

# Investigating the Effectiveness of Positivism Group Psychotherapy Based on Frisch's Theory in Quality of Life of Breast Cancer Patients

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## Abstract

The aim of conducting this research was to investigate the effectiveness of positivism group psychotherapy based on Frisch's theory in quality of life of breast cancer patients referring to the counseling centers in Mashhad, Iran. This is a quasi-experimental study with pre- and post-tests in which experimental and control groups were utilized. The statistical populations were breast cancer patients in Iran in 2016. The research sample included 30 breast cancer patients who were randomly selected and divided into experimental and control groups. The experimental group received the psychotherapy approach based on Frisch's theory in eight weekly sessions. The quality of life questionnaire in patients with breast cancer OL-BC was used as the measurement tool. The data which were analyzed using analysis of covariance (ANCOVA) procedure, considered statistically significant ( $P > 0.05$ ). Results showed that there is a significant difference between the mean scores of experimental and control groups in the post-test. This means that the positivism group psychotherapy based on Frisch's theory was effective in promoting the quality of life of breast cancer patients ( $P > 0.01$ ). Furthermore, the results showed that positivism group psychotherapy based on Frisch's theory increased post-test scores of experimental group in aspects of physical, mental, social and environmental health ( $P < 0.05$ ). Results confirmed the positive effect of positivism group psychotherapy based on Frisch's theory on breast cancer patients' quality of life.

**Keywords:** breast cancer; Frisch's theory; positivism group psychotherapy; quality of life.

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## **1. Introduction**

Cancer is a cell disease marked by unlimited and uncontrolled proliferation of cells that form the malignant neoplasm [1]. Among the various types of cancers, breast cancer is the most common cancer in women all over the world [2]. According to the latest statistics announced by the Shahid Beheshti University of Medical Sciences Cancer Research Center in Iran, the risk of breast cancer in Iranian women is 5.27 percent per one hundred thousand [3]. Recent reports of Iranian's Cancer Society also indicate that breast cancer forms 25 percent of cancers in Iranian women. Despite medical advances, breast cancer is still one of the fatal malignancies [4, 5] that form 32 percent of cancers in women. A woman's risk of breast cancer in America has been 1 to 13, 1 to 9 and 1 to 8, in the 1920s, 1992 and 1995 respectively [6 and 7]. Although extensive advances in the treatment of breast cancer leads to better tumor response to treatments and prolongs patients' life, most of these therapies have some side effects and causes psychosocial problems for these patients. Furthermore, stress, physical and socioemotional functional decline, Sexual dysfunction, and change in perspective affects quality of life for patients with breast cancer after the diagnosis and treatment of breast cancer. The beginning of this widespread disease is the start of a period of intense suffering for women that neglect of their psychological state may lead to a missing sense of the control, helplessness, depression and anxiety and perhaps these psychological effects threaten the survival of these patients through their negative effects on the treatment process and the follow ups [8].

Studies also have shown that breast cancer affects quality of life for cancer patients in a way that from the psychological aspect, 42.9 percent had good quality of life, 55.4 percent had average quality of life and 1.8 percent had poor life quality. In addition, the prevalence of depression in women with breast cancer was 19.5% in this case [9]. The author in [10] considers the quality of life as three interconnected components including the ability to do daily activities, emotional state, and mental -social state. The author in [11] believes that the quality of life is in contrast with quantity either openly or concealed and includes those years of life that are great, satisfactory and enjoyable. Quality of life tries to decrease the gap between expectations and wishes and it is what really happens. A life with a high quality usually appears with Pleasure, satisfaction, happiness, contentment and ability to overcome problems. In fact, the quality of life is assessed and described individually [11].

To improve quality of life, different approaches have been developed from among them the pathological and diagnostic approaches, and approaches for the wellbeing of the mind and positive psychology can be noted [12, 13, 14, 15, 16, 17]. Treatment based on quality of life is one of the approaches in positive psychology, which aims to create subjective well-being, improve life satisfaction and treat mental disorders in the context of life. This therapy, which was designed by Frisch in 2006, is a combination of Aaron T. Beck's cognitive approach in clinical psychology, Activity Theory and Seligman's positive psychology.

