

## Effectiveness of Positive Thinking Training on Mental Health of Females with Breast Cancer

Mahmood Shirazi \*<sup>1</sup>, Akbar Saeedi Goraghani <sup>2</sup>

1. Department of Psychology, University of Sistan and Balochestan, Zahedan, Iran

2. Department of Psychology, Sistan and Balochestan Branch, Islamic Azad University, Zahedan, Iran

**Received:** 24 October 2015

**Accepted:** 20 December 2015

**Published online:** 1 February 2016

**\*Corresponding author:**

Mahmood Shirazi. Department of Psychology, University of Sistan and Balochestan, Zahedan, Iran

Phone: +985431138541

Fax: +985433446251

Email: mshirazi@edpsy.usb.ac.ir

**Competing interests:** The authors declare that no competing interests exist.

**Citation:** Shirazi M, Saeedi Goraghani A. Effectiveness of positive thinking training on mental health of females with breast cancer. Report of Health Care. 2016; 2 (1): 10- 16.

### Abstract

**Introduction:** Cancer is a type of disorder affecting cell duplication and differentiation which can occur in each part of body tissue at any age, and may cause disease by attacking the healthy tissues of body. The present study was conducted in Kerman with the aim of determining the effectiveness of positive thinking training on mental health of the women diagnosed with breast cancer.

**Methods:** The research was a quasi-experimental one with the pre-test and post-test design, having both experimental and control groups. For this reason, 30 patients were selected from among the women diagnosed with breast cancer using purposive sampling method, and then they were put into two (experimental and control) groups, each including 15 patients via random replacement. The positive thinking training course was held during eight 90-minute sessions twice a week for experimental group. Goldberg's 28-items mental health questionnaire (1972) was used to collect data. Also, the analysis of covariance (ANCOVA) test was used for data analysis with the help of SPSS software (version 19) ( $p \leq 0.05$ ).

**Results:** The results obtained from the research showed that the positive thinking training was effective on the mental health of the women diagnosed with breast cancer ( $P < 0.001$ ).

**Conclusion:** Findings of the present research showed that psychological treatments can improve mental pains of cancer patients. Thus, considering the findings of this research, it is suggested to use psychological treatments, which relieve anxiety and depression patients experience during cancer disease.

**Keywords:** Positive Thinking, Mental Health, Breast Cancer

### Introduction

Cancer is a type of disorder affecting cell duplication and differentiation which can occur in each part of body tissue at any age, and may cause disease by attacking the healthy tissues of body (1). This disease includes about one third of all female illnesses, so it is said that one-eighth of women suffer from the disease in their lives (2). Among the different types of cancer, breast cancer is the most

common, and emotionally, the most affecting illness for the women (3). Breast cancer is uninhibited growth of abnormal cells in which cells grow uncontrolled, divide and proliferate abnormally, and develop a lump called tumor. These lumps are often not painful and appear as a hard lump in upper and outer part of breast. (4). Studies have shown that breast cancer can cause psychological trauma from the very beginning of birth and can challenge

the whole life of patient, and may bring them multiple negative results, which among them depression, anxiety and disappointment are more common and threaten patient's mind (5). Bahmani's examinations show that many of women with breast cancer in Iran suffer from medium to acute side effects, emotional problems, such as sorrow, depression, irritability, anger, fear, and dissociability (6). However, internal studies signify the truth that although the epidemiologic aspect of breast cancer have been examined sufficiently, its psychological and clinical aspects have been analyzed less (7), for this reason, the role of psychological factors and interventions in facing with cancer and its improvement needs more contemplation (8). So the need of psychological support and rehabilitation plans with the aim of improving the psychological-mental condition in cancer patients is felt. In this regard, one of the supportive plans is positive thinking training. Positive thinking means allowing positive thoughts and imaginations to come into mind, which leads people to the development and success. The tremendous effects of positive thinking in life are clear to everyone (9), so that the examinations signify that optimism and, in general, positive beliefs have positive and significant relation with the different aspects of health, and have a role key in the appearance of physical and psychological disorders (10, 11). Concerning this, Lee *et al* (2006), in a research under the title of *the effectiveness of optimism on expectation in people with cancer*, showed that optimism training as a layout of dramatic events in the past and to moderate them through the positive goal settings for the future, are effective on increasing the life expectancy of patients with breast or colorectal cancer (12). During another research, which was conducted by Victoria *et al* (2014) on the women with breast cancer, the results showed that positive thinking training can cause more happiness in experimental group than control group (13). In Iran, the results of a research conducted by

