

The Effectiveness of Reality Therapy on Resilience and Psychological Distress in Parents of Children with Cancer

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Abstract

Objective: This study aimed to investigate the effectiveness of reality therapy on resilience and psychological distress in parents of children with cancer.

Methods: The present study was an experimental study with a pretest-posttest design with a control group. The present study's statistical population included all parents of children with cancer hospitalized in Amirkabir Hospital in Arak in 2020. Sampling was done by convenience sampling, and 35 people were selected and randomly assigned to the experimental and control groups (15 people for each of the experimental and control groups and five people to eliminate the possibility of falling subjects). Parent's resilience and psychological distress were assessed in both groups through the Connor and Davidson Resilience Questionnaire and the Psychological Distress Questionnaire. The first group received eight reality therapy sessions, but the control group did not receive any intervention. Then, the resilience and psychological distress of both groups were evaluated again in the post-test. Data were analyzed using analysis of covariance.

Results: Findings showed that reality therapy was effective on parents' resilience and psychological distress ($P < 0.01$). Due to this treatment's effectiveness, it is recommended to be widely used in helping parents of children with cancer.

Conclusion: The study concluded that family members' behavior towards each other has significant importance in increasing or decreasing psychological distress in parents of children with cancer. Consequently, reality therapy is essential for parents of children with cancer and should be employed extensively in medical centers to reduce stress levels among both, parents and children.

Keywords: Childhood cancer • Connor and davidson resilience questionnaire • Mortality rate

Introduction

Childhood cancer consists of malignancies, each with its prevalence, pathology, and mortality rate. This disease, which is more diverse than the adult disease, is the most common cause of mortality between 1-16 years in Western countries. Cancer mortality in children and adolescents between the ages of 3 and 14 is higher than in other patients [1]. Having childhood cancer can endanger the mental health of an affected child and his or her family. The lives of children with cancer change dramatically due to the complications of the disease. Hospitalization of children may increase infection and lead to the child's separation from the family and the community [2]. Also, since childhood cancers are life-threatening diseases, the parents' role is increasingly being considered the primary caregiver. Due to the change in parenting role, parents face many complex problems [3]. The psychological state of the parents (primary caregivers) affects the child's behavior's and feelings. Children who have a better relationship with their parents and whose parents show less stress have fewer behavioral problems and follow better treatment programs [4]. Literature also shows psychological distress symptoms in these parents, which are associated with low quality of life, functional disability, and somatic disorders [5]. Psychological distress refers to the emotional state and symptoms of depression and anxiety [6]. On the other hand, in pursuing pediatric cancer treatment, parents are involved in negative behaviors and need resilience. Therefore, resilience leads to increased flexibility, adaptation to different situations, reduced negative emotions, and increases life satisfaction [7].

Given that parents of children with cancer play a key role in child care, it

is necessary to use appropriate psychological interventions to help children with cancer and their parents [8]. One of the most effective interventions in this field is the reality therapy approach based on the choice theory founded by [9]. Reality therapy is a method based on common sense and emotional conflicts. The emphasis is on reality, accepting responsibility and recognizing right and wrong things and their relationship with their daily lives. In reality therapy, [9] emphasizes confrontation with reality, accepting responsibility, and ethical judgment about the effectiveness or inefficiency of behavior. According to the choice theory, each person has five basic needs: love and belonging, freedom, progress and power, entertainment and survival. According to this theory, each person can feel empowered, confident, self-respecting, and finally happy when he can effectively meet his basic needs [9]. Previous studies provide evidence to answer this study's question, including [10], in their research showed that reality therapy based on the choice theory has been effective in controlling patients' emotions and life expectancy [11]. Showed that group reality therapy education has a significant effect on increasing mental health and happiness and improving parents' quality of life with children with disabilities.

A review of the literature shows the effectiveness of reality therapy on anxiety and depression as well as the resilience of mothers with children with cancer [12-15] use the approach of choice theory/reality therapy to determine its effectiveness in relieving women and men who have lost their children (in any age range) either recently or in previous decades. This study showed that it is possible to improve these people's feelings with the approach of choice theory/reality therapy at least temporarily. They showed that people with child mourning experiences could benefit from

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understanding the principles and concepts of choice theory/reality therapy. Therefore, according to the above and review of the research literature, whether reality therapy is effective on resilience and psychological distress in parents of a child with cancer?