The author in [11] believes that after advancing in technology and medicine and gaining wealth, studying the well-being of individuals and communities and its promotion is the greatest scientific challenge for human being. So, today's treatments should focus on improving the quality of life, expanding capabilities, and creating life satisfaction in individuals because happiness and depression (positive and negative affect), are not at

opposite poles on a continuum and the treatment of negative mood will not automatically lead us to happiness and life satisfaction. Like positive psychotherapy, this treatment is seeking to study and promote human's happiness and well-being through capability discovery and a better quality of life. With an excessive emphasis on improving the overall quality of life as the main objective of all interventions, it considers modifications important and essential for individuals because individuals like their lives to be rewarding and beneficial and they simply do not want to overcome the problems. Moreover, in some cases we should pay attention not only to the problem itself, but also to the individuals' abilities because a major part of the problem is solved by the development and growth of individuals' capabilities and potentials. Finally, many people want a perfect life; therefore, they look for specialists who help them achieve this goal [11].

In this model, quality of life therapy is carried out by a cognitive-behavioral change in five fundamental concepts. These five concepts are abbreviated as CASIO (the first letters of these words) and include: Living conditions (Circumstances), (Attitude) or the individuals' perception, the standards that we defined for ourselves (Fulfillment of standards), values (Importance), and overall life satisfaction in other areas of life that is not individual's concern (Overall satisfaction). CASIO includes five strategies for creating satisfaction in 16 areas. It causes improvement in quality of life by creating satisfaction in the existing distance between what an individual desires and what he currently has [11]. Research findings showed that the therapy based on Frisch's theory had a positive effect on quality of life, self-efficacy and well-being of depressed patients [19]. It also had a positive influence on quality of life, mood disturbance, and social intimacy of patients with cirrhosis [20].

The present study seeks to improve quality of life based on Frisch's new approach called positivism group psychotherapy in clients of counseling centers in Mashhad, Iran. It focuses on 16 main areas of life and the Five-Factor Model (CASIO). The aim of this study was to evaluate the effectiveness of positivism group psychotherapy based on Frisch's theory in promoting the quality of life of breast cancer patients.

## **2. Materials & methods**

### ***2.1. Research Design and Participants***

This is a quasi-experimental study with pre- and post-tests in which experimental and control groups were utilized. The statistical populations of this research were individuals who referred to three counseling centers in Mashhad, Iran in 2016. The research sample included 30 individuals referring to the counselling centers. They were informed of the therapy sessions for improving quality of life through an announcement, so they voluntarily enrolled in the treatment period. The research sample was randomly selected from among the available registered volunteers. However, there were some selection criteria including a minimum high school diploma and a maximum master's degree, being between the age of 35 to 55, not having acute mental illnesses, and not taking psychiatric drugs. The selected sample was divided into an experimental and a control group. According to the fact that the minimum sample population in experimental studies should be 15, a 15-individual sample size was chosen for each group. After the pre-test, the experimental group received the psychotherapy approach based on Frisch's theory in eight weekly sessions each lasting for two hours. In the end, both groups took the post-test. Data were analyzed using analysis of covariance (ANCOVA) procedure using SPSS. It

should be noted that due to ethical considerations, the control group participants were on the waiting list and after conducting the study, they underwent this treatment.

## 2.2. Instruments

Quality of life questionnaire in patients with breast cancer OL-BC questionnaire which was designed by the National Cancer Center of Hope, California to examine quality of life of women with breast cancer, and includes 43 questions in four domains of physical, psychological, social and religious health was used. The participants were required to answer the questions based on a 4-point Likert scale (at all, low, moderate, high). In this survey a high score indicates a low quality of life while, a low score means a high quality of life. After interpretation, bisecting was utilized to assess the validity of the instrument. Pearson correlation coefficient was estimated for two halves of the instrument and the reliability of the instrument was confirmed by correlation coefficient of 0.76.

## 3. Results

The results are presented and discussed in the following tables.

**Table 1:** The descriptive statistics of demographic variables in both control and experimental groups

Demographic variables	Index	Experiment		Control	
		Frequency	Percentage of the frequency	Frequency	Percentage of the frequency
Age	from 35 to 45	9	60%	10	67%
	from 46 to 55	6	40%	5	33%
Job	Housewife	5	%33	3	20%
	employee	10	%67	12	80%
Marital status	Single	4	27%	5	33%
	Married	11	73%	10	67%

### 3.1. The Analysis of Table (1)

In the experimental group, nine participants were within 35 to 45 and six were within 46 to 55 and in the control group, 10 participants were within 35 to 45 and five were within 46 to 55.

In terms of job in the experimental group, five participants were homemakers, and 10 were employees and in the control group three participants were homemakers and 12 were employees.

In terms of marital status in the experimental group, four participants were single and 11 married and in the control group, five participants were single and 10 married.

