

# The Effectiveness of Group Logo Therapy on the Hope among the Leukemic Patients

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## Abstract

**Background:** The present study has investigated the effectiveness of group logo therapy to increase the hope among the leukemic patients.

**Methods:** This research has composed of 80 leukemic patients who have referred to Golestan Hospital in 2012 fall, and then have responded to the Snyder's Hope Scale, The research design has included pre - post - and follow up tests with a control group. First, both groups have responded to the pre-tests. Then the experimental group has received 10 sessions of counseling through group logo therapy; however, the control group has not received any specific training. Afterwards, both groups have undergone a post-test. After an interval of one month, follow-up tests have implemented in order to evaluate the permanency of the given tests. The SPSS software and covariance analysis tests have used in order to analyze the resulted tests data, and Cronbach alpha method has measured reliability coefficient.

**Results:** The research results have shown that logo therapy training might increase the hope of the leukemic patients ( $p < 0.0001$ ); moreover, permanency assessment of this study has shown the same result ( $p < 0.0001$ ).

**Conclusion:** Group logo therapy could be effective on the hope of the leukemic patients, and then this effect would be permanent.

**Keywords:** Logo therapy; Group Counseling; Hope; Leukemia

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## Introduction

An important question has often treated in clinical psychology during the 20th century, either in academic or social fields was:

"What is the problem of the people?" Along with this question, a lot of attention has given to the dark side of the human's psyche.

But now within the present century, the more overcoming question is:

"What are the negative and positive things of the people?"

This question has placed through the heart of positive-oriented psychology, which has focused on strengths and weaknesses, and then would be an emotional strength that led imagination toward positive points. Hope has given us flexibility, vitality and special energy against the blows imposed by life. Hope has defined not only as the perceived ability to produce clear objectives, but also paths to achieve those goals (strategic thinking) and motivation to use the strategies [1]. "the data has reported by Bahari et al. in his book:." the Basics of hope and hope-therapy", focuses on scientific

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description and explanation of hope, and its effect on prevention and treatment the physical and mental problems such as anxiety and depression, and then minding the evidences which have explained that hope would be much effective through all the life periods, especially against problems and difficulties, then has led to creativity and tolerance [2]. Therefore, hope could be the same as motivation and thinking based on following a certain goal. Hope-therapy is a positive motivational state, based on the state has driven from a kind of successful engagement and action which has based on energy (internal energy for self-objectiveness), and then routed and scheduled in order to achieve the goals, or the recess [3]. Snyder et al. has considered hope as the common therapeutic factor. He has purposed his theory about hope for the first time, and has considered it as a combination of animus strength, objectiveness, barriers recognition, and finally solution findings [4]. In other words, Snyder et al. has considered hope as "set of cognitive impression, resulted from different positions, from various sources (choice of target) and routes (methods chosen to achieve the target)". Therefore, hope or objective

thinking has composed of two connected components, which both could be the path of thinking and thinking resources. Thinking pathways have reflected the person's capacity for cognitive channels to gain the goals, and thought resources have included thoughts that people define about their abilities and capabilities, passing through selected windows to gain a goal. If any of these two cognitive elements hasn't existed, gaining the goal would be impossible. Since the dual elements of hope, i.e. resources and pathways would be an explanatory of goals-oriented thinking process, and the goal-oriented thinking are the central and gravity point of meaning in life from the theoretical point of view, so it could be assumed that hopeful thinking would be the main result of significance in life [5]. Snyder and Feldman et al. have believed that the meaningfulness of life would be a structure that is more widespread than hope, and hope could be considered as an element of meaningful life; so hope could be predictive of body and mental health. Thus, according to the relations between hope and meaning in life, and based on the findings of one decade research on hope and meaning in life, we have suggested that there is a kind of guaranteed empirical relationship between hope and meaning [5, 6].

Although cancer has led to several mental disorders, but it has recently specified that mental pressures have a profound impact on acceleration the development and growth of various malignant tumors. The data reported by Frankel et al. hold out that: Patients with cancer, who have seriously faced with death, would be necessary for the better understanding and insight about their lives, because facing the death has led them to a state of emptiness, futility and meaninglessness of life [7]. Cancerous Patients should not only fight cancerous tumors, but also would fight family problems (such as sexual dysfunctions, inability to perform family roles and social disruptions), then affording the treatment costs and finally job activities disabilities. All mentioned items have required skill-training, and new trainings or new methods which the patient could not carry out him/herself, therefore needed support by others such as psychotherapist.

