ANALYSIS

24(103), May - June, 2020

ISSN
2321–7359
EISSN
2321–7367

Medical Science

The study of the effect of group training on stress of cancer patients' caregivers in instructional hospitals of the Medical Sciences University of Zahedan

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Article History
Received: 10 December 2019
Reviewed: 11/December/2019 *to* 04/ February/2020
Accepted: 05 February 2020
E-publication: 10 February 2020
P-Publication: May - June 2020

Citation
Arezoo Keykha, Fatemeh Kiani, Mojtaba Tasbandi, Ali Navidian. The study of the effect of group training on stress of cancer patients' caregivers in instructional hospitals of the Medical Sciences University of Zahedan. *Medical Science*, 2020, 24(103), 1036-1041

ABSTRACT

Background: The cancer patients need help from nonofficial caretakers due to the cancer debilitating nature and its especial treatments. They have an important role of doing the patients daily affairs. The current study aimed to examine the effect of the group training on caretaking pressure and psychological reactions of cancer patients' caretakers. *Methods:* It is a semi experimental study. One hundred cancer patients' caretakers who had the inclusion criteria were selected by random sampling method from Khatam Al Anbia and Ali Ibn Abitaleb hospitals. After having allocated patients into two groups of control and case, at first before the intervention, the caretaking pressure questionnaire and the DASS21 were filled out by caretakers in both groups. The control group only had the routine cares. Intervention included strategies of crisis management and stress that was done in the case group during five individual sessions one time a week moreover its follow up took six weeks. After the above-mentioned time, the questionnaires were given to control and case control group then the post test was done. *Results:* Results of this study showed that the mean and SD of cancer patients caregivers age had been (34.68±11.48) and (37.08±11.58) in case control and the control group respectively. The mean and the SD of the stress index of the cancer patients caregivers in case control and the control group were respectively (8.56±5.90) (7.52±4.16) before the intervention and (9.20±4.52) (5.24±4.89) after the intervention. This change was significant in case control group (P=0.31) and (P=0.001) in the control group. *Conclusion:* Results indicated that providing group instructional plan for cancer patients' caregivers reduces their stress therefore using this plan can be an effective method to decrease their psychological reactions. Thus, this plan can be used in medical centers in order to promote and maintain the caregivers' mental health.

Keywords: caring stress, group instruction, cancer, stress

1. INTRODUCTION

Nowadays, cancer is one the main health problems in Iran and all over the world ("cancer fact sheet in CANCER fact sheet ", 2008; Harandy TF1 et al., 2010 Jan). Caregivers state that they forget their needs because of their caring role of their favorite patients (Schneider, 2004). Some of the points that indicate the need to carry out this study are that families of patients with cancer often encounter various problems of managing the cancer complications and crisis. Having the ability to control these complications can highly reduce the caring stress and psychological problems. Sajjadian et al. study (examining the common problems of the breast cancer patients caregivers) showed that the lack of enough knowledge and expertise about their patients disease and their own health were the most common needs and problems (A. Sajjadian & Heydari, 2015). Navidian et al. believe that interventions like training, family therapy and group treatment should be used to decrease caregivers stress in order to increase the caring quality of patients, physical and mental health of the caregiver as a hidden patient (Navidian, Salar, Hashemi Nia, & Keikhaei, 2001). So, empowering the caregiver is a priority. Since taking care needs expertise and nurses are in a special situation to interact with the patients and their family members they can provide knowledge, skills and the necessary support to maintain care quality at home. Family of the patients need proper understanding the disease during the care and the nurses duty along with taking care of the patient is helping the family to increase hope and trust in order to promote family health and welfare (Dehghan Nayeri, Mohammadi, Pedram Razi, & Kazemnejad, 2012). Group training is a training method in which the learners and the trainers gather in order to share information, feelings and beliefs (Heshmati Navabi et al., 2012). Since group training is a non-drug, non- aggressive and low cost method for restraining physical and mental problems moreover, nurses easily teach it to patients and their families. It provides the opportunity for nurses to train many trainees at the same time and more people in less time. Generally, it has a positive effect on people's attitude that is due to increased interest and more interaction with others. This method creates active learning; provide an opportunity to share ideas, experiences and feeling in the group and getting support from the group help them to find better solutions for their problems (Ghavam- nasiri et al., 2011; Heshmati Navabi et al., 2012). This study aimed to determine the effect of group training on psychological reactions of cancer patients' caregivers in the instructional hospitals of the medical Sciences University of Zahedan from 2018 to 2019.