Jabari *et al* (2014), also showed that positive thinking has been the reason of significant reduction of inefficient attitudes and increased happiness in experimental group, compared to control group (14). Segerstrom *et al* (1998) also have shown that optimism is in relation with more number of T, CD3+, CD4+, CD8+, and NK (natural killer) cells. According to the researchers (1998), optimistic people confront differently with stressful factors, experiment less negative mood, and have a more compatible hygienic behavior, each leads to a safer condition. So due to the effects of positive thinking and optimism on health and mental and psychological comfort, positive thinking has a high importance (15). Hence, considering topics mentioned above, the outbreak of breast cancer and its effects on patients' mental health, it can cause exhaustion, and reduction of dominance power over life for this group of patients. So in addition to medication treatments which aim at physical symptoms of disease, psychological interventions are required in order to make positive changes in these patients, to help them accept they are able to change their view horizon and they can use their other abilities with a proper management of their illness, and confront with the disease with more hope and better morale. Thus, these patients need some appropriate course of actions, training course to overcome the pathological dimensions of diagnosis and treatment periods. Hence, this research has addressed the effectiveness of positive thinking training on mental health of women with breast cancer in Kerman.

## Methods

This study is of intervention type with the pre-test—post-test design together with control group, statistical population of present research primarily consisted of 79 patients diagnosed with breast cancer who referred to medical-supportive center in Kerman. The sample size in these two experimental and control groups, due to the research method (quasi-experimental), was estimated to be at

least 15 persons. For this purpose, firstly, after getting permission for performing the research, 30 people were selected via purposive sampling and with respect to inclusion criteria for the research, and then they were divided into two (experimental and control) groups, each including 15 subjects. The inclusion criteria for the research included women with breast cancer in the range of 30-55 years old, without any record of divorce or death among their family members in the last six months, without psychological disorders, having leveled progression of disease, not in the process of radiotherapy, no drug addiction, being able at least to read and write. At first, the mental health questionnaire (GHQ28) was offered to the patients of two groups and then the interventional positive thinking training was held in experimental group by the lecturer during eight sessions, each of 1.5 hours, twice a week, while control group didn't receive any intervention. Then, after the last session, the mental health questionnaires of two groups were reevaluated. Also, the analysis of covariance (ANCOVA) test was used for data analysis with the help of SPSS software (version 19) ( $p \leq 0.05$ ).

Mental health questionnaire was invented by Goldenberg and Blackwell (1972) for the first time, and has been widely in use by many researchers and is the most popular tools for screening in psychology. Its original and early form includes 60 questions which are the simple questions on individual's health condition and their discomforts and, on the whole, their general health with an emphasis on current psychological and sociological problems which some small forms for it were provided. In the present research, the 28-item questionnaire is used which consists of four scales, and each scale contains 7 questions. Its scoring method is based on Likert scale, in which 5 scores are obtained from each person; four scores are related to sub-scales and one score to all items of the questionnaire. Total score for each person will vary from 0 to 84, and 0 to 21 for sub-scale. The high score in

each scale indicates undesirable condition (16). Hooman (1997), using Cronbach's alpha coefficient, in standardization of general health questionnaire in Iran, reported the rate of inner sub-scale coordination of the questionnaire, as 0.85, 0.87, 0.70, and 0.91, respectively, and 0.85 for the whole scale which indicates general health (17).

## Results

As it can be seen in Table 2, there are some differences between the average scores of mental health post-test in two experimental and control groups. The average scores in experimental group is 19.93 with a standard deviation of 8.20, while in control group they are 31.80 and 4.17, respectively. Statistical covariance analysis test was used in order to examine these significant differences and to control the pre-test effect as well. The homogeneity of the variances was the default for using the covariance test, due to the results of Levene's test ( $F = 3.01$  and  $P > 0.05$ ). The results of covariance analysis are shown in Table 3.

As it can be seen in Table 3, assuming that control variable is pre-test scores, there is a significant difference between mental health scores of experimental group before and after training ( $P = 0.001$ ). Statistical power 1, shows that sample was sufficient. Moreover, balanced average was obtained for experimental and control groups as 19.55 and 32.17, respectively.

## Discussion

The present research was conducted in Kerman with the aim of determining the effectiveness of positive thinking training on mental health of the women diagnosed with breast cancer. Findings of the research correspond with the findings of Pernegar (2004), Jayasvasti (2005), Mannix and Margaret (2009), Victoria *et al.*, (2014), Tabatabaee *et al.* (2013), and Jabari *et al.* (2014) (19,20, 13, 21, 14).