Methods

Participants

The present study was an experimental study with a pre-test and post-test design with a control group. The present study's statistical population included all parents of children with cancer admitted to Amirkabir Hospital in Arak in the spring of 2020. Thirty-five people were selected by the available sampling method (15 people for each intervention and control groups and five people for eliminating the possibility of losing subjects) and randomly assigned to the intervention and control groups. The test power was calculated to be more than 0.8 ($P=1$), indicating the sample size's adequacy. The research process can be briefly summarized in four stages. First, 30 subjects were selected and randomly assigned to two groups of 15 individuals. The first group received reality therapy in one of Arak city's counselling centers following the health protocols. The second group was compared without experimental intervention. Tests were performed in the pre-test stage. Before each test, the test instructions were provided to the subjects. The average age of the participants was between 32 and 53 years. Inclusion criteria were: Diagnosis of cancer for one of the subjects before entering the study, no mental disorders or serious physical and mental illness, and not attending to other psychotherapy and medication sessions at least one month before the study. Exclusion criteria were absenteeism in more than three sessions of medical counselling sessions.

Research tools

Connor-Davidson Resilience Scale (CD-RISC): This questionnaire has 25 items and was prepared by [16] to measure resilience to pressure and threat by reviewing research literature in the field resilience from 1979 to 1991. Scoring is done between zeros (completely incorrect) to four (always correct). The highest score is 100, and the lowest score is zero. The authors believe that this questionnaire can distinguish resilient from non-resilient individuals in clinical and non-clinical groups and can be used in research and clinical situations. According to [17], the reliability and validity coefficients of the scale in Iran were 0.89 and 0.41-0.64, respectively. These values are in line with the reports.

The kessler psychological distress scale(KD 10): This special scale for identifying mental disorders in the general population has been developed by [18] in two forms of 10 and 6 questions and used in various studies. These two forms' questions are scored as "never" to "always" and from 0 to 4. Therefore, the maximum score in k-10 is equal to 40. The 10-question questionnaire describes a person's level of anxiety and depressive symptoms over the past few weeks. Various studies have shown that the k-10 questionnaire has good validity and reliability [19]. This scale was also standardized in Iran by [20]. Cronbach's alpha and reliability coefficients were 0.93 and 0.91, respectively. This instrument's content validity was reported to be good, and the reliability was obtained by Cronbach's alpha method equal to 0.78. In this study, for the first group, the intervention was performed as reality therapy in 8 sessions as follows. This intervention is taken from Glasser's book quoted by [9] (Table1).

Sessions	Objectives of the meetings	Content of meetings and assignments
1	Communication therapy	Familiarity with members, written commitment to confidentiality, presentation of goals by members, expression of happiness by the therapist
2	Introduce why and how we issue behaviour, identify our needs and how to meet them	Introduce five basic needs and help to identify needs. Preparing a list of behaviours by patients in order to help satisfy their basic needs and thus a sense of adequacy and value

3	Assess the perception and perception of the disease	Addressing the previous session's task, evaluating patients' perceptions and perceptions of their disease and its complications and consequences, evaluating patients' perceptions and perceptions of their addiction.
4	All behaviours are general behaviour. What is your current choice?	Ask a question to express the experience of success in one of the parts of life. Task: A basic behaviour based on which you want to change life and identify its components.
5	Filling the gap between what I want (the desired world) and what I have (the received world), what ways their creativity has suggested.	Check the assignments, specify the goals
6	How changing their perceptions helps them make better choices. Recognizing the pattern of using factors in key life interactions	Introducing destructive behaviours of human relationships, introducing constructive behaviours and the task to do it during the next week
7	What is the psychology of internal and external control? How the quality of communication can be improved by applying the choice theory.	Assignment review; Question: Do members think their behaviour is under external or internal control? Explanations on how to control behaviour by teaching the ten principles of choice theory Task: Provide a list of behaviours that are under internal and external control and strategies to control behaviours
8	Prepare a practical plan and select an action and commit to it.	Help to the individual in order to develop an objective plan to avoid the use of external control and develop a practical plan to optimally change the practice and thinking related to the disease and do effective work and discuss the goals and the extent to which people achieve them, a complete overview of all programs implemented and final summary.

Table 1. Description of reality therapy sessions.

The second group did not receive any intervention. Then post-test was comply with ethical standards at the end of the study and after collecting post-test data, the subjects in the control group underwent eight sessions of reality therapy.

Statistical analysis

Data analysis was performed using the statistical test of analysis of covariance and SPSS software version 23.

Ethical considerations

The present study's ethical considerations were as follows: All individuals received written information about the research and participated in the research if they wished. Individuals were assured that all information is confidential and will only be used for research purposes. Also, for the sake of privacy, the names of the participants were not registered.

Results

According to education and age, the subjects' distribution was as follows: 11 people had a university degree, and 19 people did not have a university degree. The mean age of the participants was 41.22 years. The scores of the experimental group's dependent variables, compared with the control group, from pre-test to post-test, are presented in Table 2.

