of school-age asthma children. 1390; 6 (20).
14. Curley A.M, Moloney-Harmon A.P. *Critical Care Nursing of Infant and Children*. Pennsylvania: W.B. Saunders. 2001.
15. Greasey G, Ottlinger K, Devico K, Murray T, Harvey A, Hesson-McInnis M. Children's affective responses, cognitive appraisal, and coping strategies in response to negative affect of parents and peers. *Journal of Experimental Child Psychology*. 1997; 39-59.
16. McClain-Jacobson C, Rosenfeld B, Kosinski A, Pessin H, Cimino JE, Breitbart W. Belief in an afterlife, spiritual well-being and end-of-life despair in patients with advanced cancer. *Gen Hosp Psychiatry* 2004; 26(6): 484-6
17. Gulbeyaz, Can., Akin, S., Aydinler.A., Ozdilli, K., Oskay, U & Durma, Z. A psychometric validity study of the quality of life and Famcare scales in Turkish cancer family caregivers. *Qual life Res*. 2011. 10: 512-520 [20(8): 1319-29].
18. GHeisar SH, Vaziri SH, Mousavi M, Hashemie M, Kashani F. The effect of Spirituality on quality of life of mothers of children with cancers. 2012.
19. Navidian A, Pahlevan Zade S, Yazdani M. The effect of family psychoeducation on depression, anxiety and stress of caregivers of psychological patients. *Journal of Kermanshah Medical School* 1389: 14(3).
20. Naji Esfahani H, Musarezaie A, Momeni Ghaleghasemi T, Karimian J, Ebrahimi A. The Relationship between Spiritual Wellbeing and Stress, Anxiety, and Depression in Patients with Breast Cancer. *Journal of Isfahan Medical School*. 2012; 30(195).
21. Bolahri G, Nazari GH, Zamaniyan S. Effective therapeutic spirituality to reduce the amount of intellectual depression, anxiety and stress in women with breast cancer. *Sociol Women* 2012;3(1):85-116.
22. Sanaei B, Nasiri H. [The effect of cognitive-spiritual group therapy in reducing depression and anxiety in patients with mood disorders in Isfahan Noor Medical

- Center] [Article in Persian]. *Couns Res Dev* 2011;2(7-8):89-97.
25. Simoni J, Marton M, Kerwin J. Spirituality and psychological adaptation among women with HIV/AIDS: implications for counseling. *J Couns Psychol* 2002;49(2):139-47.
26. Hayley Harriet R. Hope and ways of coping after breast cancer .Ph.D. dissertation of Arts in clinical psychology in Johannesburg University;2008. Available at: <http://ujdigispace.uj.ac.za:8080>.
27. Fallah R, Gilzari M, Dstani M, Akbari M. Integrating spirituality into a group psychotherapy program for women surviving from breast cancer .[Article in Persian] *Thought Behav Clin Psychol* 2011;5(19):65-76.
28. Rippentrop, E.A., Altmaier ,E.M., Chen ,J.J., Found ,E.M.,&Keffala. The relationship between religion/ spirituality and physical health, mental health, and pain in a chronic pain population. *Pain*, 2005 Aug; 116 (3): 311-21.
29. Tuck J. A critical review of a spirituality intervention. *West J Nurs Res* 2012 Oct; 34(6):712-35.
23. Hart SL, Hoyt MA, Diefenbach M, Anderson DR, Kilbourn KM, Craft LL, et al. Meta-analysis of efficacy of interventions for elevated depressive symptoms in adults diagnosed with cancer. *J Natl Cancer Ins* 2012 Jul;104(13):990-1004.
24. Ghahari S, Fallah R, Bolhari J, Moosavi SM, Razaghi Z, Akbari ME. [Effectiveness of cognitive-behavioral and spiritual-religious interventions on reducing anxiety and depression of women with breast cancer] [Article in Persian]. *Know Res Appl Psychol* 2012 Winter;13(4):33-40.