



ORIGINAL ARTICLE

Effectiveness of Reality Therapy in Improving the Psychological Well-being in People with Leukemia

Running Title: Effect of Reality Therapy on Psychological Well-being

Shahrzad Jahangiri <sup>1</sup>, Mohammadreza Mortazavizadeh 1, Masoure Nasirian <sup>2</sup>

<sup>1</sup> Department of Internal Medicine, Medical School of Islamic Azad University, Yazd, Iran

<sup>2</sup> Department of Psychiatry, Shahid Sadughi University of Medical Sciences, Yazd, IR Iran

Corresponding Author: Shahrzad Jahangiri, E-mail: shahrzadjahangiri22@yahoo.com

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ABSTRACT

**Introduction:** Cancer is now the most important health concern endangering the patients' physical, mental and social health. Cancer has several types among which prostate and breast cancers are the most common tumors in men and women respectively, and the lung and colon are more prevalent in both genders, but leukemia is more common in children. The present research aimed to determine the effectiveness of reality therapy in improving the psychological well-being in people with leukemia. **Materials and Methods:** The present study utilized a quasi-experimental approach. This study examines cognitive and behavioral changes in subjects by pre-test- post-test due to the precise control of experimental conditions by controlling the independent variable through questionnaires. The statistical population consisted of all people with leukemia in hospitals and private offices of blood and oncology in Yazd during 2013-2014. Convenience sampling was done on those referring to an oncology office for the cancer treatment. Leukemia patients, who knew about their illness, were selected as samples and involved in reality therapy sessions considering inclusion and exclusion criteria: The sample size included 30 leukemia people who were randomly divided into two groups (experimental and control). The treatment research plan was individually conducted for 6 weekly 1-hour sessions; and Ryff's questionnaire was recompleted at the end of the sixth session. Shapiro-Wilk test, Levene's test, one-way analysis of covariance, and multivariate analysis of covariance were used to analyze research data. **Results:** During the reality therapy sessions, participants' self-knowledge was increased (self-acceptance was also increased in participants, so it was consistent with current studies) as members discuss and contemplate themselves and share their perceptions. **Conclusion:** This self-knowledge is the basis for making more constructive decisions, more functional programs, changing their feelings and thoughts, improving life for remaining years, and more purposeful life.

INTRODUCTION

Diagnosis and treatment of cancer is an experience with stress and anxiety. People, whose diseases are early diagnosed, encounter potential negative side effects such as the hair loss, nausea, lymphedema and sexual problems during the treatment and surgery (1, 2). Long-term treatment makes doubts about the patient's ability to play a social role, future status, and the possibility of returning to work. A high level of stress has a long-lasting negative effect on the patients' self-esteem and it has a very bad effect on their performance and lowers the quality of life (3). The problems namely the

anxiety, non-adaption, marital conflicts, deviance, psychosis and delinquency can all be successfully treated by the reality therapy (2).

Glasser's Therapy leaves people out of the external control and gives them the internal control. This procedure is the individual adaptive (effective) or maladaptive (ineffective) method in order to adapt to a threat to create the mental balance. A great number of theories and therapies have been implemented to accept problems and improve the quality of life; and the controlled studies have found that the psychological approach has provided the most beneficial therapeutic

strategies to help people with different problems in the last two decades (4). There is always a balance between the rates of cell division, cell death and differentiation in a healthy living. Cancer includes all types of malignant tumors which are often known as neoplasms in the medicine (5). The risk of cancer increases with age. Cancer causes 13% of deaths. According to the American Health Association, 7.7 million people died of cancer in 2007.

After obtaining the knowledge of cancer based on the personality field, people show a variety of reactions such as fear of death and fear of death and mental preoccupation, anxiety, depression, sleep disorder, anger and aggression, and phobia. These symptoms and reactions can be secondary to fear of cancer or symptoms of diseases, therapeutic methods such as chemotherapy, radiotherapy, and surgery (6, 7). In some cancers including the brain and pancreas cancers, patients get depressed even before aware of cancer. Cancer patients are generally reluctant to talk about their psychiatric disorders, and on the other hand, physicians are reluctant to ask questions about psychiatric problems. Cancer patients experience shock when their cancers are diagnosed, and thus their quality of life is generally decreased. Increasing the anxiety and depression from unpleasantness will reduce the possibility of hospitalization experience for treating the disease. Rejection of reality in patients and negative psychosocial factors can significantly increase overcoming the immune system; however, the relationship between psychology and cancer is theoretically decisive and influential (8-10).