**Table 1.** Summary of the subjects offered in the sessions, According to Seligman therapeutic protocol (2005)

| Sessions | Session content  | Aims   |
|----------|--|--|
| First    | Introduction, recording a positive self-introduction in a single page            | Guiding the referrer/participants into the positive psychotherapy frame, its premises and the role of psychotherapist  |
| Second   | Recording the abilities of each participant by themselves                        | Personal abilities identification, familiarization with the categories of abilities and moral virtues, and using of personal abilities                         |
| Third    | Remembering 3 good (positive) work in life                                       | Installing positive emotions and good affairs in life  |
| Forth    | Repeating the task which has been done in session                                | Examining whether writing 3 good memories and emphasizing on positive memory during a week had any positive effect   |
| Fifth    | Using of work sheet of thanksgiving  | Focusing on gifts and thanksgiving   |
| Sixth    | Mid-examination  | Customers review their progress on writing down the good memories, gifts, thanksgiving, and using their abilities actually according to their activities plans |
| Seventh  | Writing 3 cases of events or things down which they wanted to do but they failed | Focusing on hope, faith and optimism and that if a door is closed another is opened  |
| Eighth   | Using of public relations techniques and developing positive relations           | Training answering style and improving relations, filling and completing the questionnaire by participants   |

**Table 2.** Average and standard deviation of mental health scores

| Variable       | Group        | Test type | Number | Average | Standard deviation |
|----------------|--------------|-----------|--------|---------|--------------------|
| General health | Experimental | Pre-test  | 15     | 31.66   | 5.77               |
|                |              | Post-test | 15     | 19.93   | 8.20               |
|                | Control      | Pre-test  | 15     | 31      | 4.22               |
|                |              | Post-test | 15     | 31.20   | 4.17               |

**Table 3.** Results of covariance analysis test, difference of mental health scores before and after training, in terms of two experimental and control group

| Variable | Sum of squares | df | Mean of squares | F      | p     | Difference Rate | Statistical power |
|----------|----------------|----|-----------------|--------|-------|-----------------|-------------------|
| Pre-test | 925207         | 1  | 925207          | 95300  | 0.001 | 0.779           | 1                 |
| Group    | 1189673        | 1  | 1189673         | 122541 | 0.001 | 0.819           | 1                 |
| Error    | 262126         | 27 | 9768            |        |       |                 |                   |
| Sum      | 27316000       | 30 |                 |        |       |                 |                   |

Results of these researches showed that having positive thoughts, hopes, happiness and goal in life ensures mental health in people. To explain the results, it can be said that if human conceptions being together with a positive sense of self and an optimistic and hopeful view about future, they not only help people to control routine problems of life, but also to go along with very stressful and threatening events in life, and this can reduce anxiety in people (22). In addition, positive thoughts and emotions widen human repository of thought and action, and also can cause them to have a tendency for using the exploratory and holistic cognitive processing (23, 24). This style of data processing can facilitate cognitive flexibility and creative problem solving (25). Therefore, having positive thoughts and learning how to guide our thought path to the positive direction and to the optimism, give us a skill with which we can overcome our depression and disappointment. Generally, to explain the results, subjects got more knowledge about their thoughts and emotions. Also, logical interpretation of events, and cognitive restructuring gave them the ability of confronting with unpleasant conditions of life, and this could reduce the unpleasantness of events, hence it led to increasing mental health in patients. Findings of the present research showed that psychological treatments can improve mental pains of cancer patients, which usually are fears and anxiety related to disappointment and losing the feel of life or being lost in life. Thus, considering the findings of this research, it is suggested to use psychological treatments, which relieve anxiety and depression patients experience during cancer disease, in addition to medical treatments which can reduce their physical pains. Therefore, holding positive thinking workshops for cancer patients is recommended. It is also suggested to conduct positive thinking in larger scales for other

groups having similar problems, and then to examine the results.

### **Conclusion**

Findings of the present research showed that psychological treatments can improve mental pains of cancer patients, Thus, considering the findings of this research, it is suggested to use psychological treatments, which relieve anxiety and depression patients experience during cancer disease.

### **Ethical issues**

No applicable.

### **Authors' contributions**

All authors equally contributed to the writing and revision of this paper.

### **Acknowledgments**

Many thanks to all cancer patients who fully did cooperate with the researchers and participated in the current study.