One of the common treatment approaches to reduce despair in the patients with incurable diseases would be logo therapy. When humans faced with an inevitable condition or an irreversible destiny, such as a patient with incurable disease or cancer, s/he could sense the deepest meaning in life with highest

value, which would be the suffering! Sometimes the best aspects of human existence would be suffering, then the most important things would be the practices and attitudes towards suffering, and the way that s/he have carried out the burden of life. One of the basic principles of logo therapy would be that it has attracted the people's attention to the point that the main motivation and purpose of life could not escape neither from pain nor enjoying all the time, but looking for meanings of the life would be the point that made sense [5]. The aim of this study was investigation of group logo therapy for increasing the hope among leukemic patients.

## Materials and Methods

The present study was half-experimental with test and control groups and pre-post tests and purposive follow-up tests. First, the leukemic patients have accustomed with the group Logo therapy constitution program, in coordination with the hospital. Among the patients who have volunteered to participate in group therapy sessions (80 people), 20 patients have met the study entry criteria, the conditions have selected purposefully and randomly divided into test and control groups. The spss software and covariance analysis test has used in order to analyze the resulted test data and Cronbach alpha method has used to measure reliability coefficient. This paper has registered in the "Iranian registry of clinical trials" under code number IRCT2013052813496N1.

## Statistical Population

Statistical population of this research has selected from the 80 leukemic patients in Golestan Hospital (Ahwaz), who have been treated in 2012. The samples of the researches have included 20 patients out of whom have selected by purposive sampling method and randomly divided into 2 tenper groups (control and test). The entry criteria have included the willingness to participate in group logo therapy sessions, ability to communicate and interact in group, establish to cut-off score in hope scale, ability to participate in the sessions according to the time schedule. The exception criteria for participants have included: 1-score containing over than cut-off point, based on research tool, 2-simultaneous participation in psychotherapy sessions, 3-chronic mental containing or physical illness, which impedes patient's interaction and communication in the group.

**Table 1.** General research design

group	Pre-test	Independent variable	Post-test	Follow-up test
test	T1	×	T2	T3
control	T2	—	T2	T3

## Session protocol

<b>Session 1</b>	Goals: Determination of goals and rules in the group – Getting accustomed with the other group members and advisors- Definition and explanation of logo therapy ,and its necessity in life- Summary: definition and explanation of logo therapy and its necessity in life by an example- task : in order to involve them in the class contents. Task presentation among the group members in order to meditate about the session contents, then finding out and sensing the” work, love and leisure and...” meanings.
<b>Session 2</b>	Goals: believing and accepting ourselves, recognizing self-characteristics – deep attention to intellectual freedom as one of the imminent human rights- summary: review over the tasks and homework from the previous session
<b>Session 3</b>	Goals: understanding of responsibility and its roles in acquisition of success- summary: personal responsibility is one of the aspects of human rights, but it is related to us to give our lives a meaning- if freedom has not accompanied by sense of responsibility, then it would change to authoritarian. Task presentation: imagine one of your failure or success conditions. Whose have you named responsible for that? How have you felt about it? How much could you accept the responsibility of your own behaviors? Specify the behaviors, accept what you have done under the expectations control or the rules of the others, then finally set down the results.
<b>Session 4</b>	Goals: acquaintance with causative stress factors, and also coping ways- Stress understanding- summary: reviewing the tasks from the previous session and providing feedback; anxiety against fighting has resulted from the surviving fear; we could reduce the stress in our lives through the reduction of selections, and improving, then reconstruction of our lives; task presentation: express your feeling and opinion about spending the life; count down, with priority orders, Specifying some of the valuable manners that you never had , worried about them.
<b>Session 5</b>	Goals: Necessary to maintain the identity and relationships with others; reviewing the homework of the previous sessions, then providing feedbacks; talking about different aspects of love, and the way of reaching the life meaning, and also saying that “it must be remembered that love is a completely human phenomenon, which we must be aware to preserve its human aspects.
<b>Session 6</b>	Goals: investigation the meaning of suffering- summary: one of the basic principles of logo therapy is to attract the people’s mind to this fact that” the main motivation and goal in life would not be to escape from pain or endless enjoying, but it would be seeking for giving a real meaning to the life. Therefore, people who could cope with difficulties of the life if they have supposed to give a meaning to the life.
<b>Session 7</b>	Goals: making sense with creative values; summary: logo therapy has suggested three ways to reach the life meaning which corresponded to the three fundamental value systems: creative values, empirical values, orientation values; creative values that have realized by activity were usually dependent on a kind of action; created by a tangible thing or an idea or helping others, to be able to give his/her life a meaning.
<b>Session 8</b>	Goals: recognition of empirical values; summary: explanation of empirical values as showing interest into the nature or art world. Experiencing the severity and depth of life aspects, independency from any positive act, the meaning of life could be achieved. Task presentation: feel yourself beside a nature landscape and enjoy as much as you can. Determine three of the works that you want to do and evaluate its values, and then change them if necessary. How have you felt about them? Have you felt proud or ashamed?
<b>Session 9</b>	Goals: recognition of propensity values; summary: reviewing the homework of the previous session, then providing feedback; Situations which require orientation values would be the ones that we could not transform or avoid them, in other words the inevitable conditions of fate. Facing with such situations, the only reasonable answer would be acceptance. The way we have accepted our fate, the courage we have shown for suffering and the dignity we have carried out when a disaster happened. The final test and measure would be our success as a human being. Task presentation: imagine that you are in a situation of illness or death. How could you find a meaning? So Do some acts according to your new demands , and its complying values then note the results.
<b>Session 10</b>	Goals: summary and conclusion of the sessions; Summary: review over the homework of the previous session, then providing feedback; reviewing the topics of the 2 <sup>nd</sup> session up to 9 <sup>th</sup> session, holding a post-exam (life expectancy questionnaire)

