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Research Article

INVESTIGATION OF THE IMPACT OF INDIVIDUAL SKILLS TRAINING WORKSHOPS ON LIFE EXPECTANCY AND LIFE QUALITY OF BREAST CANCER PATIENTS WHO ATTENDED TO THE CANCER SPECIALIZED MEDICAL CENTERS OF YAZD PROVINCE IN 2013

Nemati Fateme[1], Mortazavizadeh Seyed Mohammadreza[2], *Montazer Abbas[3], Dehghani Ahmadabadi Ali[1], Tahani Fateme[1] and Sepehri Maria[1]
[1]Clinical Research Development Center, Shahid Sadoughi University of Medical Science, Yazd, Iran
[2]Department of Oncology and Hematology, Yazd Branch, Islamic Azad University, Yazd, Iran
[3]Department of Humanities, College of Psychology, Yazd Science and Research Branch, Islamic Azad University, Yazd, Iran
**Author for Correspondence*

ABSTRACT
The aim of present study was to investigate the effectiveness of individual skill training workshop on life expectancy and life quality of breast cancer patients. The population of present study consisted of all the female who suffer from breast cancer in the Yazd province. The number of 30breast cancer patients was selected by sampling method and were assigned into two experimental group (15 patients) and control group (15patients). The Miler questionnaire of life expectancy and SF36 life quality inventory were distributed between the examinees of both experimental and control group then experimental group was under individual skill training for 10 weeks (two hour per weeks). Then collected data was analyzed by SPSS software and covariance analysis. The questions of physical health (SG) subscale were omitted because no attempt was made for improving physical health of patients. The results of covariance analysis showed that the training of individual skill with%95 significant level impacted life expectancy and life quality subscale of breast cancer patients ($p>0.05$). The result of this study suggests that breast cancer patients can increase their life expectancy and life quality with improving their life skills.

Keywords*: Breast Cancer, Skills Training Workshops, Life Expectancy*

INTRODUCTION
Today, suffering from cancer is one of the most stressful events in life that disturb emotional, social and physical performance of individuals. After cancer diagnosis a person will face anxiety, depression and social energy reduction due to unrealistic fear from death.
The necessity for repetition of hospitalization and continuous concern of patients and their families will cause psychological disorders for cancerous patients (Bamshadand Safikhani, 2006).
Life quality has two objective and subjective dimensions. So the person's perception and attitude to the life is effective in the life quality and its assessments.
Life quality reflects the gap and difference between the hopes and expectations of the individual and his/her current experiences (Seidnozadi, 2008). In a study that was conducted by Marjan Hamuleh and her colleague in Ahwaz province in 2009, the relationship between mental health and life quality of cancerous patients was investigated. In this study, 90 cancerous patients filled life quality and general health questionnaire which results have shown that there is significant correlation between the life quality physical performance with three fields of anxiety, social performance dysfunction and depression (Hamuleh, 2009).
Anxiety is one of the essential components cancers. Anxiety is special common trait that caused life bitterness, prevent human from connection with the others, reduce life expectancy and decrease person's effective dealing with the environment form childhood to elderly ages (Alfred, 1910).
Frankel believes that having meaning, goal and hope in life are stabilizers of the general health. So while the life has goal and meaning naturally any overwhelming events such as severe pressures and deadly diseases can find meaning (Viktor, 1996).

Schneider defines hope as structure with two concepts: the ability to design gateways toward the suitable purposes in spite of existence barrier or motivation factor for using these gateways. Base on Schneider idea frustration is shocking mood that works seem impossible and the feeling of disability and exhaustion will be revealed. Hopelessness will lead to individual's inactivity and person will lose his/her ability to make decisions in different situations (Eslaminasab, 1998).

