ORIGINAL ARTICLE

Evaluation effect of Logotherapy group on Mental health and hope to life of Patients with Colorectal Cancer receiving Chemotherapy

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ABSTRACT

Cancer is a second leading cause of death in developed countries and the third leading cause of death in Iran. Suffering cancer and Awareness that is life threatening, for patients and his family, is a big challenge. The recovery and re-adjustment of this kind of disease, requires professional intervention to relieve the pressure caused by disease.To investigate the effect of Logotherapy group on mental health and life expectancy of patients with colorectal cancer receiving chemotherapy.In this pilot study, review was conducted on patients undergoing chemotherapy in Qazvin Kosar Hospital.Then Selected35 patient and divided randomly in two groups: control group (18) and treatment group(17). Then clinical data were investigated. Groups using the General Health Questionnaire (GHQ-28) and life expectancy at Schneider pre-and post-test and follow-up of 6 months were assessed. Treatment group received 8 session Logotherapy group. Collected data were analyzed as paired and independent t-test using software SPSS-13. The Significant differences were observed between two groups in post-test GHQ-28 averages in Visualization, function, depression and overall scale (P≤ 0.05). Significant difference was appeared between the groups for hope scale (P≤0.01). After 6 months of follow up, no significant differences in the scale of test GHQ-28 and hope scale were observed.Psychological interventions, particularly in the treatment Logotherapy group can effectively increase the sense of psychological adjustment and improvement of patients with life-threatening illnesses. A considerable benefit of using Logotherapy is,it can be decreases psychological symptoms of colorectal cancer. Increasing the hopefully level in patients as a major variable key will affect the patient's physical health probably. Evaluation 6 months after the intervention showed that it is essential to continue interventions to improve patients' health.
Key Words:*Logotherapy, Mental Health, Hope, Colorectal Cancer*

INTRODUCTION

Cancer is one of threatening disease for life that may cause many changes in physical and psychological equilibrium, life, relationship and social activities . Cancer is second cause of death in developed countries and the third leading cause of death in Iran and responsible for twenty percent of the deaths. Colorectal cancer is one of the most common types of gastrointestinal cancer in Iran. This kind of cancer is the third highest cancer among Iranian men and fourth among Iranian women. Although the essence of life is an undeniable fact, but cancer challenged the life as a regular and continuous process. Challenge which can be caused Psychological issues, Anxiety, depression, and fear of death and despair in mental health. This problem can appear as a crisis in advanced stage of the disease. The cancer patients, who are informed of their impending death, often after the denial and anger, became depression and feel loss, injury, failure, despair and hopelessness, helplessness, isolation, feelings of worthlessness nonsense. The hided death message of cancer, for patient are means short opportunities, incomplete work, loss of interests, no

affairs. These circumstances intensify the physical and psychological symptoms of disease and patients became panic anxiety and fear. When life passes in anxiety, immune system activity comes down and patients lose them usefulness activity, so consequently the rate of disease will be increased. Thus, neglecting of psychological complexities of cancer will prolong hospitalization, medical treatment disorder, and at the end, the chances of survival time and quality of life will be decreased. Frankel believed that death is not threat, but makes human ready to obtain his well done life experience and give him an opportunity to do his most meaningful works [1]. In his view, cancer patients who are facing with serious deathrequire adequate preparation background to understand vision of a better life. In facing with death, they encounter to emptinessand meaninglessness of life. Frankel said that reality is the essences of the life [1] and Yalom believe that humans need meaningful life [10]. Meaningful of life allows human to interpret event and their wishes about life, living and provide their values. Many of the patients in early stages of disease try to find real meaning of life, or tolerance against suffering from this disease. The rate of disease reception and its reaction by patients are very effective on cancer treatment and the consequences of disease process. From the Logotherapy point of view the face of death is not meaningless life, but temporarily lives, it is meaningful and human responsibility to remind him that. Since humans in both health and disease, is a single biological, psychological, social and spiritual unit. Therefore, it is worthy for further treatment to avoid a unilateral treatment. Logotherapy sense can look at particular aspects of human existence. Logotherapy is an effective step to improve mental health, stress reduction, life expectancy, and disease control and ultimately eliminate cancer. Various studies have been done for this subject showed importance of this treatment in clients. The research has been conducted by Kong et al 2009showed that in adolescents with cancer, Logotherapy reduce pain of disease and finding positive meaning in their lives [7]. After studying the problems of cancer patients, researcher showed that training of Logotherapy reduced their stress.Logotherapy treatment (meaning life experience) in cancer patients has a direct relationship with psychosocial adjustment and negative relation with stress. Nagochy et al (2006), Showed that psychotherapy addressing to meaning is effective in patients with chronic diseases [4].Yalom showed that cancer patients in group therapy session try to deal with his death [10]. This kind of death illustration causes that patients appear with a new thinking and better look of life. Nagochy et al (2006) approved the effect of Logotherapy on physical ailments. They showed that Logotherapy group is effective in improving mental health of a men contaminate with HIV and improve the physical and social function, reduce anxiety and depression in this group of patients [4]. The effectiveness of Logotherapy group on variables item such as mental health and adjustment have been shown by pourebrahim et al [19]. Fakhr et al 2008 showed that Logotherapy group can be affected on increasing the life expectancy of disabled people with spinal cord which were damaged by the earthquake in Bam city [18]. Bijari et al 2009 Investigated the rate of depression in patients with breast cancer and method of its control. They concluded that Logotherapy is an effective method for this kind of patients [17]. In this research, has tried to investigate the effect of Logotherapy approach on the mental health and increasing optimism in these examined colorectal cancer patients.

