

## Improvement in patient-reported outcomes after group poetry therapy in women with breast cancer

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### Abstract

**Background:** One of the best ways of achieving the patients' views and expectations about the effects of a therapeutic or palliative intervention on their quality of life is using Patient-Reported Outcome Measures (PROMs). Poetry therapy as a psychotherapy intervention has been used for palliation of stressful conditions of several chronic diseases and disabilities. In the present study, we aimed to evaluate the effectiveness of group poetry therapy on the quality of life measures in women with breast cancer.

**Methods:** A total of 30 women with breast cancer, undergoing chemotherapy at a referral center in the north of Iran, participated in the current quasi-experimental before-after study conducted in 2016. The study protocol included eight weekly sessions of group poetry therapy using poems from the great Persian poets. The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC-QLQ-C30) was completed by the patients before beginning group poetry therapy and, twice more, one week and two months after the last session. Items of the questionnaire were manually scored and then analyzed using appropriate statistical tests in IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.

**Results:** A total of 28 patients participated in all the group poetry therapy sessions and completed the questionnaire. The mean and standard deviation of age were  $45 \pm 6.6$ . The changes in the score of quality of life from 51.8 to 65.5 and 69 were observed to be significant in the one-week and two-month follow ups (both with  $P=0.002$ ). Also, changes in symptom score from 34.5 to 23.7 ( $P=0.01$ ) and functional score from 65.6 to 77.2 ( $P=0.01$ ) in the two-month follow up were found to be statistically significant.

**Conclusion:** Based on the findings of the study, it can be concluded that group poetry therapy, as a psychotherapy approach, can be used to improve quality of life in breast cancer patients.

**Keywords:** Breast Neoplasms; Cancer; Group therapy Poetry; Quality of life; Psychotherapy

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### Introduction

Due to the changes in medical paradigms and patient-centeredness of clinical decisions, nowadays, assessing

the consequences of affliction with a disease solely based on physiological changes and measuring biomarkers is not

well accepted. The change in the patients' and physicians' points of view from disease to illnesses (1) raises the need for Patient Reported Outcome Measures (PROMs) (2). Although PROMs was initially used in research and its application in the effectiveness of clinical measures was not clear, it is a valuable tool for individual clinical management of patients, determining prognosis, designing standard patient care, providing self-efficacy training for patients, achieving a proper feedback from interventions by the patient and physician, and especially patient satisfaction measurements (3-6).

The epidemiological transition of diseases and the predominance of chronic diseases over acute, infectious diseases have changed the goal of treatments from cure to measuring physician's and patient's expectations of life so that most of physicians and researchers presently believe that patients should be the first source of information about their quality of life (8).

Today, there are more than 30 million cancer survivors around the world due to the advances in early detection and treatment of cancer, who might have been affected by physical and psychological side effects (9). These individuals are in need of supportive therapy, a type of which is poetry therapy. The latest studies identify poetry therapy as an effective treatment for improving mental health, social relationships, the meaning of life, opportunities for self-expression, and creativity in a wide variety of diseases (10-12). Despite the mentioned issues, few studies have approved the effectiveness of poetry therapy on improving the quality of life in cancer patients (13).

Therefore, considering the role that PROMs can play in accurate and timely assessment of a lot of complaints by cancer patients and improving their quality of life (9), and on the other hand, as few studies examined the effectiveness of poetry therapy on the quality of life in cancer patients, the present study used the

EORTC-QLQ-C30 questionnaire from the European Organization for Research and Treatment of Cancer (14), one of the most widely used tools to measure the quality of life in cancer patients, with the aim of measuring the effectiveness of group poetry therapy in improving the quality of life in women with breast cancer.

## Methods

A total of 30 women with breast cancer, undergoing chemotherapy at Baghban Clinic, participated in the current quasi-experimental before-after study in 2016. This clinic is a governmental referral center which is affiliated to Mazandaran University of Medical Sciences in the north of Iran.

