



**INVESTIGATING THE EFFECTIVENESS OF LOGOTHERAPY BY GROUP
METHOD ON RESILIENCE IN MOTHERES**

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ABSTRACT

This study aims at investigating the effect of logotherapy by group method on the resilience in mothers with children, who suffer from cancer, in Tehran City. This research has experimental method and uses the pretest-posttest two-group way. Accordingly, 20 mothers with children who suffer from cancer referred to Mahak Society are randomly put in two 10-subject groups based on inclusion and exclusion criteria and evaluated through the research tools. The research tool includes Connor-Davidson Resilience Scale (CD-RIS) (2003) which is a common tool in the field of resilience and has confirmed validity and reliability in several studies. The research data is analyzed by analysis of covariance (ANCOVA). The results of statistical analysis indicate the significant difference in components of resilience in mothers, who have received the logotherapy treatment, in experimental group with a group who has not received any treatment in this field (control group). ($p < 0.05$)

Keywords: Logotherapy, Resilience, Cancer

INTRODUCTION

Nowadays, the cancer is one of the most important health problems worldwide and if it is increased with this trend, 1 out of 5 people will certainly suffer from a kind of cancer according to the UN estimates. The cancer statistics follows the same rule in Iran. After the cardiovascular diseases, the cancer is the second cause of death in America and the third cause of death in Iran [2].

The childhood cancers are more diverse than the adulthood, but despite the fact that more than 200 types of cancer exist for childhood, leukemia (1.3 from the total cancer diagnoses) and brain/spinal tumors (1.4 from the total cancer diagnoses) are the most common malignancies (Nelson, 1999, quoted by Shaheni-Yeylagh and Akaberian[4]). Despite the increase chance of long life for some children with cancer, the emotional/ affective impact of diagnosis and cancer experience for the child, family and community is strong and stable in most of the cases. Regardless of medical results, the family requires the professional supportive care in order to deal with these predictable crises.

The cancer is always along with the image of death, pain and a sense of uncertainty, confusion, and lack of power both for patients and their families. When cancer affects the child, the parents, brothers and

sisters are directly involved in all disease and treatment processes. For most of the parents, it is a shocking incident facing with child cancer and this makes changes in the social texture of core family and may challenge their roles as parents. The cancer represents a new experience in family life cycle and forces the parents to expand or redefine their philosophy of life and death as targets, expectations, hopes and optimism for themselves and their children (Matthew and Pierluigi, 2008, quoted by Zare[5].).

The resilience is the first variable investigated on mothers with children who suffer from cancer in this study. The resilience refers to the individual's response to stressful life events or continuous exposure to stress (such as the war and sexual exploitation) (Najmeh et al., 2012). The resilience will allow the person to take the advantage of his adaptive skills and even make into stressful situations as the opportunity for learning and growth and control or inhibit the stress in the person by focusing on the problem. The resilience moderates the levels of stress and inability in stressful situations and is in fact a dynamic process of adaptation and positive adjustment to adverse and unpleasant experiences in life (Pourafzal et al, 2013). The resilience is a factor which helps the people to face and deal with difficult and

stressful life situations and protects them against the mental disorders and problems of life. The resilient individuals have high adjustment to environmental stressors in their lives [1].

Logotherapy focuses on meaning of human existence and also his search for meaning. According to the principles of logotherapy, the effort to find meaning in life is the main driving force of every person during his life [3].

According to this study, the logotherapy consists of 8 regular discussions and organized assignments which help the participants to make desired changes in increasing their resilience.

Therefore, according to the above-mentioned issue, this study indicates whether the logotherapy treatment increases the resilience in mothers with children, who suffer from cancer, or not.

MATERIALS AND METHODS

This research has experimental method and uses the pretest-posttest two-group way. Accordingly, 20 mothers with children, who suffer from cancer, referred to Mahak Society are randomly put in two 10-subject groups based on inclusion and exclusion criteria and evaluated through the research tools. The research tool includes Connor-Davidson Resilience Scale (CD-RIS) which is a common tool in the field of resilience and has confirmed validity and reliability in

several studies. The research data is analyzed by analysis of covariance (ANCOVA).

RESULTS

The descriptive data of resilience scale is presented in Table 1-4 based on the pre-test and post-test separation in experimental and control groups.

As shown in Table 1, the mean of experimental group is lower in post-test than the pre-test. According to the results of table, it can be described that the logotherapy increases the mothers' resilience.

Statistical analysis of research hypothesis

In this study, the effect of group logotherapy is investigated on the resilience in mothers with children, who suffer from cancer, and the questions associated with research subject designed and it is assessed by the univariate analysis of covariance (ANCOVA) and through at statistical SPSS software at all stages.

The use of parametric statistical methods requires confirming the test hypotheses in order to apply the target test; therefore, we first investigate the hypotheses of covariance of variance including the independence of observations, normal distribution of dependent variable, homogeneity of variances, the linear relationship between the dependent and

covariate variable and the equality of regression slopes in different groups.

Independence of observations

Being independent means that each person's score in dependent variable is independent of all other subjects' scores; this was true because the subjects' responses to questions were not affected by other subjects.

Single-sample Kolmogorov-Smirnov test

(data normality test)

H₀= The data come from normal society

H₁= The data does not come from normal society

H₀ = P > 0.05

H₁ = P < 0.05

According to the results of table 2 and the obtained significance levels of research variable greater than 0.05, the null hypothesis is confirmed and the variable data is normal; the parametric tests can be applied for variable test.