**Table 2:** Table of descriptive statistics indices of research variable scores

Variable	Group	Phase	Number	The lowest	The highest	Mean	Standard deviation
<b>physical health</b>	Pre-test	Experiment	15	69.00	91.00	81.1333	7.73551
		Control	15	67.00	91.00	80.8667	6.89582
	Post-test	Experiment	15	06.00	153.00	140.6667	13.70957
		Control	15	5.00	97.00	80.9333	9.47528
<b>mental and psychological health</b>	pre-test	Experiment	15	3.00	93.00	78.7333	8.58126
		Control	15	7.00	96.00	78.4000	7.17934
	post-test	Experiment	15	19.00	148.00	132.4667	9.10939
		Control	15	2.00	96.00	78.4667	12.15887
<b>social health</b>	pre-test	Experiment	15	4.00	50.00	43.8000	4.22915
		Control	15	4.00	55.00	43.5333	5.69294
	post-test	Experiment	15	6.00	89.00	81.1333	6.53416
		Control	15	2.00	51.00	43.6000	5.90157
<b>religious health</b>	pre-test	Experiment	15	2.00	4.00	27.8667	3.66190
		Control	15	0.00	33.00	27.6000	3.22490
	post-test	Experiment	15	8.00	60.00	52.9333	5.43095
		Control	15	1.00	35.00	27.6667	5.27347

### 3.2. The Analysis of Table (2)

As seen in the above table, for the physical health variable, the lowest amount is related to the control group in post-test, the highest amount is related to the experimental group in post-test, the lowest mean is related to the control group in pre-test, and the highest mean is related to the experimental group in post-test. For the mental and psychological health variable, the lowest amount is related to the control group in post-test, the highest amount is related to the experimental group in post-test, the lowest mean is related to the control group in pre-test, and the highest mean is related to the experimental group in post-test.

For the social health variable, the lowest amount is related to the control group in post-test, the highest amount is related to the experimental group in post-test, the lowest mean is related to the control group in pre-test, and the highest mean is related to the experimental group in post-test.

For the religious health variable, the lowest amount is related to the control group in pre-test, the highest amount is related to the experimental group in post-test, the lowest mean is related to the control group in pretest, and the highest mean is related to the experimental group in post-test. One-way analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) was conducted to analyze data and answer the research

hypotheses. Checking the assumption of homogeneity of variances for the sample is provided in Table (3).

**Table 3:** Levine's test results for checking the homogeneity of variances

Variable	F Statistics	Degree of freedom's numerator (df1)	Degree of freedom's denominator (df2)	Level of significance (Sig)	Results of test
physical health	0.774	1	28	0.387	Variances are homogeneous
mental and psychological health	1.655	1	28	0.209	Variances are homogeneous
social health	0.004	1	28	0.948	Variances are homogeneous
religious health	0.618	1	28	0.438	Variances are homogeneous

### 3.3. The Analysis of Table (3)

The results presented in the above table shows that the homogeneity assumption of variances about the physical health variable was met ( $F=0.774$ ,  $\text{sig}=0.387$ ). The homogeneity assumption of variances about the mental and psychological health variable was also met, ( $F=1.655$ ,  $\text{sig}=0.209$ ).

The homogeneity assumption of variances about the social health variable was met too ( $F=0.004$ ,  $\text{sig}=0.948$ ), and the homogeneity assumption of variances about the religious health variable was met as well ( $F=0.618$ ,  $\text{sig}=0.438$ ).

**Table 4:** Results of the homogeneity test slope of the regression line

Variable	Sum of squares	Degree of freedom	Mean squares	F Statistics	Level of significance (Sig)
Group interaction and physical health	75.995	1	75.995	0.580	0.453
Group interaction and mental and psychological health	29.926	1	29.926	0.247	0.623
Group interaction and social health	8.947	1	8.947	0.235	0.632
Group interaction and religious health	85.721	1	85.721	3.135	0.088

### 3.4. The Analysis of Table (4)

As can be seen, factor analysis of covariance of group interaction with physical health variable is not significant ( $F=0.580$ ,  $\text{sig}=0.453$ ). Factor analysis of covariance of group interaction with mental and psychological health variable is not significant ( $F=0.247$ ,  $\text{sig}=0.623$ ). Factor analysis of covariance of group interaction with social health variable is not significant too ( $F=0.235$ ,  $\text{sig}=0.632$ ), and factor analysis of covariance of group interaction with religious health variable is not significant either ( $F=3.135$ ,  $\text{sig}=0.088$ ).

### 3.5. Inferential Analysis of Data

In the present study, one-way analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) were used to respond to the research hypotheses. In this section, each research hypothesis is responded separately.

Hypothesis: The positivism group psychotherapy based on Frisch's theory improves the quality of life in patients with breast cancer. To investigate this hypothesis, multivariate analysis of covariance (MANCOVA) was used.