The mentioned criteria, and also hope scale should be studied via clinical and selective interviews, prior to beginning of the group therapy sessions. First, the pre-test has performed on sample group. Then the experimental group has under gone logo therapy intervention which has composed of ten 45-

minutes sessions, then after finishing the intervention, a post-test has taken for both groups. After one month, in order to investigate and determine the permanency of the intervention effect the Snyder’s Hope Scale has implemented for both groups.

### Validity and reliability of the research tool

In order to measure the variant alternatives, Snyder's Hope Scale has been used. The following tool has acted in domains of life from completely disagrees, 1 score, to completely agree, 8 scores. Agentic thinking subscales have consisted of four questions: 2, 9, 10 and 12; pathway subscales consisted of 4 questions 1, 4, 7 and 8; questions 3, 5, 6 and 11 have been misleading questions [8]. Snyder et al. has reported its validity amount, 0.85, through retesting after 3 weeks for operational subscale, 0.81, and for pathways, 0.74 [9]. Lopez and Snyder have reported scale internal consistency by Cranach's alpha, 0.74 to 0.84, and its reliability coefficient by retesting method, 0.80 [10]. Among the Iran's student population, its validity has calculated by Cronbach's alpha for total scale, 0.82, and for agentic subscale, 0.79, and for pathways 0.88 [11]. In another study the validity of this scale has calculated by Cronbach's alpha, 0.70, and by retesting after one month, 0.74 (Khalaji) and internal consistency has calculated by Cronbach's alpha for pathway subscale, 0.62, and for agentic thinking, 0.74 [9, 12]. In a research that has conducted by Golzari on 660 girl students in Tehran, the permanency of Snyder's Hope has studied by internal consistency method and Cronbach's alpha coefficient of 0.89 has achieved [13]. In assessment of concurrent validity of hope scale, since hope and mental health have related together (Feldman& Snyder) their relation has investigated by the health related factors, suicidal thoughts. Sheikholeslami, et al, has realized social support Nasiri and Jokar and meaning of the life [13]. The results have shown that the relation between hope and suicidal thoughts

were negative which related consistent with the findings of Roswarski & Dunn and Meadows et al. [14]. The above finding has suggested that hope scale has shown good divergent validity. In explanation of these findings, according to Hana et al.: hope is an important factor for despair, depression and suicide understanding, and then it is more related to suicide rather than despair. A hopeful person has wanted to live because he has found the future pleasant and graceful for him/her, as known that life conditions could be changed, and then s/he has tried more rather than killing him/herself to consider the future as the most positive thing [15]. Snyder's hope scale could be an appropriate and credible tool to use among the Iranian society; thus this Scale could be used in research field, student researchers, counseling centers and training workshops. In the present study, the permanency coefficient has varied between 0.89 and 0.94 for the entire scale