2. MATERIAL AND METHODS

This study was approved by the Ethics Committee of Zahedan University of Medical Sciences and the Ethics Committee of the place where research was conducted (Ethic code: IR.ZAUMS.REC.1397.477). Having approved the study, getting permission from the medical Sciences University of Zahedan and coordinating with chemotherapy wards of Imam Ali and Khatam Al Anbia hospitals of Zahedan from 1 January to 30 August 2019, the researchers chose case control and the control group from these two hospitals

gradually. After explaining the plan aim and getting written satisfaction from cancer patient's caregivers, later those who had the inclusion criteria entered the study using convenience sampling method. At first, all of the study participants were given envelopes containing group name cards and were randomly arranged. Later by referring and selecting participants one of these cards were given to them that designated each participants group. Having randomly allocated the caregivers into two groups of case control and the control group, the questionnaire information containing two parts were filled out. First demographic information of the patients and caregivers were recorded with questions about age, marital status, job, education level, race, sex, children number, family relationship, daily need for care, disease duration, patients' ability to do personal matters and the cancer type. Patients Caregivers filled out the DASS21 questionnaire before the intervention in both groups and the researcher supervised and helped filling out it in the control group. Intervention included crisis and stress management strategies that were five individual sessions one time a week in the experimental group. Having finished the five training sessions, its follow up took six weeks. After the follow up, the questionnaires were given to control and the case control groups then the test was done. Finally the pamphlet and the training book which its scientific contents had been verified by an oncologist were given to control group. Sample volume was determined using the mean and SD of caring burden from the study of the Pahlavan Zade et al. 2014 (Pahlavanzade, 2014 Nov-Dec). Moreover it had the confidence level of 95% and the power test of 90%. Having considered a sample volume that can diagnose five units difference among the groups, the necessary sample volume was determined 48 in each group according to the following formula. To ensure the sample volume sufficiency and considering probable drop out, each group was 50 and totally 100 (Figure 1).