**Table 5:** Results of multivariate analysis of covariance (MANCOVA) on the mean post-test scores of the components of quality of life of experimental and control groups with pre-test control

Test name	Amount	F Statistics	Degree of freedom's effect	Degree of freedom's error	Level of significance (Sig)	Eta Squared $\eta^2$ ( $\eta^2$ )	statistical power
Effect Testing Pylayy	0.940	82.489a	4.000	21.000	0.000	0.940	1.000
Wilks Lambda test	0.060	82.489a	4.000	21.000	0.000	0.940	1.000
Hotelling trace test	15.712	82.489a	4.000	21.000	0.000	0.940	1.000
The largest root test	15.712	82.489a	4.000	21.000	0.000	0.940	1.000

As can be observed in Table 5, with pre-test control, significant levels of all tests indicate that there is a significant difference among women with breast cancer both in experimental and control groups at least in terms of one of one of the dependent variables ( quality of life's components).

To understand that difference, the results of one-way analysis of covariance in the context of MANCOVA are provided in table 6. Furthermore, the amount of effect or difference is equal to ( $\eta^2 = 0.940$ ). This means that 94 percent of the difference in post-test scores of quality of life's components (physical, mental and psychological, social and religious health) is related to the effect of positivism group psychotherapy based on Frisch's theory. Statistical power is equal to one. This means that there is not the probability of a Type II error.

**Table 6:** The results of one-way analysis of covariance in the context of MANCOVA on the mean post-test scores of the components of quality of life of experimental and control groups with pre-test control

Variable	Source of change s	Sum of squares	Degree of freedo m	Mean squares	F Statistic s	Level of significanc e (Sig)	Eta Square d ( $\eta^2$ )	Statistica l power
<b>physical health</b>	Pre-test	406.188	1	406.188	3.150	0.087	0.104	0.402
	Group	26875.336	1	26875.336	208.391	0.000	0.885	1.000
	Error	3482.079	27	128.966				
<b>mental and psychological health</b>	Pre-test	55.568	1	55.568	0.472	0.498	0.017	0.102
	Group	21811.577	1	21811.577	185.432	0.000	0.873	1.000
	Error	3175.898	27	117.626				
<b>social health</b>	Pre-test	87.770	1	87.770	2.376	0.135	0.081	0.318
	Group	10504.737	1	10504.737	284.321	0.000	0.913	1.000
	Error	997.563	27	36.947				
<b>religious health</b>	Pre-test	5.581	1	5.581	0.189	0.667	0.007	0.070
	Group	4793.451	1	4793.451	162.452	0.000	0.857	1.000
	Error	796.685	27	29.507				

### 3.6. The Results of Table (6)

#### 3.6.1. Analysis of Physical Health Variable

As shown in the above table, there is a significant difference between women with breast cancer in experimental and control group in terms of physical health at the significance level of 0.05 ( $F=208.391$ ,  $Sig=0.000$ ). This means that positivism group psychotherapy based on Frisch's theory has a significant effect on physical health. In other words, according to the average physical health of women with breast cancer in the experimental group compared to the average of the control group, positivism group psychotherapy based on Frisch's theory promoted the physical health of the experimental group.

Furthermore, the difference in the scores of the experimental and control group or the effectiveness of positivism group psychotherapy based on Frisch's theory is ( $\eta^2=0.885$ ). This shows that 89 percent of the difference in the physical health post-test scores is related to positivism group psychotherapy based on quality of life. Statistical power is 1.000. This means that there is not the probability of a Type II error.

#### 3.6.2. The Analysis of Mental and Psychological Health

As can be observed in the above table, there is a significant difference between women with breast cancer in experimental and control group in terms of mental and psychological health at the significance level of 0.05 ( $F=185.432$ ,  $Sig=0.000$ ). This means that the positivism group psychotherapy based on Frisch's theory has a significant effect on mental and psychological health. In other words, according to the average mental and



psychological health of women with breast cancer in the experimental group compared to the average of the control group, positivism group psychotherapy based on Frisch's theory promoted the mental and psychological health of the experimental group. Furthermore, the difference in the scores of the experimental and control group or the effectiveness of positivism group psychotherapy based on Frisch's theory is ( $\eta^2=0.873$ ). This shows that 87 percent of the difference in post-test scores of mental and psychological health is related to positivism group psychotherapy based on Frisch's theory. The statistical power is 1.000. This means that there is not the probability of a Type II error.