### Results

In test group, the women subjects have accounted for approximately 50% of the samples, and man subjects have accounted for about 50% of the samples, then in the control group man and woman have equally selected. In the test group, subjects between 31 to 40 years old had the majority, with about 50% of the sample, then subjects with between 41-50 years old, and 51-60 years old had the lowest frequency with about 10% of the sample, then in control group subjects between 31-40 years old had the majority with about 40% of the sample, and subjects between 51-60 years old had the lowest frequency with approximately 10%

**Table 2.** Mean and standard deviation for the leukemic patients in Pre-post and follow-up test scores (n=20)

Variable	Phase	Groups	Mean	SD
Hope	pretest	test	22.20	5.80
		control	22.00	4.71
	Posttest	test	49.80	4.75
		control	25.10	6.19
	Follow-up	test	47.90	5.02
		control	25.70	3.71
pathway thinking	pretest	test	12.50	3.53
		control	12.90	3.98
	Posttest	test	26.80	2.82
		control	11.40	2.45
	Follow-up	test	9.70	2.37
		control	8.90	3.71
agentic thinking	pretest	test	9.70	2.54
		control	8.90	2.37
	Posttest	test	23.00	2.21
		control	13.70	2.17
	Follow-up	test	22.10	2.76
		control	10.10	2.92

of the sample.

As it have been seeing in table 1, the average of parameters such as hope increase, controlling increase, and will increase in pre- test stage had a considerable change in test group in comparison to the control group. Also these changes were not significant in follow-up stage, with respect to the post test stage for the test group. In order to compare these two groups and determining whether the obtained differences in two groups was statistically

significant or not, the covariance analysis test has used. The First necessary assumptions for covariance analysis test usage have included normal score distribution, as well as Kolmogorov-Smirnov test, the equality of the variance of these two groups have used levene's test, a test for homogeneity of regressions hope, and linearity of the relationship between pre-test and post-test, which have confirmed and then the covariance analysis test has used.

**Table 3.** The results from one-way covariance analysis among the leukemic patients hope post-test scores in test and control group with pretest control

Source of variation	Sum square	of Df	Mean square	F. value	P. value	Eta squared	power estimate
pretest	222.04	1	222.04	11.56	0.003	0.40	0.893
Group	3016.53	1	3016.53	157.08	0.0001	0.90	1.00
Error	326.45	17	19.20				

**Table 4.** Multi-variable covariance analysis of the mean of hope among leukemic patients post-test, in test and control groups with the control of pretest

	Value	df	Df error	F value	P. value	Eta square	power estimate
Wilk's lambda	0.063	2	15	110.91	0.0001	0.93	1.00

**Table 5.** The results from covariance analysis in man covariance content on the mean scores of hope increase factors among leukemic patients post-test in test and control groups with the control of pretest

Variable	Variation source	Sum of square	df	Mean squares	F	P. value	Eta square	power of estimate
Way power	group	1221.64	1	1221.64	236.40	0.0001	0.93	1.00
Will power	group	411.00	1	411.00	83.03	0.0001	0.84	1.00

As it could be seen in table 5 with pretest control, there is a significant difference in terms of pathway thinking between the leukemic patients and control groups (F=236.40 and p<0.0001). After

controlling the pretest, there would be significant difference between leukemic patients, and control group in terms of agency (will) thinking (F=83.03 and p<0.0001).

**Table 6.** The results from one-way covariance analysis (Ancova) among leukemic patient hope follow-up test scores, and control group with pretest control

Source of variation	Total square	df	Mean square	F	P. value	Eta squared	power estimate
Group	2446.13	1	2446.13	150.60	0.0001	0.89	1.00

As could be seen in table 6 at follow-up stage with the control of pre-test there is a significant difference between leukemic patients of

experimental and control groups in terms of hope increase (F=150.60, p<0.0001).