Magarey (1988) says that patient's survival psychological factors can be affected through early diagnosis and adaptation with the treatment. Right now some evidence suggests that psychological factors also affect body immune factors that control the micro metastasis. In particular, the submission of cancer is associated with short life period, while expressing hostility towards cancer associated with long-term survival of cancer. Undiagnosed psychological complications can affect life quality of cancerous patients for years. Also such psychological complications can be decrease through open communication with patients or through encouraging them to express their feeling especially their anger mood, preoperative diagnosis of breast cancer by biopsy and granting more time before breast removal. Also these implications give active role to the patient for shortening time for treatment decision, prevent mastectomy surgery operation and immediate surgery of breast restoring, caused appropriate psychological support and self-help techniques such as meditation. Breast cancer can be a positive turning point in the person's life (Magarey, 1988).

ArefehDavoodi *et al.,* (2007) in their study evaluated the impact of self take care on life quality by holding three half hour sessions for patient who suffer from esophageal cancer, the results showed that the training improved the life quality and decrease patients problem (Davoodi, 2004).

Karimoi and his colleagues during 9 session's group counseling showed that psychological interventions can improve the symptom scales of life quality (Karimoi *et al.,* 2006).

A study that was conducted by Telch and his colleagues (1986) the priority of two grouped method, psychological supports and the coping skill training was evaluated between 41 breast cancer patients from 19 to 64 ages old. The method of psychological support include mutual sharing of feelings and concerns without guidelines and the method of coping skill training consisted of relaxation and stress management, assertive communication, problem solving and cognitive reconstruction, emotions management and planning for enjoyable activity. The results showed that group therapy base on the coping skill training were more effective for creating psychological adjustment (Telchand Telch, 1986).

In another study which was done by Graves (2003), the results showed that social cognitive therapy can improve the scores of life quality in the emotional and social subgroups and increase physical-objective consequences (Graves, 2003).

Linda *et al.,* (2004) in a case - control study investigated the variables of temperament, stress measure, cortisol level, blood dehydroepiandrosterone (DHEAS) and salivation melatonin level in the patients who suffer from breast and prostate cancer, thus the results showed that 8 weeks of meditation and yoga exercises and indoor practices base on self consciousness can improve temperament but there is no relation between the length of class attendance or practices with meditation training of stress reduction. Cortisol levels fell down in the afternoon but have no change in the morning and evening (Carlson *et al.,* 2004).

Alistair *et al.,* (1991) in 273 samples of the cancerous patient found that there is positive and strong relation between self efficacy with life quality and temperament (Cunningham *et al.,* 1991).

Common believe is that the promotion of communication skills will lead to improvements of individual psychological health. These abilities help individuals to cope with situation effectively and enable them to act positively and concordantly with the other individuals of society and provide health especially psychological health for them. The surveys about life skills have been started in 1970 but recent years these skill have been center of attention and different works have been done for their training. Interpersonal relationship, decision making skills, critical thinking, coping skills, and personal management are common life skills. For the training of life skills, skills such being aware of self abilities and self features , focusing on personal, familial and social values and using accurate communication skill and decision, avoiding of violence and providing health have been emphasized (Poorseyed *et al.,* 2010).

Present study has been implemented base on the importance of life quality and hope for improving life conditions and also increasing the survival rate of cancerous patients. For determination of quality statue and life expectancy of breast cancer patients of Yazd province and the impacts of life skill training sessions have been designed for these indicators.

MATERIALS AND METHODS

Implementation Method

The present study was done with the purpose of investigation the effectiveness of individual skill training on life expectancy and life quality of breast cancer patients in the Yazd province in 2013 that attended to the specialized blood and cancer center after breast surgery. The study's method was semi-experimental one with pretest-posttest design and control group. Initially the number of 30breast cancer patients who were willing to participate in the experiment was selected by sampling method and were randomly assigned into two experimental group (15 patients) and control group (15patients). The Miler questionnaire of life expectancy and life quality inventory were distributed between the examinees of both experimental and control group. Then experimental group was under individual skill training for 10 weeks (two hour per weeks) and control group did their normal daily tasks. After the training workshop both groups completed the mentioned questionnaires again. In this study, covariance analysis was used for data analyzing and the rate of life expectancy and life quality were compared before and after experiment period.