Group	Reality therapy (mean \pm SD)		Control (mean \pm SD)	
Variable	pre-test	post-test	pre-test	post-test
Resilience	38.93 \pm 3.78	43.33 \pm 4.27	38.53 \pm 4.53	38.73 \pm 4.07
Psychological distress	28.93 \pm 6.35	21.01 \pm 5.03	26.66 \pm 5.00	25.86 \pm 4.78

Table 2. Information of variables in pre-test and post-test by experimental groups.

Considering that the normality of data distribution and homogeneity of variance is the main presuppositions of covariance analysis, before presenting the results of the analysis of covariance, the Shapiro-Wilk test was used to examine the normality of data distribution (Table 3).

Variable	Resilience		Psychological distress	
	Statistics	Significance level	Statistics	Significance level
Reality therapy	0.95	0.63	0.88	0.06
Control	0.95	0.57	0.89	0.07

Table 3. Shapiro-Wilk test result.

Due to the observed level of significance, the default of normal data distribution was established. Leven's test was also used to investigate the equality hypothesis of the dependent variable error variance (Table 4).

Variable	F	Degree of freedom (1)	Degree of freedom (2)	Significance level
Resilience	0.82	2	42	0.44
Psychological distress	1.89	2	42	0.16

Table 4. Leven's test results on the equality assumption of the variance of variable scores.

According to the results obtained from the Leven test, it can be said that the groups were homogeneous in terms of variance in the research variables ($P > 0.05$). The univariate one-way analysis of covariance test for investigating the independent variable's effect on each of the dependent variables is reported in Table 5.

Dependent Variable	Sources of change				
Variable	Total of squares	Degrees of freedom	Mean of squares	F	Significance level
Resilience	137.53	1	137.53	16.42	0.0001
Psychological distress	1655.08	1	1655.08	95.34	0.0001

Table 5. Results of ANKOA analysis on the mean post-test scores of dependent variables.

As shown in the table above, the univariate test result is significant for each dependent variable ($P < 0.01$). Therefore, it was concluded that the independent variable affects each of the dependent variables separately.

Discussion

One of this study's findings was the effectiveness of reality therapy on resilience in parents of children with cancer, consistent with previous findings [13,15]. In explaining this finding, according to people like [21]. It can be said that resilience skills are learnable. Resilience can be defined as the ability to get out of difficult situations or adjust to them. Resilience is the capacity of individuals to stay healthy, resilient and tolerant in difficult and high-risk situations in which the individual not only overcomes those difficult conditions but also becomes stronger during them. Resilience, then, means being able to succeed, live, and grow in difficult situations (despite risk factors). Reality therapy is a subset of cognitive psychology and positive psychology. The summary of this theory states that man is responsible for

his own choices, decisions, goals, and a word for his level of happiness. Psychological internal control explains how and why we make choices throughout life. According to [7], among the keys to family resilience, we can mention the family belief system that gives meaning to hardships, and misfortunes are one of its components. Families need supportive and caring communication to increase their abilities. One way to build resilience is to take care of you and make supportive connections with your friends and peers. Talking to friends or family can provide emotional support in situations where resilience is needed. Reality therapy training can lead to appropriate thinking and empower people to deal with the problems ahead in a healthy way, or in other words, increase their resilience.

This study also showed that reality therapy effectively affects the psychological distress in parents of children with cancer. In explaining this finding in line with previous research [11,12,14]. It can be said that reality therapy offers a method that helps people to control their lives effectively, to take responsibility for emotional problems, and to help create positive emotions by knowing the right things from the wrong and identifying the needs of people in the process of life. Since distress is an aspect of reducing brain self-regulation [12]. And on the other hand, self-regulation is one of the goals of reality therapy; this method has been able to reduce the level of psychological distress. Due to excessive anxiety, people may sometimes limit the choices that come to their minds in dealing with events and may not choose useful solutions for themselves and do the easiest thing. When people can see more options for an event in front of them, they make more effective choices according to their circumstances [9]. In the field of child's illness, as it is considered an important event in parents' lives, reality therapy has helped these parents use more efficient interpretations and feel less psychological distress.

Conclusion

Based on the findings of the present study, it can be concluded that in the family environment, which is, in fact, a limited society, the actions and reactions between members, especially in times of crisis and illness, have a significant effect on reducing or increasing problems. In such critical situations and medical treatment for the affected child, their parents also need such interventions to cope with the situation and help their child more effectively. Due to the effectiveness of reality therapy, it is recommended that this treatment be used comprehensively and widely in medical centers for parents and the treatment of their child. Also, it is recommended to investigate the durability of treatment in the follow-up phase.

Study Limitations

The present study has some limitations that should be considered when interpreting the results and generalizing to other groups, including the fact that the participants in the present study were parents of children with cancer; therefore, more research is needed to generalize the results to other populations, such as parents of children with other diseases. Another limitation of this study was the sampling method, which reduces its generalizability. It should be noted that the type of health care and insurance can affect psychological characteristics.

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