**Table 7.** The results from multi-variable variance analysis (mancova) on the mean amount of follow-up test scores for the hope factors among the leukemic patients in test and control groups with the control of pretest

Test name	Value	Freedom degree of hypothesis	Freedom degree of error	F value	P. value	Eta squared	power estimate
Wilk's lambda	0.087	2	15	79.17	0.0001	0.91	1.00

**Table 8.** Mancova analysis on hope rate follow-up tests among leukemia patient in experimental and control groups

Variable	Variation source	Sum square	of df	Mean squares	F	P. value	Eta square	power estimate
Way power	group	506.13	1	506.13	166.39	0.0001	0.91	1.00
Will power	group	646.50	1	646.50	76.29	0.0001	0.82	1.00

As it could be seen in table 8 with pre-test control, there was a significant difference in terms of pathway thinking between the leukemic patients, and control groups at follow-up stage ( $F=166.39$  and  $p<0.0001$ ). After controlling the pretest, there is significant difference between leukemic patients and control group in terms of agency thinking ( $F=76.29$  and  $p<0.0001$ ). As a result of group logo therapy, they have considered the mean of agency, and have thought the leukemic patients group in follow-up tests. Respecting of control group, it has caused an increase in agency thinking in comparison to the patients of experimental group.

## Discussion

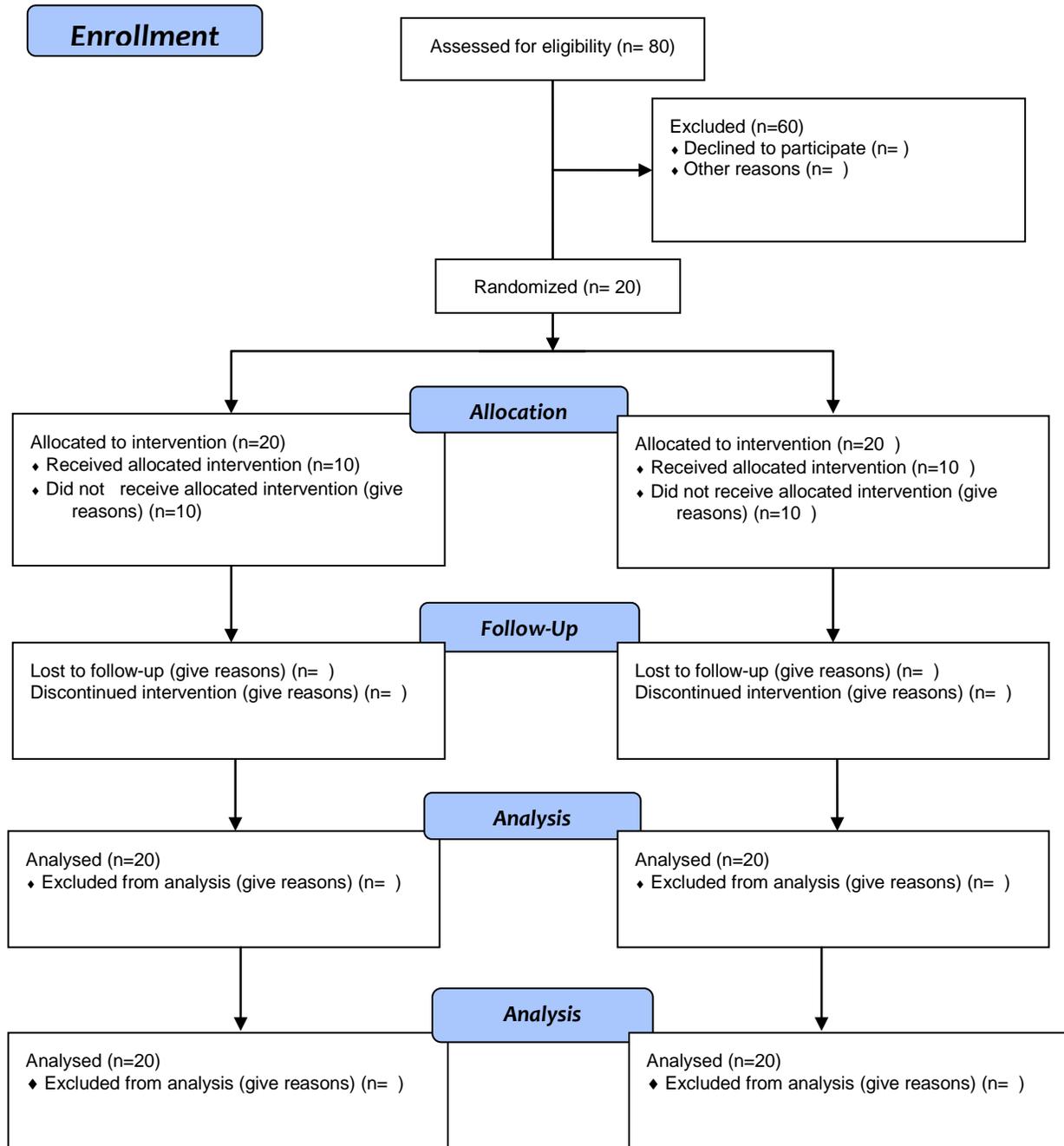
the research results has shown that logo therapy could be effective for increasing hope expectancy as well as it's sub-scales on leukemic patients, and also follow-up represented that effectiveness of logo therapy on increasing hope expectancy, as it's sub-scales was constant. Also results have shown that sex variables and marital status would not be effective on hope increasing in leukemic patients. The research results would be compatible with the results of the research by Hoseinian et al., who has found that group logo therapy might increase hope in leukemic patients [16] and also compatible with the research by Roudini, and Bijari et al., who have concluded that group logo therapy would be effective for improvement of mental health, future hope, social functionality, changing the attitude, and reduction of despair [17, 5], and also compatible with the research by Ebadi et al. who has found that two rational-emotional and reality-therapy strategies were effective on the hope level among the cancerous patients, and also compatible with the research by Sozovich who has suggested that logo therapy might improve the mental and social function of the soldiers suffering from PTSD, caused by war. Also it was compatible with the research by Sotoudeh who has found that hope-therapy was effective on all of the life quality aspects among the hypertensive patients [18], and it is somehow