MATERIAL AND METHODS

This pilot study carried out as a randomized clinical trial. The target population for this study consisted all of the patients with colorectal cancer who were admitted to the center of chemotherapy in Qazvin Kosar hospital in 2010. Among them, samples of 38 patients randomly selected.Then, patients were tested by General Health Questionnaire GHQ-28 and Schneider life expectancy. Afterwards, based on scores obtained from pretest, members were matched. Regarding to previous studies, the number sample were chosen 7 and regarding to d=30, s=33, $\beta=0.2$ and $\alpha = 0.05$ coefficient in formula, 19 patients were selected in each group.

$$n = \frac{2 S^2 \left(Z\alpha_{/2} + Z_\beta \right)^2}{d^2}$$

Samples were selected from patients who referred to the center of chemotherapy in Qazvin Kosar hospital at 2009-2011 and were willing to cooperate. They sign an agreement and entered the study. Patients that having minimum education (Middle school), aged 65-25 years, being in stage 3-1 colorectal cancer progression and awareness of self, time and location were key criteria for enter to the study in both group. Entering to stage 4 of disease (end stage), previous psychiatric diseases and major stressful events (divorce, death of family member) were exclusion criteria during of this study. Samples divided

into two groups of subjects randomly.The treatment group was treated by therapeutic methods . Prior to the assignment of patients to join treatment and control group, they were not aware the type of intervention (control group or the intervention). Patients were fully justified the medical intervention and were treated for 8 weeks. The intervention was Logotherapy group that consisted of 8 sessions. Two patients from treatment and one person from control group were lost among the study. Each session will run for 120 minutes weekly. General Health Questionnaire (GHQ-28) and life expectancy Schneider were providing before and after intervention and at the end of a six-month follow-up period, from all subjects (control and study). In order to apply independent variable, Logotherapy group sessions with newest methods of Logotherapy (MCGP -2010) were performed. The content of each session was as followed:

The content and purpose of the meeting	General title	Meeting
Meet with other members of the group; Stated objectives, Charter Law Group, setting goals, request members to provide mutual feedback with the aim of forming a relationship. Evaluation of the impact of cancer on patients' physiological function and body image. Heredity plays. Impact on the response of a person with cancer	Introduction and Cancer	First
That mean, the two experiences of every member who makes their life has meaning	The mean	Second
Member identity before and after a cancer diagnosis, they are (the reality of) people's beliefs about their expressiveness and self-disclosure to facilitate dialogue between its members and members in relation to their own feelings	Consciousness	Third
Asking members to share their life history, knowledge about it, expressing significant and signifying memories, relationships, customs and traditions. His point of view	Sources of meaning in life	Fourth
Users familiar with the concept of freedom, limited right choice. Detoxification discuss death and facing death anxiety: family issues after the death, burial, perceived barriers to new concepts, death, good and meaningful future goals	Reference sources say	Fifth
Sense of responsibility as the ability to recognize the truth. Asking members to express their responsibilities and who is responsible for the liability. How often in your life have the courage to make their lives? What significant commitments towards things in life are worth living? Unfinished works.	Creativity as a means	Sixth
The concept of love, beauty and fun (and creative approach focuses on the areas of active life, but experimental resources focused on passive components), positive body image, sense of vitality	Experimental sources of meaning	Seventh
Review of the experience gained during eight sessions, a new sense of meaning in life, and a point of asking members whether they are able to apply these concepts. How Hope to the future?	Transition	Eight

