Razavi Int J Med. 2015 August; 3(3): e27122. doi: 10.30483/rijm.2015.118386

ugust 26. **Research Article**

The Effect of Positive Thinking on Quality of Life and Resiliency of Cancer Patients

Elham Mousavi,[1] Ali Esmaeili,[2,*] and Soodabeh Shahid Saless[3]

[1]Shahrood Science and Research Branch, Islamic Azad University, Shahrood, IR Iran
[2]Faculty of Psychology, Allameh Tabatabai University, Tehran, IR Iran
[3]Mashhad University of Medical Sciences, Mashhad, IR Iran

*Corresponding author: Ali Esmaeili, Faculty of Psychology, Allameh Tabatabai University, Tehran, IR Iran. Tel: +98-5138523300, Fax: +98-5138549234, E-mail: dresmaeili49@yahoo.com

Received: January 20, 2015; **Revised:** June 6, 2015; **Accepted:** June 15, 2015

Background: Every individual's quality of life, well-being and mental health are certainly influenced by physical and psychological aspects.
Objectives: The purpose of this study was to determine the effect of training positive thinking on quality of life and resiliency in female cancer patients hospitalized in Mashhad Omid hospital.
Patients and Methods: This study was an interventional and experimental trial, including pre-and post-test. The target population in this study includes all female cancer patients, monthly 500 patients, hospitalized as outpatient (for a day) or inpatient (more than a week) in Omid hospital, Mashhad. Simple random sampling was used in this study. From the invited subjects, 55 patients accepted to participate in the classes. Using random number table, 30 subjects (15 patients as experimental group, and 15 as control group) were selected. The intervention was performed through eight sessions of one and a half to two hours, and continued for three weeks. After finishing positive thinking sessions, the post-test was conducted for both the experimental group who received intervention and control group who did not receive intervention. Two questionnaires including Conner-Davison resilience scale, 2003, and quality of life (SF-36) along with the primary questions about the individual characteristics were used to collect the required data.
Results: To analyze the data, t-test and analysis of covariance (ANCOVA) was used. The result of this study showed that the positive thinking training course has a significant effect on resiliency (P = 0.00) and quality of life in cancer patients and changes are statistically significant (P = 0.00). These changes are the result of the effect of the independent variable.
Conclusions: The overall results of this study reveal that positive thinking training courses can be used to increase the quality of life and resiliency of cancer patients.

Keywords: Quality of Life; Psychological Resilience; Neoplasm

1. Background

Every individual's quality of life, well-being, and mental health are certainly influenced by physical and psychological aspects. These two aspects have strong influence and constant interaction with each other. Thinking and how to think play an important role in various aspects of human life, so that human beings can be always distinguished from each other based on their thinking and attitude towards the world. A person who thinks positively not only knows nothing bad and evil in the world, but also, considers every moments of an event carefully designed and controlled by the Great Creator of the Universe. This type of thinking as recommended by all the religions and scholars, after penetrating the mind develops in to the whole body and changes the behavioral and even physical styles.

During the recent years, psychologists have paid attention to the psychological approach of positive thinking focusing on talents and capabilities of human being rather than his abnormalities and disorders. The ultimate purpose of this approach is recognizing the components and methods bringing well-being and happiness to human being. There is an increasing interest to conduct researches on the abilities of an individual to preserve positive thinking, in spite of the presence of negative events affecting mental health (1). The mentioned approaches, in mental health literatures, have been included in researches conducted in the field of resiliency (2, 3). Resiliency is the ability of an individual to establish biological-psychological equilibrium in untoward conditions (4). Resiliency as a process is the ability to adapt successfully to the threatening conditions, in other words, it is positive adaptation relies on effective responses to untoward events (2). Resiliency is constructed by hardiness, self- enhancement, repressive coping, and positive emotions (5).

Due to the importance of the way of thinking, role of the mind in the process of treatment, and also, the associated large dimensions, more exploration in this regard

is required. Presentation of different models and various methods of technology of thinking in social strata and also public trend towards them have occupied thoughts of many people. New studies on positive thinking and its effect on treatment or reduction of the severity of cancer symptoms have been conducted during the recent decade; several researches on positive thinking training to cancer patients have confirmed this idea. Among the recent studies, there are considerable debates about the effect of positive thinking on different aspects of cancer treatment. Positive thinking as an effective agent in treatment of cancer is an ongoing debate among various scientific circles. Although some have raised doubts about positive thinking, documented findings have led researchers to explore various aspects of this issue (6). It is obvious that cancer patients are affected both physically and mentally by the disease and significant changes may consequently occur in their daily life. Although physical effects of cancer and its treatment methods are inevitable consequences of the disease, cancer patients, due to the psychological and mental aspects of the disease, may not be able to tolerate the associated effects sometimes followed by the significant signs.