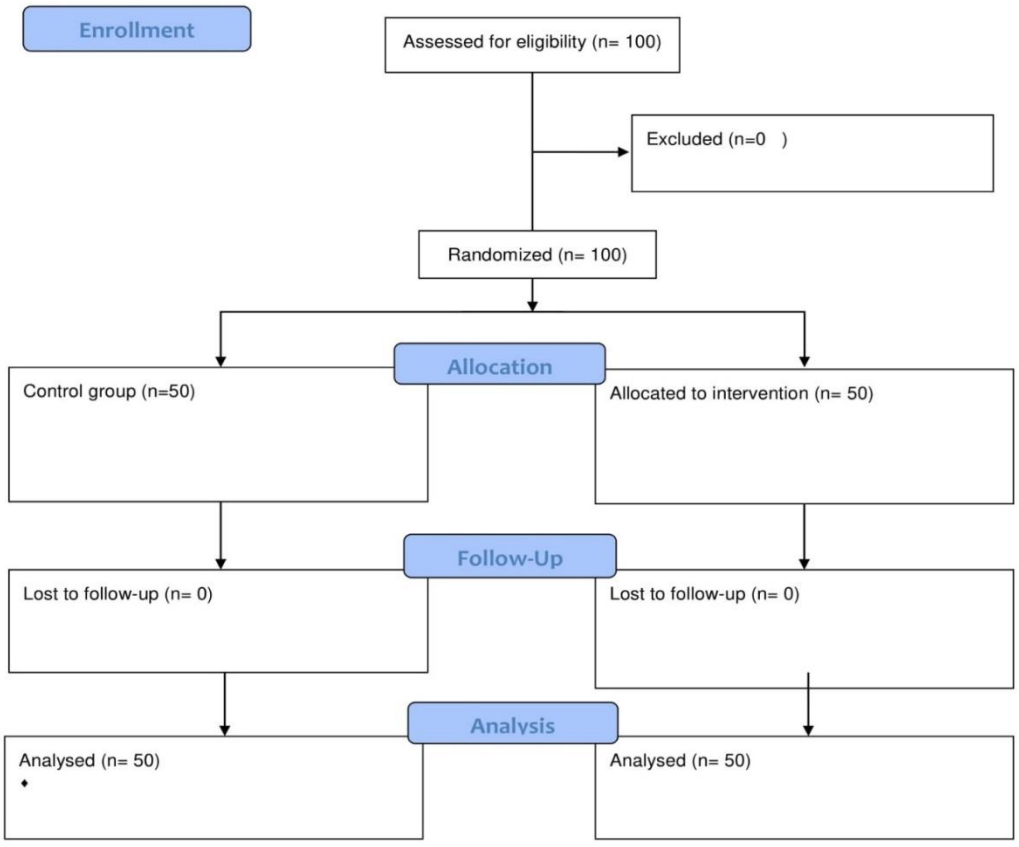

Figure 1. Study Flow Diagram

Having gathered the data and encoded them using the SPSS version 21 software analyzed them. At first descriptive statistics determined the frequency, percent, and mean, SD, the minimum and the maximum. Later the paired T test compared the pre and post means in each group. Independent T test compared the mean changes between the control and the case control group. X2 test compared the frequency of the qualitative variables of the two groups. Significance level was 0.05 in this study.

3. RESULTS

Results of this study indicated that the mean and SD of the patient's caregivers age have been (34.68±11.48) and (37.08+_11.58) in the case control and the control group respectively. Considering the disease duration, it has been 10.90 and 12.86 in the case

control and the control group respectively. 68% of the patients in case control group had a degree higher than high school diploma and it was 32% for the control group. Regarding the occupation, 42% of the caregivers in the case control group and 40 percent of them in the control group were housewives. Patients' children were the main caregivers. 54% of them were in the case control group and 38% were in the control group.

The mean and the SD of the caregivers of the cancer patients have been (7.52±4.16) (8.56±5.90) before the intervention in the case control and the control group and (9.20±4.52) (5.24±4.89) after the intervention respectively furthermore this change was significant in the case control (P=0.31) and (P=0.001) in the control group. The independent T test showed a significant statistical difference (p=0.001) (Table 1, figure 2).

Table 1 comparing the mean and the SD of cancer patients caregivers stress score before and after the training intervention in the case control and the control group.

time / group	Before the intervention	After intervention	changes	Paired T test
	mean±SD	mean± SD	mean± SD	
Intervention	5.90 ±8.56	4.89±5.24	3.34±-3.32	t=7.01 Df=49 P=0.001
Control	4.16±7.52	4.52±9.20	1.68±1.75	t=6.77 Df=49 p=0.001
Independent T test	t=1.01 df=98 p=0.31	t= 4.19 Df=98 p=0.001	t=9.35 df=98 P=0.001	

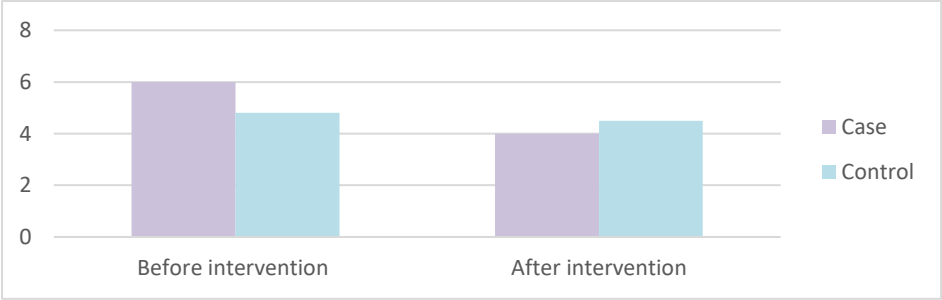

Figure 2 Scores before and after of intervention in case and control group.

4. DISCUSSION

Results of this study showed that stress level reduced after the training in the case control group that is similar to the study of the Aboumasoodi et al. (comparing two training methods of face-to-face and electronic on cancer patients' stress. Its results showed that patients stress reduces considerably after the training (Sheikh Abu Masoudi, Kashani, Karimi, Salarvand, & Hashemi, 2015), although their patients were different from the present study. Researchers in this study indicated that most studies are carried out on patients therefore it is better to have more extensive studies on caregivers because promoting the mental health of the caregivers can directly affect the patients (Johansen S, Mar/Apr2018).

