

## Effects of Cognitive-Behavioral Group Therapy on Increased Life Expectancy of Male Patients with Gastric Cancer

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### ABSTRACT

**BACKGROUND AND OBJECTIVE:** Gastric cancer is one of the most common malignancies in the world, which is classified as a multifactorial illness. Most canceric patients experience a period of stress. Since being patient and positive thinking play an effective role in coping with chronic diseases. Therefore, this study was conducted to evaluate the efficacy of cognitive-behavioral therapy group on being patient and positive thinking in gastric cancer patients.

**METHODS:** This cross-sectional study was performed on 92 men with gastric cancer who were referred to the Tooba Medical Center in Sari who were randomly divided into two groups of 46 test and control groups. The two groups completed the standard questionnaire of positive thinking (150-30 points) and being patient (100-0 score) in the pre-test phase. The test group was trained of cognitive behavioral therapy for ten sessions of 90 minutes. The control group did not receive any special intervention. Then, both groups completed the questionnaires again in the post-test phase.

**FINDINGS:** The mean score of positive thinking before the test in the test group was (88.71±24.21) and in the control group was (94.54±24.23). The mean score of being patient in the test group was (26.66±22.20) and in the control group was (30.45±22.42) that they were not significant. However, in the post-test phase, positive thinking (test group 106.33±28.16 vs. control group 94.43±24.71) ( $p<0.01$ ) and in terms of being patient (the test group 23±23.5) /40 versus 30.91±20.89 control group ( $p<0.01$ ) had a significant difference.

**CONCLUSION:** According to the results, -behavioral therapy group can increase being patient and positive thinking in patients with gastric cancer.

**KEY WORDS:** Cognitive-Behavioral Therapy, Positive Thinking, Being Patient, Cancer.

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## Introduction

Cancers have a wide range of diseases, each of which has its own etiology, therapeutic profile and prognosis. Most people with cancer experience a stressful period. In some patients, this psychological stress is eliminated on its own and does not lead to long-term mental problems and can be considered as a natural adaptation reaction, but some patients experience more severe psychological problems. This reduces their quality of life and their daily function (1). Cancer is a multifactorial disease, due to the presence of infectious, environmental and genetic factors in humans (2). Gastric cancer is the fourth most common cancer and the second leading cause of death from cancer in the world. According to global estimates, more than 930,000 new cases of gastric cancer are diagnosed annually and at least 700,000 patient die because of this disease and thus it is a serious health problem for the community (3).

Gastric cancer is the third cause of death among Iranians and is the first cause of death from cancer in men and the second leading cause of death in Iranian women. In Iran, this cancer has been increased mild to moderate over the past 30 years. The prevalence of this cancer is particularly high in north and northwestern Iran (4). Today, positive psychology as a new branch of psychology is essentially a scientific study of strengths and human happiness. Happiness and pleasure as positive excitement can lead to creative creativity in daily life. Psychological phenomena such as happiness, optimism, hope, creativity, arising from positive experiences of the mind, are at the center of attention and psychological studies (5).

Positive thinking can be seen as "having the habitual hope of finding a solution" and, according to the widespread interpretation is "optimism" toward the world, man and himself. Positive thinking means to expect the best things in the world and confident that we will meet our demands (6). Research has shown that positive emotion facilitates behavior and continuity of activity. The researchers came to the conclusion that the experience of positive emotions encourages people to interact with their environment (7). Positive thinking can be seen as "having the habitual hope of finding a solution" and, according to the widespread interpretation is "optimism" toward the world, man and himself. Positive thinking means to expect the best things in the world and confident that we will meet our demands (6). Research has shown that positive emotion facilitates behavior and continuity of activity. The

researchers came to the conclusion that the experience of positive emotions encourages people to interact with their environment (7). The crises caused by the cancer causes, lack of balance and inconsistency of thought, body and soul.

Waller considers being patient as a positive person's adaptation in response to adverse conditions of injuries and threats (8). Fredrickson et al. study shows that as a result of the process of being patient, events and adverse effects of life can be corrected, modified, or even disappeared (9). Cognitive-behavioral therapy is an intervention that generates behavioral and emotional changes by learning new ways of coping and recognizing thoughts in a difficult way in a person (10). Since patients develop a sense of despair after suffering from chronic illness and may sometimes have mental problems, the importance of psychotherapy for these patients is determined. Therapists who plan their work on the basis of the core elements of cognitive-behavioral therapy can more easily accommodate treatments with patient problems. Therefore, this study was conducted to determine the effectiveness of cognitive-behavioral therapy on being patient and positive thinking in people with gastric cancer.

## Methods

This cross-sectional study was performed on 92 men with gastric cancer who were referred to the Tooba Medical Center in Sari city who were randomly divided into two groups of 46 members: test and control groups. People who had gastric cancer from 6 months to 2 years were enrolled in the study. Regarding the lack of cooperation and the absence of some patients, two groups of 46 patients were selected as test and control groups. In this study, the test group was divided into three groups (two groups of 15 and one group of 16) due to their high number and their suitability for each group. They were trained of cognitive behavioral therapy for ten sessions of 90 minutes. The structure of the sessions consisted of introducing and familiarizing, welcoming, motivating, reviewing the structure of the meetings and the main laws, establishing a good therapeutic relationship with empathy and active listening, familiarity with the concept of anxiety, the benefits of cognitive-behavioral therapy, familiarity with self-negative conscious thoughts, cognitive schemas, cognitive triangle, negative errors, and the relationship between thoughts, feelings and behavior, verbal challenge, vertical arrow training, revision of beliefs,

negative and anxious attitudes, substituting positive thoughts, training for muscle relaxation and visualizing a relaxed environment, creating a positive mental pattern, and finally preparing for the end of treatment. Positive thinking was measured using the Ingram and Visnicky standard questionnaire, which included 30 5-item questions.