Measuring Tool

SF36 life quality questionnaire was used for measuring life quality. SF36 form focus on psychological and physical hygienic performance in the eight dimensions: physical performance, physical role, bodily pain, general health, vitality, social performance, emotional role and p mental health. Totally life quality questionnaire is divided to physical health and mental health subscales. Physical health is obtained from total physical performance, role disturbances due to physical health, pain and general health. Mental health is obtained from total role disturbances due to emotional health, energy/fatigue, emotional welfare and social performance.

SF36 questionnaire is completed by the present of researcher. The validity of this questionnaire frequently has been evaluated in the general population and in patients with various diseases. All the 8dimensions lonely have 0 to 100score level. The scoring model has been achieved base on standard measurement criteria of SF-36. A higher score indicates better performance. 3 options question with scores of (0, 50 and 100), 5 options questions with scores of (0, 25, 50, 75, and 100) and 6options questions with score of (0, 20, 40, 60, 80, and 100) are considered.

The standard mean of life quality dimensions is 50 that upper score indicate higher mean performance and lower score indicate low mean performance. The questionnaire was translated and converted to the Persian version by Ali *et al.*, (2005) for determining its reliability and validity and was implemented in Tehran for individuals who were 15 year old and above 15 years old. Questionnaire's reliability was evaluated using statistical analysis of "internal consistency" and questionnaire's validity was evaluated using "known- groups' comparison" and "convergent validity".

Analysis of "internal consistency" showed that all the scales of SF-36(Persian version) have minimum coefficient standard ranged from0.77 up to 0.9 except the vitality scale (0.65). Statistical test of "known-groups' comparison" showed that the Persian version of SF-36 can differentiate between the population groups according to their gender and age. Older people and women received lower scores on all the scales. Results showed that the Persian version of SF-36has suitable reliability and validity for measuring health issues and life quality in the population.

Miller's life expectancy questionnaire: Miller's test is one of the diagnostic tests. This test consisted of 48 aspects including the hope and helplessness modes which its articles have been selected base on internal and external appearance of behavior in the hopeful and frustrated individuals. Any aspect has one behavioral sign which is explained as following sentences: 1 completely disagrees, 2 disagree, 3neutral, 4 agree, 5 completely agree.

Any individuals select the sentences which have different score from 1 to 5; base on their choices their grades will be summarized. Total scores reveal rate of hope and frustration. In theMiller's test range of grades varied from 40 to 200. Individuals who get 40 score (minimum score) are completely frustrated and those who get 200 score (maximum score) are completely hopeful. For determining the validity of questionnaire (Mousavi, 2006), the total score of questionnaire was correlated with the score of criterion question so positive and significant relation was found between them. (r= 0/61 and p = 0/0001). For determining reliability, cronbach and Tansif alpha were used that their coefficient score respectively were 0/9 and 0/89 (Hosseini, 2006).

RESULTS AND DISCUSSION

Findings

Descriptive Statistics

In both experimental and control groups, about 50 percent of participants were between 41 to 49 years old , the second age range were between 25 to 40 and lowest and third one above 50. The highest frequency of university degree in both groups was bachelor's degree then the middle school degree, diploma and MA degree were similar in both groups. The highest frequency for occupational statue in both groups was staffs and lowest frequency was self-employed job.

Inferential Statistics

Table 1: Pretest and posttest in the experimental group

Variable	Mean	The mean of standard deviation	significant level %95 low level	high level	t test	Sig.
Physical health of life quality	125/38	548/28	551/23	801/99	335/1	205/0
Mental health of life quality	064/57-	891/21	36 / 104-	771/9-	607/2-	022/0
Miller's Life expectancy	786/17-	76/2	748/23-	823 / 11-	444/6-	0.000

Paired test was used in order to investigate the impact of training on experimental group, so base on the p-value we can conclude that the training impacted the variables of mental health of life quality subscales (p-value = 0.022) and Miller's Life expectancy (p-value = 0.000), But it has no impact on physical health of life quality (Table 1).

Table 2: Pretest and posttest in the control group

Variable	Mean	The mean of standard deviation	significant level %95 low level	high level	t test	Sig.
Physical health of life quality	0/983	29/456	-62/193	64/160	0/033	0/974
Mental health of life quality	21/444	16/005	-12/884	55/772	1/34	0/202
Miller's Life expectancy	-0/600	4/078	-9/346	8/146	-0/147	0/885

Above table was provided to investigate the impact of training on the control group, so base on the p-value we can conclude that no change was found in the variables because control group receive no training.