Since diagnosing and treating the cancer causes stress for the patients and their caregivers, it is necessary that health planners and physicians pay more attention to this problem in order to promote caring conditions by reducing patients and caregivers stress. Having understood the above-mentioned points, caregivers of cancer patients suffer from more stress than those of the other chronic diseases patients (Ballesteros et al., 2012 Dec). Therefore it is necessary to use training according to the coded plans that meet all the caregiver's needs. In other words, while analyzing the effect of the training package on the caring stress of the cancer patients caregivers it can be said that this package is applying the main theories of taking care of the cancer patients, controlling the crisis, training control methods of stress, depression and anxiety. Finally, it makes the caregivers of cancer patients to feel better

performance and promote their psychological status to have a positive attitudes of themselves thus this process reduces their caring stress. Other studies also mention that able humans with better performance feeling deal more actively while encountering especial disease like cancer. They also state that in such a condition the caregivers show less worry and more adaption (Ellison, Burdette, & Hill 2009 Sep). It is recommended that the next studies should be done on more population in order to generalize the results more certainly. Results of the analyzing the data in the present study showed that the interventional training has considerably reduced the caregivers anxiety. Results of the present study are similar to that of Parivash Garavand et al. (2007) (the effect of the hope based training by spiritual recognition method on worry and mental distress of mothers of children with cancer. Results of Parivash Gravand et al. (2007) showed that hope based training significantly reduced the worry and the mental distress of these mothers (Geravand, Manshaee, & Nadi, 2018). Results of the present study is also similar to that of Taghadossi et al. (Taghadosi & Feyz, 2014). It is essential to state that one of the differences of the present study compared to others is having a more comprehensive way of examining anxiety, stress, depression and finally caring stress among caregivers. Only few studies have examined all these variables at the same time moreover other studies are patient centered while the present study have examined the caregivers (hidden patients). Training is planned in this study with defined contents and considering ways to control the above-mentioned problems. To summarize we can say that while taking care of cancer patients, paying attention to the main caregiver is of great importance. Since one of the nursing purposes is promoting patients' health moreover affectivity and dependencies from the main caregiver on the physical and the mental conditions of the patients in undeniable in chronic diseases. Therefore promoting the mental health of the caregivers can have amazing effects on themselves and their patients. Because, we can promote the patients adaption level, physical and mental health by controlling the caregivers anxiety. Recent studies shows that medical care systems need to meet the needs and the problems of the caregivers due to their direct effect on families and treatment procedure (Glajchen, 2004; Grunfeld et al., 2004). It seems that paying attention to caregivers at different periods can have amazing effect on their mental health. It is essential to pay attention to caregivers as the cancer diagnosis and treatment begins, because the caregivers' psychological problems are more chronic during these stages. The study of Sajadian et al. (examining the breast cancer patients' caregivers caring problems) showed that the caregivers with more than 6 months to 2 years caring duration had more mental problems (Sajjadian et al., 2015). Studies related to the caregivers have also shown that compatibility happens at long term (Kim & Given, 2012). The present study has not examined the relationship between the caring duration and depression level, but it seems that psychological problems (anxiety, stress, and depression) are more severe among cancer patients at the elementary stages due to the disease unknowingness. However, it becomes moderate as time passes and information increase. Therefore, it is better to pay attention to the main caregiver of patient at the time of diagnosis in order to create better compatibility with the disease development. Training and managing the cancer crisis and awareness of its outcomes increases the caregivers performance that verifies the fourth hypothesis of this study saying that cancer patients caregivers depression is different it the two groups after the intervention.

5. CONCLUSION

Results of this study showed that training during sessions with comprehensive contents could reduce stress, and the caring stress consequently promoting the caregiver's health.

Ethical clearance

Taken from Zahedan university of medical science committee (ethic code: IR.ZAUMS.REC.1397.477).

Funding: This research was funded by Zahedan University of medical science.

Conflicts of Interest: The authors declare no conflict of interest.

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