compatible with the research by Thomson, Cocker and Henry who have quoted from Bijari et al. which have shown that logo therapy had a very strong effect on improvement and the consistency of life quality for disabled people with spinal cord injury [5]. Other researches such as Irvine et al, Snyder, Crow son and Irving and Chiones, Feldman, Gam, Michael and Snyder also have confirmed the findings. The results of the present study were in line with the research by shahbolaghi [19], and Sobhanifard [20], Hosseini [16], Alavi et al [21], Havasi [22], Barabadi [16, 19-23].

In determining the important outcome of logo therapy, theoretical and philosophical concepts should be included first. Logo therapy has targeted the hope, then has caused life expectancy increase among the cancerous patients. Ovoun has enumerated some features such as goals organization in life, positive personal characteristics, renewed future description, and meaningfulness of life, peace and energy among the hopeful cancerous patients [24]. Harriet also has suggested that hope is one of the key factors for coping strategies in cancerous patients life. In this therapeutic approach, treatment has caused awareness increase; awareness was one of the actual aspects of human rights like freedom and responsibility, death and mortality and permanent need to earn or obtain the value, meaning and goal [25].

## Conclusion

The result of this study has indicated that transiency and finalization not only were one of the main features of human life, but has also accounted for the actual reason of its meaningfulness and the meaning of human existence have based on the doubtless nature of death. Our life has given us valuable experiences that could be known as the gifts of life. For example the existence of beauties such as sunrise and sunset, mountains and seas, flowers and trees are all gifts which have given us without any charge. The sample people of this study have realized that death was not the end of life but they could enjoy their present life by using the



**Figure 1.** Consort 2010 Flow Diagram

available opportunities and possibilities, and then living with each other and considering the given trainings, finally they have understood that even though they could not change the certain events of their lives, but they could learn to change their method, which they would fight the problems and difficulties ,and have reflected against the painful events of life. There upon, when we have found the meaning of life in our experiences and events of our

lives, we could control worry and anxiety sense, and then offered our lives the meaning and the hope.

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### Conflict of Interest

The Authors have no conflict of interest in this article.

### Authors' Contribution

Nazila Ebrahimi has conceived and designed this study; Farshad Bahari and Nazila Ebrahimi have interpreted the results and drafted the manuscript, then gathered the data and approved the final manuscript; Mehdi Zare Bahramabadi has participated in writing and revising the manuscript. All authors has read and improved the final manuscript.

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