Original Research

The Effectiveness of Group Cognitive-Behavioral Therapy on Quality of Life in Patients with Psoriasis Skin Disease

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Abstract:

Background: Psoriasis is a chronic skin disease, unpredictable and has a recurrence period, and its complications cause disability and psychosis in patients. This research was conducted to determine the effectiveness of cognitive-behavioral group therapy on the quality of life of patients with skin disease of psoriasis.

Method: The present research was a semi-experimental study with a pre-test post-test with a test and control group. The sample of this research was 30 patients with psoriasis who were referred to Spadana Specialized Clinic of Surgery and Laser Diseases. They were available selected and they were randomly assigned control (n = 15) and experimental (n = 10) groups. The experimental group received a cognitive behavioral group training in 7 sessions of 100 minutes with a median time interval of 6 days. Subjects completed a questionnaire of 36 quality of life questionnaires before and after intervention. Data were analyzed using covariance analysis.

Results: The mean scores in the experimental group were significantly different from that of the control group ($P<0.05$). The intervention group had significantly better scores compared with the control group, indicating the effectiveness of the intervention.

Conclusion: Group-based cognitive-behavioral therapy can be used as an effective intervention on the quality of life of patients with skin diseases of psoriasis.

Keywords: Cognitive-behavioral therapy, Quality of life, Psoriasis

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Introduction

Auto-immune diseases are one of the most common chronic, progressive and costly diseases in the world. The clinical course of many skin diseases is due to the interaction among biological, psychiatric, and psychological factors that accelerate, predispose or perpetuate skin diseases (1). Epidemiological studies show that over a lifetime, one-fourth to one-third of people have at least one skin disease (2). Psoriasis, which is referred to as a type of psychotic disorder, is a skin inflammatory disease with symptoms in the form of scaly red plaques in different parts of the body that is equally prevalent among men and women and affects approximately 1 to 3% of the population (3). Factors that cause and aggravate this disease can be factors such as infections, psychological factors, physical injuries, and some drugs, and in some cases hormonal and metabolic factors of sunlight. Studies in the UK show that men and women with this disease die on average 3.5 and 4.5 years earlier, respectively (4).

One of the most troublous and painful aspects of this disease is the feeling of lack of control of the disease by the patient, so it is necessary to examine the disease with a comprehensive approach physically and mentally (5). In general, due to its chronic, painful, and debilitating nature, this disease has profound effects on quality of life. Stress in psoriasis (as a debilitating disease) is a major cause of disability and could have a great impact on patients' quality of life, disease severity, and response to treatment (6). Having a life of high quality has always been a human desire. For this reason, various definitions of good life and quality of life have been proposed by thinkers and researchers (7). Quality of life means how a person evaluates different aspects of their life. This assessment includes everyone's emotional reactions to life events, the feeling of fullness of life, satisfaction with it, and happiness with the job and personal relationships (8).

Assessment of quality of life-related to health is based on understanding individuals' health and is essentially a clinical indicator of patients' treatment progress. The quality of life of a person significantly affects its social and physical performance and is a part of the definition of "health" of the World Health Organization. Health-related quality of life is also increasingly used as an indicator in cost-effectiveness models, which are used to determine the relative value of urgency and access to treatment (9).

In today's world, improving the quality of life in people with physical disabilities is a goal in rehabilitation (10). To discover the relationship between psoriasis and psychological factors, it has been determined that drug treatment ways have not had a major effect on psychiatric symptoms and the quality of life of patients. Therefore, according to the confirmed effect of psychological factors in the incidence of this disease, psychological interventions in reducing symptoms and improving the quality of life of patients seem necessary (11). In recent decades, third-generation psychological therapies have been developed, and extensive research has confirmed the usefulness of these therapies in chronic physical conditions. The third generation of psychological therapies provides skills and strategies that allow patients to accept their own abnormal experiences and stay in touch with the present (12). Psychologists and mental health experts have used a variety of psychological approaches and methods to improve the quality of life. The cognitive-behavioral approach is one of the most popular and valid approaches in psychological therapies in this field (13). With the help of this treatment, a person by changing their behaviors, feelings, and attitudes, can replace their irrational belief system and abnormal behaviors with realism, a sense of efficiency, and increased alternative activity (14). Many studies have confirmed the effect of cognitive-behavioral therapy on the

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quality of life of chronic diseases (15, 16, 17, & 18).

According to the studies, a few types of research has been done on the effectiveness of cognitive-behavioral therapy on the quality of life of patients with psoriasis, and also considering the importance of psychological interventions in reducing the problems of chronic diseases. The present study aims to investigate the effectiveness of a cognitive-behavioral intervention on quality of life in patients with psoriasis.

Table 1. Summary of goals and content of cognitive-behavioral therapy sessions

Sessions	Target
First Session	Increase motivation: motivational interview for patients' participation and involvement during treatment, presenting treatment logic, and setting treatment goals
Second Session	Defines stress and identifies physiological reactions to stress, and also identifies negative thoughts
Third Session	Recognizes the types of irrational thoughts
Fourth Session	Challenging irrational thoughts, and replacing rational thinking
Fifth Session	Introduction to coping stress strategies, identifying coping stress strategies
Sixth Session	Diaphragmatic breathing training - training of emotion-oriented strategies
Seventh Session	Relapse prevention, an overview of treatment concepts, and discussion of improvement and therapeutic advances