## MATERIALS AND METHODS

The present study used a quasi-experimental approach which is among the most complex and the scientific form of study after the experimental method and consciously implement and manipulates at least an independent variable called the test variable. Due to the precise control of the experimental conditions by controlling the independent variable in these projects, the individual behavioral and cognitive changes can be investigated by means of a questionnaire and a pre-test-post-test method. Diagram of this project is shown in the figure. In this study, independent variable was educational "reality therapy" method and dependent variables were psychological well-being including self-determination, environmental mastery, personal growth, positive relationships with others, purposeful life and self-acceptance. The statistical population consisted of all people with leukemia in hospitals and private clinics of blood and oncology in Yazd during 2013-2014.

Convenience sampling was done on those referring to an oncology office for the cancer treatment; and leukemia patients, who knew about their illness, were selected as samples and involved in reality therapy sessions considering inclusion and exclusion criteria:

The sample size included 30 leukemia people who were randomly divided into two groups (experimental and control). Subjects of the first group were randomly put into the reality therapy group and were known as the experimental group; and the second group did not receive any psychiatric treatment, and they were known as the control group.

In the past decade, Ryff and Keyes suggested the psycholog-

ical well-being model that was widely studied by researchers. Psychological well-being had several components including self-acceptance, positive relationships with others, self-determination, environmental mastery, purposeful life and personal growth.

### Reliability and validity

To normalize psychological wellbeing scales, Ryff performed this test on a sample of 321 subjects. He reported the consistency coefficient of sub-scales in this questionnaire as follows: Self-determination = 76%, environmental mastery= 90%, personal growth= 87%, positive relationships with others= 91%, purposeful life=90% and self-acceptance= 93%. The reliability of sub-scale re-test was from 81% to 85% in a sample of 117 subjects and at a 6-week interval. Another research reported the internal correlation coefficient of sub-scales as follows: self-determination= 78%, environmental mastery= 77%, personal growth= 74%, positive relationships with others = 83%, purposeful life= 76% and self-acceptance= 0.79%. The reliability of sub-scale re-test was also from 0.74 to 0.84 at an 8-week interval. Bayani et al. implemented psychological well-being scales in Iran on a sample of 145 students at Islamic Azad University in order to normalize scales. Test-retest reliability of Ryff's scale of psychological well-being was obtained equal to 0.82, and it was statistically significant and equal to 0.71, 0.77, 0.78, 0.77, 0.77, and 0.78 respectively for sub-scales namely the self-acceptance, positive relations with others, self-determination, environmental mastery, purposeful life and personal growth. The correlation of psychological well-being with a number of welfare measurement tools indicated the validity of questionnaire. Some of this correlation is as follows:

1. Correlation of emotional balance scale between 0.25 (personal growth rate) to 0.62 (environmental mastery scale)
2. Correlation with life satisfaction scale between 0.28 (self-determination scale) to 0.73 (self-acceptance scale)
3. Correlation with Rosenberg's Self-Esteem Scale between 0.29 (personal growth scale) to 0.62 (personal growth scale)
4. Correlation with Zung's Depression Scale between 0.60 (Environmental Mastery Scale) and 0.33 (purposeful life) and a positive correlation with 4 other scales.

### Research implementation design

Treatment was individually performed for 6-weekly 1-hour sessions. Ryff's questionnaire was recompleted at the end of the sixth session.

In the present study, conditions were considered as the inclusion and exclusion criteria in order to control the interventional variables. Inclusion criteria were as follows:

1. Women and men aged 18-45
2. Men and women with leukemia.
3. One month from the diagnosis of their illness.
4. Subjects should know about their illness.
5. Subjects should be included in the chemotherapy stage.
6. Subjects did not undergo any psychological treatment.
7. Subjects had no psychiatric illness background.

**Educational Reality Therapy Sessions**

Educational reality therapy sessions, which were held in 6 sessions by group therapy and were according to presented papers (Table 1).