Table 3: Mean and SD for life quality and Miller's Life expectancy scores in the experimental and control groups at the pretest and posttest stage

Variable	Stage	Group	Number	Statistics indicators	
				SD± Mean	SD± Mean
Physical health of life quality	Pretest	Experimental	15	311/96 ±41/68	18/28
	Pretest	Control	15	272/08 ±26/80	20/72
	Posttest	Experimental	15	273/83 ±80/74	19/99
	Posttest	Control	15	271/10 ±55/95	24/67
Mental health of life quality	Pretest	Experimental	1 5	41/68 ± 96/311	32/22
	Pretest	Control	15	26/80 ± 08/272	20/21
	Posttest	Experimental	1 5	273/83 ±80/74	19/11
	Posttest	Control	15	271/10 ±55/95	22/22
life expectancy	Pretest	Experimental	1 5	181/43 ±93/21	5/86
	Pretest	control	15	180/93 ±88/24	6/42
	Posttest	Experimental	1 5	199/21 ±19/16	4/32
	Posttest	Control	15	181/53 ±87/26	6/94

According to the above table as you can see in the experimental group the value of SD± Mean in the physical health of life quality variable at the pretest stage is 311/96 ± 41/68and at posttest stage is ± 273/8380/74, so the training had no impact on physical heath of life quality in the experimental group. But in the experimental group the value of SD± Mean in the mental health of life quality variable at the pretest stage is41/68 ± 96/311and at posttest stage is273/83±80/74 so this variable has been increased.
Also according to the mentioned table in the control group the value of SD± Mean in the life expectancy at the pretest stage is180/93 ± 88/24and at posttest stage is 181/53 ±87/26, so no difference was found. In the experimental group the value of SD± Mean in life expectancy variable at the pretest stage is 181/43±93/21and at posttest stage is 199/21±19/16, so this variable has been increased and the difference is obvious.
The investigation of normal distribution of scores in the experimental and control groups isone of the prerequisites of parametric t test. The Kolmogorov-Smirnov test was performed for implemented assumption that its results have been presented below.

Table 4: The Kolmogorov - Smirnov test for investigation normal distribution of data in both groups

Variables		Kolmogorov-Smirnov	Significant
PH	Pretest	127/0	200/0
	Posttest	094/0	200/0
MH	Pretest	138/0	165/0
	Posttest	155/0	072/0
Miller's Life expectancy	Pretest	088/0	200/0
	Posttest	110/0	200/0

Output analysis of above table shows that the P-values of Kolmogorov-Smirnov test are higher than 0.05, so data distribution is normal in the all aspects.

Table 5: The results of Lon test base on equality of variances in the both groups

Variables		Statistic of test	F	df1	df2	Sig.
PH	Pretest	046/1		1	27	316/0
	Posttest	720/0		1	27	819/0
MH	Pretest	053/0		1	27	501/0
	Posttest	173/1		1	27	199/0
Miller's Life expectancy	Pretest	465/0		1	27	614/0
	Posttest	642/3		1	27	372/0

According to the above table the significant value in the both groups for all above components is higher than 0.05, so the variances of groups are homogeneous.

Table 6: The results of covariance analysis about the efficacy of individual skill training on the PH of life quality of patients who suffer from breast cancer

The Source of Changes	Total squares	Degrees of freedom	Square mean	Statistic of test F	The significance level (PV)	Eta square
Group	38/114201	2	69/57100	43/7	003/0	364/0
pretest	83/733	1	83/733	095/0	760/0	004/0
Error	97/199843	26	30/7686	---	---	---
Total	74/2352842	29	---	---	---	---

According to the above table, there is no significant difference between PH of life quality of patients who suffer from cancer in the experimental and control group at pretest stage (F = 7.43 and P> 0/05). As well as the impact or difference between the scores mean of experimental and control groups is 0/364, so 36/4percent of individuals differences at posttest stage of PH are due to the training's impacts.