### **References**

1. Hamid N. Effectiveness of semantics on depression, anxiety and quality of life in cancer patients. *J Psychol Achiev.* 2011; 18 (2): 199- 224.
2. Montgomery GH, Bovbjerg DH. Pre-surgery distress and specific response expectancies predict post- surgery outcomes in surgery patients confronting breast cancer. *J Health Psychol.* 2004; 23: 381- 387.
3. Akbari N. Evaluation of health beliefs of nurses toward breast self-efficacy in tabriz health center. *Tabriz University of Medical Science.* 2000.
4. Darvishi H. Examining mental imagery and relaxation on anxiety and hospital depression reduction and increasing life expectancy in women with breast cancer,

- Golestan Hospital of Ahvaz, Thesis in Azad university of Ahvaz. 2009.
5. Sharpiro SL, Lopez AM, Scharrz GE, et al. Quality of life and breast cancer relationship to psychosocial variable. *J clin psychol.* 2001; 5 (1): 501- 519.
  6. Bahmani B. Comparison of effectiveness of two interventional methods of education-based cognitive therapy according to Michael furies' and cognitive-existential group therapy on hope, self-esteem and quality of life of women diagnosed with breast cancer, together with symptoms of depression. Thesis in Alameh Tabatabaei University. 2010.
  7. Shahkhodabandeh S. Pirozi Z. Breast cancer in iran, A study of iranian researches at the medline database. *J Breast Diseases.* 2009; 1 (2): 49- 54.
  8. Hamzeh S, Beirami M. Comparison of personality trait, experience of negative emotions, and confronting styles in healthy women and those suffering from cancer. *J Shahid Sadoughi Univ Med Sci.* 2011; 19 (5): 627- 636.
  9. Madani Zare H. The effect of education positive thinking on values, interpersonal and interpersonal problems. Thesis in Tehran University. 2010.
  10. Maruta T. Colligan RC. Malinchoc M. Offord KP. Optimism- pessimism assessed in the 1960s and self reported health status 30 years later. *Mayo clinic Proceedings.* 2002; 77 (8): 748- 753.
  11. Anderson P. Happiness and health. *J Socioeconomics.* 2008; 37: 213- 236.
  12. Lee V, Cohen SR, Edgar L, Andrea ML, Gagnon AJ. Meaning making intervention during breast or colorectal cancer treatment improves self-esteem, optimism, and self-efficacy. *Social Sci Med.* 2006; 62 (12): 3133- 3145.
  13. Victoria C. Margarita OT, Violeta C, Alejandro D. Positive psychology group intervention for breast cancer patient: A randomized trial. *Psychol Reports.* 2014; 115 (1): 44- 46.
  14. Jabari M, Shahidi S, Mootabi F. Positive thinking efficacy of group interventions in reducing ineffective attitudes and increasing the happiness of adolescent girls. *J Clin Psychol.* 2014; 6 (2): 65- 74.
  15. Segerstrom SC, Taylor SE, Kemeny ME, Fahey JL. Optimism is associated with mood, coping, and immune change in response to stress. *J Personal Social Psychol.* 1998; 47 (6): 1646- 1655.
  16. Goldberg DP, Blackwell D. Detecting of psychiatric illness by questionnaire. London: Oxford University Press. 1972.
  17. Hooman A. Standardization of general health questionnaire for undergraduate students at Tarbiat Moalem University of Tehran. Tarbiat Moalem University Research Institute. 1997.
  18. Pernegar T. Health and happiness in young Swiss adults, quality of care until. Geneva University Hospital, Geneva, Switzerland. 2004.
  19. Jayasvasti K. Happiness and related factors in pregnant women, department of psychiatry, faculty of medicine, chulalongkorn university, Bangkok, Thailand. 2005.
  20. Mannix M. Optimism, quality of life, and coping style in adolescents with cancer. *J Social Clin Psychol.* 2009; 4120- 4130.
  21. Tabatabaei J, Ahadi H, Khamesan A. The effect of optimistic education on anxiety and depression in psychology students of Islamic Azad University of Birjand. *J Nurs Midwifery College Birjand.* 2013; 10 (1): 34- 42.
  22. Snyder C, Foldma R. The role of hope in meaning life anxiety and depression. *Psychol.* 2005; 3: 210- 219.
  23. Armitage CJ, Conner M, Norman P. Differential effects of mood on information processing: evidence from the theories of reasoned action and planned behavior. *Eur J Social Psychol.* 1999; 29: 419- 433.

24. Fredrickson BL. The role of positive emotion in positive psychology: the broaden and build the of positive emotion. *Am Psychol.* 2001; 56: 218- 226.
25. Isen AM. Positive affect and decision making. In Lewis M Havilan J (Eds.). *Handbook of Emotion*, New York: Guilford. 1999.