General Health Questionnaire GHQ-28:
Goldberg adjusted the questionnaire health public for first time in 1972, which widely used in order to detect minor psychiatric symptoms. The questionnaire health public was used in different situations. In this review Goldberg & Hillier Form has been used. The form has four sub-scales and minor scale has seven questions which are: somatic symptoms, anxiety symptoms, social functioning, and symptoms of depression. Palhang et al have calculated the reliability of this form well-nigh 91%.For grading simple, Likert method (0,1,2,3) is used. Schneider life expectancy questionnaire (hopefully) includes 12 scales and designed for ages 15 and older.It consists of two subscales passage and motivation, that can be answered the question in short time (2 to 5 minutes) (Schneider and Peterson, 2000). To answer any questions, continuum from 1 (completely false) to 4 (completely true) is considered. Questions 3,7 and 11 are not graded and are related to distraction . Questions 1, 4, 6 and 8 subscales of the passage and questions 2, 9, 10 and 12 are related to motivation subscales. Hopefully score is the sum of the two subscales. Thus, total scores can be placed 8 to 32. Data were analyzed by using SPSS-13 and compared with dependent and independent t-test. Patients participating in scheme were purely voluntary and there was no compulsion. The experimental group and control group was allowed to leave treatment at any stage of the project. In addition, group members were free to enter to the intervention group at the end of intervention group and will receive treatment sessions. All documents and records confidential questionnaire was only available for executives. Informed consent was obtained from all volunteers .Attitudes and religious beliefs respected individuals in treatment. Before start, research characteristics and regulation of medical intervention were described for each patients participating in the scheme. With

adequate explanations about the importance of treatment or lack of meaning, attempts have been done to reduce or lack of participant incentive in among of study.

RESULT AND DISCUSSION

As a Table 1 shows, Post-test mean scores of control group in visualization, anxiety, depression, and total yield significantly increased compared to pre-test (P≤0.05) and in depression scale, showed significant difference (P≤0.01). The significant difference was observed between the groups in measurements of anxiety and overall scale at less than (P≤0.01) but it's became significant in function scale and depression scale at less than (P≤0.05). Thus, mental states of patients have to improve. However, after 6 months, no significant differences were observed in any of GHQ-28 test scales. It is worth noting that at this stage, both groups were faced with the loss at the number of participants in each group and was reduced to 14.

Table 2 shows that there were a significant difference between mean effect of treatment and control group in using GHQ-28 post-test in visualization scale, performance, and overall scale of depression at the level of (P≤0.05). There were no significant differences for Anxiety subscale using post-test comparison.

As table 3 shows, no significant differences were observed between pre-test and post-test in control group and treatment group after 6-month through Schneiderhopefully test. The mean pre-treatment and post-treatment on treated and control group have not significant differences at level of (P≤0.05). There was no significant difference between the follow-treated group, in average performance of early intervention and post-test (6 months after end of intervention).

As Table 4 shows the difference between the two groups in Schneider hopefully scale test, is significant at (P ≤ 0.01).

In this study, the results showed that medical intervention (Logotherapy group) can eliminate inefficient mechanisms for improving lifestyle and provide a better meaning. Results showed that intervention was significantly decreased in treatment group symptom in subscales visualization, performance, depression, and overall scale using the GHQ-28 test. Although there was a decrease in anxiety scale, but it wasn't significant.

In control group, there was no decrease in test scores, but the symptoms of anxiety subscales, performance, severe depression and general scale and their scores had increased significantly. These findings confirmed the significant effect of intervention Logotherapy group practices in promoting mental health of patients with colorectal cancer who are undergoing chemotherapy. The follow-up period of 6 months after intervention revealed that,patients' condition worsens and mental health is declining. There was no significant difference between average score of pre-test and post-test and were not significantly difference between follow-up phases. Continuing for intervention in treatment group is suggested. Similar results obtained in this study has been reported by Fakhar, He said: Logotherapy group increased mental health, reducing anxiety, stress, and social interaction impairment in older women, but the effect of this approach on somatic complaints and depression, was not significant [18]. Pourebrahim usedLogotherapy group, and said that this treatment reduced depression in the elderly, although this decrease is not significant (19).

Affleck et al (1996) showed that Logotherapy was ineffective in improving relationships and quality of life couples surveyed were stricken, this inconsistency was probably due to the demographic characteristics and methodology [16].