Table 7: The results of covariance analysis about the efficacy of individual skill training on the MH of life quality of patients who suffer from breast cancer

The Source of Changes	Total squares	Degrees of freedom	Square mean	Statistic of test F	The significance level (PV)	Eta square
Group	18/84657	2	59/42328	17/10	001/0	439/0
pretest	13/62019	1	13/62019	91/14	001/0	364/0
Error	41/108151	26	67/4159	---	---	---
Total	68/2281147	29	---	---	---	---

According to the above table, there is significant difference between MH of patients who suffer from cancer in the experimental and control group at pretest stage (F = 10/17 and P< 0/05).
As well as the impact or difference between the scores mean of experimental and control groups is 0/439, so 43/9percent of individuals differences at posttest stage of MH are due to the training's impacts.
According to the above table, there is significant difference between life expectancy of patients who suffer from cancer in the experimental and control group at pretest stage (F = 38/57 and P< 0/05). As well as the impact or difference between the scores mean of experimental and control groups is 0/425, so 42/5 percent of individuals differences at posttest stage of life expectancy are due to the training's impacts.

Table 8: The results of covariance analysis about the efficacy of individual skill training on the life expectancy of patients who suffer from breast cancer

Source of Changes	Total squares	Degrees of freedom	Square mean	Statistic of F test	The significance level (PV)	Eta square
Group	07/3123	2	53/1561	63/9	001/0	425/0
pretest	06/9307	1	63/9307	38/57	0.000	688/0
Error	03/4217	26	19/162	---	---	---
Total	1063448	29	---	---	---	---

Discussion and Conclusion

The results of the present study showed that individual skills training affected the rate life expectancy and mental health subscale but does not affect on the physical health

First assumption; the effectiveness of life skill training on the rate of life expectancy in the cancerous patient was consistent with research of KarenRehse (1996) (Rehse and Pukrop, 2003), Fawzy (1995), Antoni *et al.,* (2001), Watson *et al.,* (1999), Margaret *et al.,* (1999), Linda (1998), Bridge *et al.,* (1988).

In confirmation of mentioned assumption it should be said that base on Schneider's definition; in the skills training classes (in the self conscious part) individuals should be aware of their values and purposes and they should apply these skills creatively for discovering this purposes so whenever they face problem they can solve it through their skills.

The second assumption of the study which was significant (the relationship between life skills training and mental health of life quality subscale) is consistent with the research of ArefeheDavodi *et al.,* (1386), Karimoi *et al.,* (2006), Telch *et al.,* (1986), Graves (2003), Jutta *et al.,* (2003), Alistiar *et al.,* (1991).

The role of stress, emotion and especially anger management can be considered as the reason of positive relation in improving the life quality of patients. Cognitive reconstruction of individual's mental concepts one of the training phases of these sessions. So this process can lead to reviewing of life events, so with positive and realistic understanding better life quality can be provided.

In addition, increasing sympathy and making effective communication skills can extended the circle of communication and exchange of personal feelings and provide stronger social support networks thus the spirituality of life quality can be increased. With increasing critical thinking, creativity and problem solving skills will be improved and appropriate solutions which have effective role in the enhancing life quality will be selected. In the second part of life quality scale, the physical health dimension of life quality is not consistent with the researches that have been done in the field of lymphocytes secretion and cortisol secretion reduction due to psychological intervention (McGregor *et al.,* 2004; Phillips *et al.,* 2008). Also the second part of life quality scale is not consistent by a research which has been done by MarjanMardaniHamuleh (1388) about existing of significant correlation between the life quality physical performance with three fields of anxiety, social performance dysfunction and depression, but is consistent with a research that has been by Linda *et al.,* (2004) about lack of relationship between the changes of hormone secretion with changes of stress or temperament signs. Weiss *et al.,* (2005) in their research investigated the factors that are associated with impairment of life quality; they showed that 70 percent of individuals as their age increased significantly experienced general pain such as body flushing, sexual intercourse pain and bladder control problems. The global life quality of these patients significantly is less than similar healthy people. Due to lack of suggestion in this research naturally we should have no expectation for improving physical health of patients.

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