Equality of variances

Levene's test is utilized for investigating this hypothesis and its results are presented in Table 3.

Equality of regression slopes

This hypothesis means that the regression coefficient of dependent variable from the covariate variables is the same in groups.

The analysis of variance (F test) is used to verify this hypothesis for each component.

Table 1: Descriptive data of resilience according to the separation of measurement stage in groups

Factors Statistical indices		Pre-test	Post-test
Experimental group	Number	10	10
	Mean	39.70	47.70
	Standard deviation	10.54	13.21
Control group	Number	10	10
	Mean	39.20	39.40
	Standard deviation	9.89	10.29

Table 2: Single-sample Kolmogorov-Smirnov test

Variables Index	Resilience
Z	0.69
P	0.72
Significance level	0.05

Table 3: Levene's F test for investigating the equality of variances in control and experimental groups

Variables Index	Resilience
df1	1
df2	18
F	0.18
sig	0.67

As shown, the hypothesis of equality of variances is true for variable (p > 0.05).

Table 4: ANOVA for investigating the equality of regression coefficients in research variables

Statistical index Variables	SS	df	F	sig
Resilience* group	0.49	1	0.02	0.92

Table 5: Analysis of covariance for research hypothesis

Statistical index Variables	SS	df	F	sig	Size effect	Test ability
Pre-test	1536.95	1	32.15	0.001	0.65	0.99
Group	334.07	1	6.98	0.02	0.29	0.76
Error	812.75	17				
Total	40469	20				

According to the results of table 4 and since the calculated F coefficients for interaction of pre-test and group are not significant in any variable ($P > 0.05$), there is no significant difference between the regression coefficients of dependent and covariate variables in both groups, and this the equality of regression coefficients is true in both experimental and control groups for all scales.

According to the all proposed assumptions, it is found that the data of this research is able to enter into the analysis of covariance, and thus the differences between two groups can be analyzed in dependent variable.

Hypothesis test

The group logotherapy increases the resilience in mothers with children who suffer from cancer.

According to the results of table 5 and the excluded effect of pre-test variable and calculated F value, it is found that there is a significant difference between the adjusted mean scores of participants' resilience in

terms of membership in "control and experimental" groups in post-test ($P < 0.05$). Therefore, according to modified mean and results of table, it can be concluded that the null hypothesis is rejected and the group logotherapy in experimental group has the greater impact on mothers' resilience than the control group. This "practical significance" impact is equal to 0.29; in other words, 29% of the total variance or individual differences in mothers' resilience belong to the group logotherapy. Furthermore, the statistical analysis ability in this study implies that the null hypothesis is correctly rejected by the probability of 76%.

DISCUSSION

Statistical analysis of first hypothesis indicates that there is a difference in mothers' resilience component, who have received the group logotherapy therapy in experimental group, with a group who has not received any kind of therapy in this regard (control group) ($p < 0.05$). This findings is consistent with the results of

research by Hedayati (2006); Kouhi (2008), Zarandi and Goudarzi (2008), Hosseinian, Soudani and Honarmand (2009), Gholami, Pasha, and Soudani (2009), Ghorbanalipour (2010), Rasouli and Borjali (2011), and Rafiei (2012) inside our country, and the abroad research by Stein and Britpart (2000), Britpart et al (2004), and Noguchi et al (2006) about the effectiveness of logotherapy on increasing the resilience.

According to the justification of this finding, it should be concluded that the resilience is defined as the power or ability to go back to the early life and the beginning of new situation by reducing the stress, or distorting it and replacing the joy. The resilience is also considered as the ability to improve the mental health of issues like this. Moreover, the cancer is always along with the image of death, pain and a sense of uncertainty, confusion, and lack of power both for patients and their families. When cancer affects the child, the parents, brothers and sisters are directly involved in all disease and treatment processes. For most of the parents, it is a shocking incident facing with child cancer and this makes changes in the social texture of core family and may challenge their roles as parents. The cancer represents a new experience in family life cycle and forces the parents to expand or redefine their philosophy of life and death as targets,

expectations, hopes and optimism for themselves and their children. Therefore, when the mothers' children are faced with cancer, they feel that their lives have been empty and immediately doubt the meaning of work, love, life and death. Here, the meaning-based treatment is useful for those who are faced with the existential failure or inability to find a "reason for living". According to the main objective of logotherapy intervention, the mothers attend the group meetings and exchange of ideas and opinions and find the meaning of what they have passed to this day, whether pain of child illness or disaster and loss and thus gain the ability and knowledge that the life always has meaning and a meaning and purpose can be found in every events. Furthermore, the group logotherapy sessions create the opportunity for members to identify, understand and release from the obstacles which have hinder their freedom, and experience the above-mentioned processes by full and informed participation. Therefore, their resilience will be increased.

SUGGESTIONS:

- 1- According to the research findings and based on the results of statistical analysis and the effects on mothers with children who suffer from cancer, it is suggested that the psychotherapists should utilize the

group logotherapy training in sick people's parents and relatives in order to improve the mental attitudes, reduce the neuroticism, frustration and skepticism which prevent the will focusing on meaning.

- 2- It is suggested that the additional training should be given to parents for increasing their mental health skills using the logotherapy techniques in addition to social and financial support of children with cancer.

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