The results of conducted studies show that the interventions making positive emotions are effective in reducing and relieving depression. For example, Stewart et al. (7) concluded that adolescents with high levels of happiness experience fewer emotional and behavioral problems. Regarding Seligman's study (8) on the effect of positive thinking on population with clinical depression, Linley and Burns (9) found that identifying the individual's specific powers and finding how to use them will lead to reduce and control depression. These findings corroborate Sloman's study on patients with severe cancer (10). In another study by Seligman (8), he indicated that it is possible to teach people the required skills for being optimistic and positive thinker based on the reality, and immunize them psychologically against problems. The results of the studies reveal that resiliency along with adjusting and fading the stressful factors in lives of children with learning difficulties may guarantee their psychological well-being and provide the basis for its promotion (11). Resiliency is a variable which may increase the quality of life in adolescents with a mobility disability (12). Considering the mentioned evidences, Carver, et al. (13) suggest that optimism may improve the individual's resiliency while facing with stressful life events. Reynols et al. found that positive thinking improves survival among paiteints with breast cancer (14). The purpose of this study is evaluating the effect of positive thinking on quality of life and resiliency of cancer patients.

2. Objectives

The purpose of this study was to determine the effect of positive thinking training on quality of life and resiliency in female cancer patients hospitalized in Mashhad Omid hospital.

3. Patients and Methods

This study was an interventional and experimental trial, including pre- and post-test. The target population in this study includes female patients with gastrointestinal cancer, undergoing chemotherapy in Omid hospital, Mashhad; they were clinically qualified to attend positive thinking classes. The exclusion criteria were male gender, risk of other cancers other than gastrointestinal cancer, and inability to participate fully in positive thinking training classes due to the physical and/or medical conditions. According to monthly report, 500 patients are hospitalized as outpatient (for a day) or inpatient (more than a week) in Omid hospital. Simple random sampling was used in this study. To conduct this study, first a list of female patients hospitalized in the short- and long-term in women ward of Omid hospital was provided, and then those patients who were qualified according to the inclusion criteria were invited to participate in positive thinking training classes. From the invited subjects, only 55 accepted to participate in the classes. Afterwards, 30 subjects (15 from experimental group, 15 from control group) were selected based on the random number table and exclusion criteria. The intervention was performed through eight sessions of one and a half to two hours, and continued for three weeks. The associated agenda is shown in Box 1. After finishing positive thinking sessions, the post-test was conducted for both the experimental group who received intervention and control group who did not receive intervention. Two questionnaires including Conner-Davison resilience scale (4), and quality of life (SF-36) along with the primary questions about the individual characteristics were used to collect the required data (Box 1).

1- Conner-Davison resilience scale, 2003 (CD-RISC): this questionnaire measures the ability of adaptation in the face of stress or trauma. Two basic goals of this tool include: first, development of a scale to measure the resiliency of clinical and normal samples, and second, assessment of changes in resiliency scores in response to treatment. CD-RISC comprises of 25 items measuring resiliency with a four-point Likert Scale (0 = not true at all to 4 = always true). The reliability and validity of the Persian resiliency scale form have also been evaluated and confirmed to be applied to preliminary studies on normal and abnormal samples (4).

2- Quality of life (SF-36): the reliability and validity of this 36-item questionnaire have been evaluated with different groups of patients. This questionnaire measures eight multi-item dimensions of health: physical functioning; role limitations due to physical problems; role limitations due to emotional problems, energy/ vitality, mental health, social functioning, pain, and general health perception. Descriptive and inferential statistics as well as SPSS software, version 12 have been used to analyze the data. Mean and standard deviation were used in descriptive statistic and univariate analysis of covariance (ANCOVA) in inferential statistic. Linear regression was employed to prove the subsidiary hypotheses (15).

Box 1. Agenda of Research Interventions

Session 1: Group members become familiar with each other and with the therapist; Expression of principles and objectives of positive thinking training program
Session 2: Assisting the group members with setting their goals in a positive, certain, tangible and measurable way; becoming familiar with the basic concepts of positive thinking training program
Session 3: Explaining the importance and benefits of positive communication to find happiness, and emphasizing positive communicative behaviors
Session 4: Improving the correlation between the group members; assisting the group to know that they can interpret an event differently, and usefully change their consideration for the untoward events caused by their disease; assisting the group to recognize positive situations in their lives; teaching the group self-care
Session 5: Removing the catastrophizing caused by the group members in their lives; inspiring the group members to have positive feelings to solve their problems using others' protection; motivating the group members to solve their problems with respect to the positive aspects of life
Session 6: Emphasizing on coping strategies in positive thinking; attracting the group members' attention to their successes in life, and highlighting their role in achieving those successes; assisting the members with being aware of their capabilities and intelligence in employing effective coping strategies more than before
Session 7: Training relaxation techniques
Session 8: Assessing the changes resulted from positive thinking in the group members; summarizing, and ending the sessions

4. Results

Descriptive indicators of measured variables before and after the intervention are presented (Tables 1 and 2).