The study inclusion criteria consisted of willingness and ability to attend the sessions, age 25-65, a high school diploma or higher degree of education, non-metastatic cancer, ability to converse and read in Persian, diagnosis of cancer at least two weeks prior to the study, being under chemotherapy, and the absence of serious mental disorders at the time of the psychiatric consultation.

The exclusion criteria consisted of a history of attending group or individual poetry therapy sessions, using psychiatric medications, acute psychiatric illness, having majored in Persian literature, metastatic cancer, treatment with protocols other than chemotherapy, such as radiotherapy or hormone therapy, and not being under other types of palliative therapy.

In order to determine the minimum sample size, the researchers considered observing at least 10 points change in the quality of life score at 95 percent confidence level, 80 percent power of the study, maximum attrition rate of 20 percent during the study as well as enrollment of 30 patients in total. The study protocol included eight weekly sessions of group poetry therapy. Each poetry therapy session took 90 minutes during which the therapist recited preselected poems from great Persian poets

including Rumi, Hafez, Sanai, Khayyam, Nizami, Parvin Etesami, Shahriar, and Malek o-Shoara Bahar using the following concepts: false assumptions (session 1), living a happy life and being jovial (session 2), hope and hopefulness (session 3), patience (session 4), divine tribulation (session 5), prayer and closeness to God (session 6), trust in God (session 7), and belief in fate (session 8). The poetry therapy sessions were held in a separate room away from the clinical staff in Mazandaran Comprehensive Cancer Center.

The EORTC-QLQ-C30 questionnaire has frequently been used to measure the quality of life in cancer patients during the past two decades. Validity and reliability (Cronbach's alpha from 0.7 to 0.95) of the Persian version of the questionnaire were previously proven in various studies (15, 16). The questionnaire consists of three scales of performance (5 sub-scales), symptoms (9 sub-scales), and quality of life (one sub-scale). Each scale is scored in accordance with specific calculation criteria from zero to one hundred. Higher scores in the performance and quality of life scale and lower scores in the symptoms theme without any predefined ranges indicate the effectiveness of interventions (17). The questionnaire was completed first prior to beginning the sessions and then a week and two months after the eighth session.

The questionnaire was manually scored and the data were entered into IBM SPSS Statistics for Windows, Version 21.0, Armonk, NY: IBM Corp. The mean, median, standard deviation, and range were

used to describe the data. In order to choose a suitable statistical test, the distribution of the data was evaluated while drawing histogram. A paired t-test was then used to assess the changes in scores after the poetry therapy sessions ended. A two-sided P-value less than 0.05 was set as the level of statistical significance.

Informed Consent was obtained before enrolling each participant and to ensure privacy and confidentiality a code number was assigned to each filled questionnaire.

### Results

A total of 28 patients participated in all the group poetry therapy sessions and completed the questionnaire in three stages (Two patients did not complete the questionnaire in follow-up period). Participants were 35 to 54 years old (n= 25) and only three participants were less than 35. The mean and standard deviation of age were  $45 \pm 66$ . Also, 25 participants were married and 18 were from urban areas.

Table 1 presents the changes in the quality of life score after group poetry therapy. This score had increased in both one-week and two-month follow-ups after poetry therapy ( $P=0.002$  in both).

Table 2 presents the changes in the functional score after group poetry therapy. Only the analysis of the two-month follow-up scores showed statistically significant changes ( $P=0.01$ ).

Table 3 presents the changes in the symptoms score in the patients. Only the analysis of the two-month follow-up scores showed statistically significant changes ( $P=0.01$ ).