Shoakazemi et al [5] Stated that individuals participating in group therapy, anxiety decreases, and thus can be more successful, more effective, more confident, and adaptive function. Gholami reported that Logotherapy group is a way of increasing life expectancy and general health of patients with Thalassemia major influence captures of Teenage girl (18-15 years). A similar finding was noted by Hezarveisy. He studied application of Logotherapy collaborative style in increasing life expectancy of patients with breast cancer were investigated and found positive results . Numerous studies of Young and posters showed that hope is an important contribution to healing various illnesses [11, 12].

In explaining why the effect of intervention on the follow up treatment is not continuum? Can be said that due to depth of concern, it doesn't seem that the approach existence can be effective quickly and have short-term effects, and have be changed basically worldview that shaped by decades of life during the past few sessions. This method of treatment help patientsto a deeper and broader level of awareness in their own existence, the concerns of human existence focus, are deeply rooted; such as anxiety: death, freedom, and loneliness, and meaninglessness.

According to the results of this study shown, it seems to be that inherent treatment is suitable selective to answer intrinsic anxiety, those are activated. Based on requirements arising from life-threatening diseases, it appears that the major components in achieve original self, is a basic factor in Logotherapy group. Comparison of two group mean in hopefully index indicated that wasn't significant difference in Schneider hopefully test at pre-test and post-test. Hopefully level at post-test in control group was

reduced, but this reduction was not significant. In the experimental group the hopefully level was significantly increased. In following stage the difference that showed, wasn't significant, so suggests that, continuous intervention is necessary. In other word,along with all the ongoing medical intervention to restore spiritual health of patients, continuous psychological intervention or variety ofLogotherapy (existential psychotherapy) seems necessary.In general, individuals with mental health and good hopeful more focused on problems and its solution, more actively. They also are more likely to perform cancer screening behaviors. The results of this study indicate that interventions should be continuous and permanent and any interruption interventions are ineffective in the long run it.

Table 1: The mean and standard deviation of the GHQ-28 test groups before and after the breakdown of the overall scale and subscales.

Significant level.	t-test	Standard deviation		Average		Traits	Group
		Post-test	Pre-test	Post-test	Pre-test		
0.013	-2.77	3.9	3.29	9.78	7.5	Visualization	Control
0.046	-2.14	3.42	4.08	10.06	8.72	Anxiety	
0.145	-1.52	3.27	3.06	10.44	9.33	Function	
0.007	-3.05	2.84	3.71	5.22	3.94	Depression	
0.016	-2.66	12.13	10.06	34.94	29.5	Total	
0.269	1.14	4.44	3.6	6.59	7.41	Visualization	Treatment
0.009	2.99	4.11	5.39	7.82	9.94	Anxiety	
0.011	2.85	4.08	4.78	7.71	10	Function	
0.018	2.64	2.88	3	3.12	4.59	Depression	
0.002	3.63	11.61	12.78	25.24	32.71	Total	
0.101	0.716	3.8	3.6	8	7.41	Visualization	Follow-treated group
0.464	0.599	2.94	5.39	2.93	9.94	Anxiety	
0.472	0.734	4.84	4.78	4.93	10	Function	
0.339	1.32	12.54	3	31.43	4.59	Depression	
0.934	0.388	12.78	12.78	29.57	32.71	Total	

Table 2: Mean comparison of GHQ-28 post- test between the two groups (control and treat) separately, the overall scale and subscale.

Significant Level	t-test	Standard deviation		Average		Traits
		Posttest	Pretest	Posttest	Pretest	
0.05	2.26	19.71	15.21	6.59	9.78	Visualization
N.S	1.75	16.89	11.7	7.82	10.06	Anxiety
0.05	2.20	16.64	10.69	7.71	10.44	Function
0.05	2.16	8.29	8.06	3.12	5.22	Depression
0.05	2.42	134.79	147.14	25.24	34.94	Total

Table 3: Mean comparison and standard deviation using Schneider hope test between two groups (control and treatment) before and after medical intervention.

Significant Level	t-test	Standard deviation		Average		Group
		Posttest	Pretest	Posttest	Pretest	
0.06	-2.01	2.57	3.18	28.47	26.65	Control
0.03	2.24	2.94	3.28	26.06	24.89	Treatment
0.09	1.05	2.48	6.88	26	23.93	Follow-up treatment

Table 4: Comparison of mean and standard deviation in both groupsatSchneiderhopetest

Significant Level	t-test	Standard deviation		Average		Traits
		Treatment	Control	Treatment	Control	
0.01	2.61	8.64	6.6	26.06	28.47	Hope

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