**DISCUSSION**

According to Ryff’s Psychological Well-Being Questionnaire in the present study, patients with leukemia forgot the purpose of their lives and were only seeking ways to escape from the reality due to the fear of illness. Therefore, their

**Table 1.** Summary of Reality Therapy Sessions

Session	Contents
First session	Understanding the life identity, success identity, and satisfaction of needs, failure identity or identity crisis
Second session	Accept of problems for sense of comfort in problems; looking at hardships of life; welcoming problems
Third session	Healthy and effective relationships with others as a social need
Fourth session	Decision-making skills; the motivation for being useful
Fifth session	The need for planning in tasks and decisions; decisions for life
Sixth session	Behavioral assessment and value judgment about it; the use of situation; and performing the post-test

**Data analysis method**

Shapiro-Wilk test, Levene’s test, one-way analysis of covariance, and multivariate analysis of covariance (MANCOVA) were used to analyze research data in four hypotheses after investigating the equality of variance, and the equality of regression slopes.

excuses for the surrounding world increased and endangered their psychological well-being. The education of reality therapy helped patients to gain more self-knowledge and awareness and higher psychological well-being. Indeed reality therapy is not considered as a fantasy or a novel method to boost the use of free times, but it is now a modern material for multiple areas of science, most notably healthcare. It is used in the treatment of mental health disorders (8). Reality therapy is a psychotherapy and counseling method that treats differently from the psychiatric and psychoanalysis and rules

**RESULTS**

The frequency of experimental and control groups is presented in Table 2-5. The main hypothesis was assessed in Tables

**Table 2.** Frequency of experimental and control groups

Group	Frequency	Percentage
Experimental	15	50
Control	15	50
Total	30	100

**Table 3.** Frequency in terms of education levels of experimental and control groups

	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Under high school diploma	7	46.6	7	46.6
High school diploma	5	33.3	4	26.6
Over high school diploma	3	20	4	26.6
Total	15	100	15	100

6 and 7. Reality therapy affects the psychological well-being of people with leukemia. Leukemia is an important factor endangering the patient physical and mental health.

taught in the medical academies. Reality therapy is focusing on “Reality”, “Responsibility” and “Right and wrong” concepts and says that the individual suffers from human, social,

**Table 4.** Frequency in terms of gender of experimental and control groups

	Experimental group	Control group
Female	7	7
Male	8	8
Total	15	15

**Table 5.** Frequency in terms of age of experimental and control groups

	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
20-25	1	6.6	0	0
25-30	5	33.3	2	12.12
30-35	4	26.7	5	33.3
35-40	5	33.3	6	39.9
40-45	0	0	2	12.12
Total	15	100	15	100

**Table 6.** Analysis of covariance of psychological well-being

Variable	Mean square	F	Significance	Effect size	Statistical power
Group effect	11165.7	225.30	0.0001	0.89	1.0

**Table 7.** Multivariate analysis of covariance of psychological well-being

Variable	Wilks' lambda trace	F	Significance	Effect size	Statistical power
Group effect	0.06	38.38	0.0001	0.93	1.0

and global conditions, not from a mental illness (9).

In the study of Heydarpour et al., conducted on forty mothers with an intellectual disabled child who their children were studying at the exceptional schools, the results showed the effective role of reality therapy on the mood of mothers, so that the mothers under the group training in the intervention group indicated a meaningful improvement in the level of resilience and psychological well-being (10). Reality therapy was experienced in different subjects. Jahromi and Mosallanejad studied the impact of reality therapy on metacognition, stress and hope in addicts and showed that the mean scores of metacognition and hope increased in the intervention group because reality therapy is emphasizing the accountability and the current behavior of addicts (11).

The effect of reality therapy rarely was checked in patients with cancer. Ebadi et al. studied the effectiveness of reality therapy on the hope of breast cancer patients. Their results indicated good news. The intervention increased hope in breast cancer patients to return to their healthy life style (12). Therefore, in patients with cancer, applying reality therapy

can be useful. In the other hand, the effect of reality therapy on life expectancy indirectly was approved in different studies (13-16). They indicated the effect of reality therapy in the reduction of stress and anxiety. Albeit, Klug et al. (16), Barends and Parish (14), and Davidson et al. (15) revealed that reality therapy can increase life expectancy. In another study, Lohse et al. showed the effective role of reality therapy on the psychological disorders of patients following stroke (17). A study by Ökmen et al., indicated the useful effect of reality therapy in rehabilitation of children with cerebral palsy with improved motor function. Thus, adding this method to conventional rehabilitation techniques may have a suitable impact on treatment success (18).

#### CONCLUSION

This self-knowledge is the basis for making more constructive decisions, more functional programs, changing their feelings and thoughts, improving life for remaining years, and more purposeful life.

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**AUTHOR CONTRIBUTION**

All the authors have contributed towards conducting the experiments and preparation of the manuscript and have approved the latest version of the article.

**CONFLICT OF INTEREST**

The authors declare no conflicts of interest.

**ETHICAL STANDARDS**

Informed consent was obtained from the patients participated in this study.

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