According to Table 1, the mean of resiliency pre-test scores in both groups of experimental and control are 54.3 ± 12.31 and 57.15 ± 10.26 respectively, and the mean of pre-test scores for quality of life in both groups of experimental and control are 63.99 ± 6.66, and 63 ± 6.34, respectively. Since no intervention has been made yet, it is obvious that there is little difference between the means in both control and experimental groups. According to Table 2, the mean of resiliency post-test scores after the intervention in both groups of experimental and control are 64.95 ± 16 and 58 ± 8.4, and the mean of post-test scores for quality of life are 74.345 ± 7.4 and 63.345 ± 5.7, respectively. These new means indicate the effective intervention.

The results of analysis of covariance with the research hypotheses are presented (Tables 4). Regarding the data in Table 3, it is revealed that the agent of intervention during positive thinking training course has a significant effect on resiliency (P = 0.00, df = 1, F = 16.590); therefore; it can be concluded that the variable of positive thinking training has led to difference in resiliency variable between the experimental and control groups. Data in Table 4 show the significant effect of positive thinking training on quality of life (P = 0.00); therefore, the variable of intervention has led to difference in the variable of quality of life between the both groups of experimental and control.

5. Discussion

Diagnosis, treatment and recurrence of cancer may cause harmful effects on the quality of life and resiliency of the affected patients. Depression is the most common psychological response of people receiving a diagnosis of cancer. Among the risk factors for depression in cancer patients, the following could be involved: previous medical history and family history of depression or suicide, chronic pain, history of drug or alcohol abuse, medical diseases and conditions as well as several types of drugs. Some anticancer drugs can also contribute to emotional changes.

Table 1. Descriptive Statistics in Pre-Test of the Two Dependent Variables of Resiliency and Quality of Life [a]

Variable	Experimental Group	Control Group
Resiliency	54.3 ± 12.312	57.150 ± 10.261
Quality of life	63.99 ± 6.663	63 ± 6.348

[a] Data are presented as mean ± SD.

Table 2. Descriptive Statistics in Post-Test of the Two Dependent Variables of Resiliency and Quality of Life [a]

Variable	Experimental Group	Control Group
Resiliency	64.95 ± 16.02784	58 ± 8.416
Quality of life	74.345 ± 7.456	63.345 ± 5.77

[a] Data are presented as mean ± SD.

Table 3. The Results of Analysis of Covariance for the Variable of Resiliency

Source of Change	Variable	Sum of Squares	Freedom Degree	Mean of Squares	F	Significant Level
Group	Resiliency score	905.749	1	905.749	16.590	0.000

Table 4. The Results of Analysis of Covariance for the Variable of Quality of Life

Source of Change	Variable	Sum of Squares	Freedom Degree	Mean of Squares	F	Significant Level
Group	Quality of life	1159.159	1	1159.159	239.489	0.000

Adjuvant chemotherapy in these patients contributes to high levels of depression and decreased quality of life. Depression in women with cancer leads to reduced mental energy, increased stress caused by the disease and its treatment, decreased immune system function, decreased quality of physician-patient relationship, decreased libido, sexual dysfunction, and failure to comply with the physician's order (16).

There are several factors, which pave the way for positive thinking and affect its incidence. However, there exist some internal or external preventive factors, in this regard. Msanesh et al. concluded that there exists a significant negative relationship between psychological helplessness and quality of life (17). Also, Baljani et al. in evaluation of the relationship between religion, spiritual health, hope and quality of life in cancer patients concluded that in planning for the cancer patients' care, paying attention to some factors such as purposeful life, belief in God, religious actions, and look to the future with optimism may lead to upgrade their quality of life (18). In the study achieved by Wenzel et al. in California University, USA on 49 patients with ovarian cancer in order to evaluate resiliency and residual stress, it was revealed that improvement in psychological conditions and resiliency has a direct relationship with mental health; the results also showed that there is a significant relationship between improvement in quality of life, feeling of well-being and resiliency in cancer patients (19). On the other hand, a man can find ways to strengthen their positive attitude and expectations and take a step towards success (20). Positive thinking and positive psychology have always been regarded as a way to improve various aspects of human being, especially in those without any health problems and diseases. In this study, we focused on evaluating the effect of positive thinking on people with acute cancer. The purpose of the study was not included in multidimensional impacts of positive thinking on cancer treatment, but it included in individual's psychological and mental indicators from the perspective of resiliency and quality of life. The overall results of this study reveal that positive thinking training courses will lead to increased quality of life and resiliency in cancer patients. Since quality of life and resiliency are regarded as major factors in cancer patients while involving with the disease, holding positive thinking and hope therapy training courses will result in overall improvement in patients' lives.