The grading method in this questionnaire is always 5 points, often 4, sometimes 3, at least 2, and never scored 1, scores (30-125 points). The reliability of this test was calculated based on Cronbach's alpha (0.94) and based on the half down method (0.95) in Hashemi study with title of relationship between positive thinking and mental health (11). Being patient was recorded using Conver and Davidson questionnaires (11). In this questionnaire, there are 25 items that each item is scored on a Likert scale. The maximum score in this questionnaire is 100. To determine the validity, first the correlation of each item with the total score was calculated and then the factor analysis method was used which coefficient range was from 0.41 to 0.64. In order to determine the reliability of the Cronbach's alpha method, the coefficient of reliability was reported to be 0.89 (12).

## Results

Of the 92 respondents who answered the questionnaires, 16 patients in the test group and 18 patients in the control group were graduated. The majority of people are in the age group of 30-35 years old (18 patients in the test group and 17 patients in the control group), and most of them have been suffered from cancer for 15 to 20 months (19 in both groups) (Table 1).

**Table1. Comparison of demographic variables between control and test groups**

| Variable               | Group            | Group |         |
|------------------------|------------------|-------|---------|
|                        |                  | Test  | Control |
| Education              | Diploma          | 15    | 17      |
|                        | Associate Degree | 8     | 5       |
|                        | Bachelor         | 16    | 18      |
|                        | MSC              | 7     | 6       |
| Age                    | 25-30            | 12    | 14      |
|                        | 30-35            | 18    | 16      |
|                        | 35-40            | 16    | 16      |
| Disease length (month) | 1-5              | 0     | 0       |
|                        | 5-10             | 11    | 10      |
|                        | 10-15            | 10    | 12      |
|                        | 15-20            | 19    | 19      |
|                        | 20-25            | 6     | 5       |

Before the test, the mean score of positive thinking in the test group was ( $88.71 \pm 24.21$ ) and in the control group was ( $94.54 \pm 24.23$ ). The mean of the being patient score of the test group was ( $26.66 \pm 22.20$ ) and the control group was ( $30.45 \pm 22.42$ ) which there was no significant difference between them. However, in the post-test phase, the positive thinking (test group  $106.23 \pm 28.16$  vs, control group  $94.43 \pm 24.71$ ) ( $p < 0.01$ ) and in terms of being patient (the test group was  $40.82 \pm 23.53$  vs  $30.91 \pm 20.89$  in the control group) that was significantly different ( $p < 0.01$ ) (Table 2). F calculated for examining the difference in the post-test scores of the two groups with the addition of the pre-test scores in the positive thinking scores is 32.5.

**Table2. Comparison of positive thinking and being patient in both test and control groups**

| Groups            | Stage               | Mean $\pm$ SD      |
|-------------------|---------------------|--------------------|
| Positive thinking | Control Before test | 94.54 $\pm$ 24.23  |
|                   | Control After test  | 94.43 $\pm$ 24.71  |
|                   | Test Before test    | 88.71 $\pm$ 24.21  |
|                   | Test After test     | 106.33 $\pm$ 28.16 |
| Being patient     | Control Before test | 30.45 $\pm$ 22.24  |
|                   | Control After test  | 30.91 $\pm$ 20.89  |
|                   | Test Before test    | 26.6 $\pm$ 22.2    |
|                   | Test After test     | 40.82 $\pm$ 23.5   |

## Discussion

The results of this study showed that cognitive-behavioral therapy group had a significant increase in the score of positive thinking and being patient in the test group. The results of the research in the field of positive thinking suggest that cognitive-behavioral therapy group in patients with cancer has an impact on their positive thinking and leads to an increase it in patients. The present study is consistent with Hashemi's study (11). Also, the results of this study in the effectiveness of cognitive-behavioral therapy on being patient are consistent with the results of the study by Burton et al (13), Catalano et al. (14) and Antony et al. (15). These patients, as they repress their feelings of illness, are becoming alien to their being alive day by day, and they are less allowed to experience new experiences in their minds. Consequently, they make cynical thoughts, a seductive state of tiredness, loneliness, and fear of death for themselves. Their participation in psychotherapy sessions has made it

possible to put an end to the incarnation of death and thinking about death and live with new thoughts and views. The results of this study are also consistent with the results of the studies by Bannink (16), Davydova (17) and Padesky et al. (18).

The results of the study by Emami et al. on women with breast cancer also indicate the effectiveness of cognitive-behavioral therapy on the increase in being patient (19). In a study by Mohammadian Akerdi et al., on the effect of cognitive behavioral therapy on the life expectancy of men with cancer, the results showed the effectiveness of this type of treatment (20). Probably the reason for the effectiveness of cognitive-behavioral interventions on being patient and positive thinking can be a way to learn how to deal with the inevitable problems of life and coping with stressful situations. The limitations of the present research were the gender of the subjects, the small number of samples, the time

and place restrictions of therapeutic intervention, the lack of patient's follow-up and the control of variables such as social status, marital and family satisfaction, the amount of social support and the impact of education through the media.

In sum, the findings of this study showed that cognitive behavioral therapy group can affect the thinking and being patient of men with gastric cancer. It is suggested that psychologists be given education to families so that psychotherapy is considered seriously in people with cancer and efforts are made to take therapeutic approaches.

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