### ***3.6.3. The Analysis of Social Health***

As can be observed in the above table, there is a significant difference between women with breast cancer in experimental and control group in terms of social health at the significance level of 0.05 ( $F=284.321$ ,  $Sig=0.000$ ). This means that the positivism group psychotherapy based on Frisch's theory has a significant effect on social health. In other words, according to the average social health of women with breast cancer in the experimental group compared to the average of the control group, positivism group psychotherapy based on Frisch's theory promoted the social health of the experimental group.

Furthermore, the difference in the scores of the experimental and control group or the effectiveness of positivism group psychotherapy based on Frisch's theory is ( $\eta^2=0.913$ ). This shows that 91 percent of the difference in post-test scores of social health is related to positivism group psychotherapy based on Frisch's theory. The statistical power is 1.000. This means that there is not the probability of a Type II error.

### ***3.6.4. The Analysis of Religious Health***

As can be observed in the above table, there is a significant difference between women with breast cancer in experimental and control groups in terms of religious health at the significance level of 0.05 ( $F=162.452$ ,  $Sig=0.000$ ). This means that the positivism group psychotherapy based on Frisch's theory has a significant effect on religious health. In other words, according to the average religious health of women with breast cancer in the experimental group compared to the average of the control group, positivism group psychotherapy based on Frisch's theory promoted the religious health of the experimental group.

Furthermore, the difference in the scores of the experimental and control group or the effectiveness of positivism group psychotherapy based on Frisch's theory is ( $\eta^2=0.857$ ). This shows that 86 percent of the difference in post-test scores of religious health is related to positivism group psychotherapy based on Frisch's theory. The statistical power is 1.000. This means that there is not the probability of a Type II error.

## **4. Discussion**

The present study was conducted to investigate the effectiveness of positivism group psychotherapy based on Frisch's theory on quality of life in clients of counseling centers in Mashhad, Iran in 2016. Results showed that there is a significant difference between the mean scores of experimental and control groups in post-test. This means that the positivism group psychotherapy based on Frisch's theory was effective in promoting the clients'

quality of life.

The psychotherapy based on Frisch's theory is a combination of cognitive approach and positive psychology. To change individuals' cognition and attributions, this psychotherapy employs cognitive techniques in two of its therapeutic strategies, i.e., changing attitude (A) and changing the objectives and standards (S). Studies have shown that attributive attitudes and beliefs and the kind of objectives have a major role in clients' sense of quality of life. It has been shown that these attitudes and beliefs are related to clients' quality of life [21,22]. It seems that changing attitude (A) and changing the objectives and standards (S) therapeutic strategies are just part of this psychotherapy.

The authors in [23] believe that in relation between cognition and affection, these two factors are under the control of separate and to some extent dependent systems that affect each other in different ways. The author in [24] indicated that spiritual activities could largely control the increase of psychological well-being of patients with chronic diseases. With the help of cognitive methods, individuals learned to control their emotions and experienced a higher life satisfaction in this treatment. The results of the analysis of covariance shows that group therapy based on Frisch's theory increased participants' mental health in post-test. The results of the present study are consistent with research findings of authors in [25], and Seligman [12].

Group therapy based on quality of life is a holistic approach ,which emphasizes mental health in context of everyday life and tries to reform all related aspects of this factor in the context of quality of life. The World Health Organization defines mental health as a state of well-being in which individuals have a real understanding of their abilities, are able to deal with daily stresses, work fruitfully and effectively and be involved in their society. One of the reasons for mental health increase is the reduction of participants' anxiety, somatic symptoms and poor social functioning. It refers to the effect of mutual interaction between the components of quality of life and mental health. Therefore, in this study, consistent with the promotion of the quality of life, mental health variables also promoted.

Those individuals who follow a cognitive approach learn to increase the subjective well-being and life satisfaction and consequently strengthen their mental health by keeping a balance between the existing precious areas of life and their ideals and growing all aspects of their lives. Theoretically, the therapeutic quality of life is an interconnected solidarity of cognitive therapy and positive psychology and is consistent with Aaron T. Beck's latest framework on cognitive therapy, cognitive theory of depression and psychopathology.

#### **4. Conclusion**

Findings of this research showed that the positivism group psychotherapy based on Frisch's theory, could promote individuals' quality of life by focusing and working on those aspects that were outside the scope of individuals' attention. Using this therapy in counselling centers for enhancing and promoting patients' quality of life is suggested. To compare its effectiveness, the application of this therapy in different groups, with other therapeutic methods is recommended. One of the strengths of the current study is that the interventional-educational approach toward the quality of life used in this study, is completely new.

The present study had some limitations due to the newness of the educational variable. Because participants were selected from among the referring patients of three counseling centers, we should proceed with caution in generalizing the findings.

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