This study was achieved in Omid hospital, Mashhad, and the samples were taken from the patients who were under treatment in that hospital; consequently, not only the number of subjects was few, but all the items involved in different types of cancer disease did not exist. Since there are various types of cancer, the results may be influenced by disease condition.

Acknowledgements

The authors are thankful to the Shahrood Science and Research of Islamic Azad University for their support.

Authors' Contributions

Study concept and design: Ali Esmaeili Interpretation of data and drafting the manuscript: Elham Mousavi, Ali Esmaeili performing the operations and follow up: Elham Mousavi, Soodabeh shahid saless Critical revision of the manuscript for important intellectual content: Elham Mousavi, Ali Esmaeili, and Soodabeh Shahid Saless.

References

1. Luthar SS, Cicchetti D, Becker B. The construct of resilience: a critical evaluation and guidelines for future work. *Child Dev.* 2000;**71**(3):543–62.
2. Garmezy N, Masten AS. The protective role of competence indicators in children at risk. In: Cummings EM, Greene AL, Karraker KH, editors. *Life-span developmental psychology: Perspectives on stress and coping*. England: Lawrence Erlbaum Associates, Inc; 1991. pp. 151–74.
3. Zautra AJ, Hall JS, Murray KE. Resilience: A new definition of health for people and communities. In: Reich JW, Zautra AJ, Hall JS, editors. *Handbook of adult resilience*. New York US: Guilford Press; 2010. pp. 3–29.
4. Connor KM, Davidson JR. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety.* 2003;**18**(2):76–82.
5. Bonanno GA. Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *Psychol Trauma Theory Res Pract Policy.* 2008;**S**(1):10–3.
6. Venkat C. Does Positive Thinking Influence Cancer Outcome? *Am J Epidemio.* 2010;**172**:377–88.
7. Stewart ME, Watson R, Clark A, Ebmeier KP, Deary IJ. A hierarchy of happiness? Mokken scaling analysis of the Oxford Happiness Inventory. *Pers Individ Diff.* 2010;**48**(7):845–8.
8. Seligman ME, Csikszentmihalyi M. Positive psychology. An introduction. *Am Psychol.* 2000;**55**(1):5–14.
9. Linley PA, Burns GW. Finding and Developing Client Resources in the Management of Intense Anger. *Happiness Healing Enhanc.* 2010:14.
10. Sloman R. Relaxation and imagery for anxiety and depression control in community patients with advanced cancer. *Cancer Nurs.* 2002;**25**(6):432–5.

11. Connor KM. Assessment of resilience in the aftermath of trauma. *J Clin Psychiatry.* 2006;**67 Suppl 2**:46–9.
12. Alriksson-Schmidt AI, Wallander J, Biasini F. Quality of life and resilience in adolescents with a mobility disability. *J Pediatr Psychol.* 2007;**32**(3):370–9.
13. Carver CS, Scheier MF, Segerstrom SC. Optimism. *Clin Psychol Rev.* 2010;**30**(7):879–89.
14. Reynolds P, Hurley S, Torres M, Jackson J, Boyd P, Chen VW. Use of coping strategies and breast cancer survival: results from the Black/White Cancer Survival Study. *Am J Epidemiol.* 2000;**152**(10):940–9.
15. Reich SG. Neurologic pearls. *Semin Neurol.* 2010;**30**(1):3–4.
16. Browall M, Ahlberg K, Karlsson P, Danielson E, Persson LO, Gaston-Johansson F. Health-related quality of life during adjuvant treatment for breast cancer among postmenopausal women. *Eur J Oncol Nurs.* 2008;**12**(3):180–9.
17. Msanesh M. Relationship between Psychological Distress and Quality Of Life in Women with Breast Cancer. *J Zabol Univ Med Sci Health Serv.* 2012;**4**(2):51–9.
18. Baljani E, Kazemi M, Amanpour E, Tizfahm T. A survey on relationship between religion, spiritual wellbeing, hope and quality of life in patients with cancer. *J Evid Based Care.* 2012;**1**(1):51–62.
19. Wenzel LB, Donnelly JP, Fowler JM, Habbal R, Taylor TH, Aziz N, et al. Resilience, reflection, and residual stress in ovarian cancer survivorship: a gynecologic oncology group study. *Psychooncology.* 2002;**11**(2):142–53.
20. Scheier MF, Carver CS. On the Power of Positive Thinking: The Benefits of Being Optimistic. *Curr Directions Psychol Sci.* 1993;**2**(1):26–30.