Table 1. Changes of Quality of life Score after group poetry therapy

	Mean (SD)	Median	Range	df	95% CI	P
Before intervention	51.8(20)	50	0-100			
After Intervention (1 week)	65.5(16.7)	67	33-100	27	-22 _ -5.5	0.002
After Intervention (2 months)	69(20.5)	67	25-100	27	-27.5 _ -6.7	0.002

Table 2. Changes of Functional Score after group poetry therapy

	Mean (SD)	Median	Range	df	95% CI	P
Before intervention	65.6(21.9)	76	9-87			
After Intervention (1 week)	71.4(12.4)	73	40-89	27	-13.5 _ 1.9	0.13
After Intervention (2 months)	77.2(10.7)	79	53-96	27	-20.6 _ -2.6	0.01

Table 3. Changes of Symptom Score after group poetry therapy

	Mean (SD)	Median	Range	df	95% CI	P
Before intervention	34.5(20.4)	28	0-87			
After Intervention (1 week)	28.4(12.2)	26	10-72	27	-0.9 _ 13.1	0.08
After Intervention (2 months)	23.7(11.9)	22	5-51	27	2.4 _ 19.2	0.01

## Discussion

The present study suggests that group poetry therapy, as a palliative therapy, improved quality of life and functional scores and reduced symptom scores, respectively. A noticeable finding in the current study is that this form of group therapy showed greater effectiveness in the two-month compared to the one-week follow-up, possibly due to the formation of a small campaign and the positive effects of this on the cancer patients' quality of life and their functional and symptoms state. As Gozashti et al. reported, poetry therapy led to better outcomes when it was offered in the form of group therapy (13). Similar studies have evaluated the effects of medical and surgical treatment options on the quality of breast cancer patients which showed long term improvement in patient's quality of life (18-19).

Also, the cancer patients' quality of life measures have been evaluated after several non-pharmacological approaches. Several studies evaluated art therapy and reported contradictory results. A randomized controlled trial (RCT) conducted by Jang et al. revealed that mindfulness-based art therapy can improve breast cancer patients, quality of life as measured using EORTC=QLQ-C30 questionnaire (20). Also, a systematic review and meta-analysis carried out by Puetz et al. revealed that although creative art therapy improves

quality of life in cancer patients, but its effect wanes during follow up period (21). In contrast to the studies mentioned, the results of another systematic review and meta-analysis suggested that art therapy has no beneficial effect on breast cancer patients' quality of life (22).

Another non-pharmacological approach to help cancer patients is psychological interventions. A systematic review of RCTs performed by Archer et al. showed that creative psychological interventions are beneficial in improving the quality of life in adult cancer patients. In this review study, the results of 10 original studies were synthesized eight of which focused solely on breast cancer patients (23). A point which should be noted is that many RCTs conducted to evaluate the effectiveness of psychotherapy have poor qualities. A review performed by Chong Guan et al. showed that any conclusion made according to the results of such RCTs about the beneficial role of psychotherapy in improving the quality of life among cancer patients are unsatisfactory (24). Other studies conducted on the use of cognitive behavioral therapy for promoting the quality of life in cancer patients referred to negative results (25, 26).

Also, in an experimental study by Zamaniyan et al., the effectiveness of spiritual group therapy was evaluated on the quality of life in breast cancer patients.

A total of 24 patients participated in this study and were randomly assigned into experimental and control groups with equal numbers. This study concluded that this type of group therapy is a beneficial method to improve the quality of life in patients with breast cancer (27).

Despite extensive searches in different databases, the authors were unable to find a study with a methodology similar to that of the present study or with results similar to or different from it.

While the most important strength of the present study was utilizing a new type of group supportive therapy for patients with cancer, solely relying on the statistical significance of the results of the intervention, without considering its clinical importance, lack of concurrent control group, and the use of a generic questionnaire rather than specific questionnaires, were its important weaknesses.

The current study showed that group poetry therapy as a psychotherapy approach can be used to improve breast cancer patient's quality of life.

#### *Conflict of interest*

Authors declare no conflict of interests.

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The research as a Ph.D. dissertation was approved by the Ethics Committee of Mazandaran University of Medical Sciences under the ethics code IR.MAZUMS.REC.95.2111.

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