Research Method

This research is a quasi-experimental study including test and control groups with pre-test post-test design in terms of practical purpose and data collection. In the present study, individuals with psoriasis skin disease were randomly divided into test and control groups, and a cognitive-behavioral intervention design was performed in the test group. The statistical population of the research consisted of all patients referred to the specialized surgery and laser clinic of Espadana skin with a diagnosis of psoriasis skin disease. The prototype of the research consisted of 44 patients who were referred by a physician in the first stage, and all of them were interested in participating in the research; after the screening, based on inclusion criteria (The person being treated for his disease: 1- Should be under the supervision of a doctor 2- Should be willing to participate in sessions 3- Psoriasis should be moderate according to the doctor 4- Do not have psychological disorders), and exclusion criteria (1- Do not participate in sessions for more than two sessions 2- Do not interested to participate in sessions), 35 people were found eligible to participate in the research. After telephone contact with these individuals, 5 of them refused to attend the sessions, and as a result of this drop, the final sample consisted of 30 people

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Table 2. The mean and standard deviation of quality of life scores and its subscales by group's membership

variable	group	Pre-test		Post-test	
		Mean	Standard Deviation	Mean	Standard Deviation
Physical function	**Test**	24/98	2/99	25/26	2/76
	Control	24/46	4/42	23/60	4/17
Restrictions on role-playing due to physical health status	**Test**	2/86	1/24	2/88	1/19
	Control	2/16	1/66	1/88	1/47
Restrictions on role-playing due to emotional problems	**Test**	1/33	1/11	1/93	1/22
	Control	1/00	0/92	0/825	0/787
Energy and vitality	**Test**	12/0	1/25	12/60	1/05
	Control	13/73	2/76	13/67	2/19
Emotional health	**Test**	15/23	2/02	15/53	1/64
	Control	15/60	3/13	15/50	2/84
Social Performance	**Test**	5/93	1/09	6/8	1/01
	Control	5/93	2/21	5/47	1/77
Pain	**Test**	8/07	2/08	8/12	1/99
	Control	6/66	1/95	6/34	1/72
General health	**Test**	14/06	0/59	15/86	0/915
	Control	14/13	3/09	14/70	1/81
Total score of life quality	**Test**	84/59	6/32	89/01	6/27
	Control	83/69	4/47	82/02	4/33

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Table 3. Results of analysis of covariance about the effect of group membership on quality of life

Variable	Sources of change	Degree of freedom	Mean squares	F	Meaning	The amount of difference	Statistical power
Physical function	**Pre-test**	1	284/99	117/41	0/000	0/813	1/000
	Group Membership	1	11/32	4/664	0/040	0/147	0/549
Restrictions on role-playing due to physical health status	**Pre-test**	1	30/332	400/925	0/000	0/603	1/000
	Group Membership	1	1/774	2/393	0/133	0/081	0/320
Restrictions on role-playing due to emotional problems	**Pre-test**	1	0/041	0/037	0/849	0/001	0/054
	Group Membership	1	8/754	7/991	0/009	0/228	0/778
Energy and vitality	**Pre-test**	1	39/334	24/49	0/000	0/476	0/998
	Group Membership	1	0/083	0/052	0/822	0/002	0/056
Emotional health	**Pre-test**	1	85/042	34/69	0/000	0/562	1/000
	Group Membership	1	0/325	0/132	0/719	0/005	0/064
Social Performance	**Pre-test**	1	31/65	32/08	0/000	0/543	1/000
	Group Membership	1	13/15	13/32	0/001	0/330	0/940
Pain	**Pre-test**	1	83/027	153/77	0/000	0/851	1/000
	Group Membership	1	2/206	04/085	0/053	0/131	0/496
General health	**Pre-test**	1	25/47	21/11	0/000	0/439	0/993
	Group Membership	1	10/53	8/73	0/006	0/244	0/813
Total score of life quality	**Pre-test**	1	260/13	12/68	0/001	0/320	0/929
	Group Membership	1	314/35	15/32	0/001	0/362	0/965

who were randomly divided into test (15) and control (15) groups. The subjects of this research completed the quality of life questionnaire (SF-36) in two stages of pre-test and post-test.

Research Tools

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Quality of Life Questionnaire in Short Form with 36 Questions (SF-36): This questionnaire is a valid questionnaire that is widely used to assess the quality of life. This form was designed by Varosherbon in the United States. In Iran, this form was translated into Persian by Montazeri et al. (2005) using the method of translation and re-translation and was standardized on 4,163 people in the age group of 15 years and above (mean age 35.1 years), which 52% of whom were women. The reported reliability coefficient for the subscales was from 77 to 90%, except for the vitality subscale which was 0.65. Overall, the findings showed that the Iranian version of this questionnaire was a suitable tool to measure the quality of life. The questionnaire (36-SF) consists of 36 questions, 35 of them were summarized in 8 subscales of several items: Eight scales (36-SF) were summarized in two dimensions of physical health and mental health. The first four subscales included physical function, physical role, physical pain, and general health in the "physical health" dimension, and the last four subscales included vitality, social function, emotion role, and mental health in the "mental health" dimension (19).

After holding a briefing session and explaining the conditions and content of the research and intervention program, the test group underwent 7 sessions of 100-hour (once a week) cognitive-behavioral intervention, while the control group was placed on a waiting list, due to the observance of ethical standards after the end of the post-test study, the intervention program was implemented for the control group, as well. A summary of cognitive-behavioral intervention sessions is provided in Table 1.

To order to analyze the data obtained from the research questionnaire, descriptive statistics indicators such as frequency, percentage, mean, standard deviation, and standard error of the data were used; and then inferential statistics were used to analyze covariance using SPSS-23 software.

Results

The mean and standard deviation of scores of quality of life and its subscales in terms of group membership are presented in Table 2.

Table 3 presents the results of the analysis of covariance comparing the test and control groups according to the adjusted quality of life scores after controlling the pre-test scores. The results of this table showed that by eliminating the effect of pre-test scores, there was a significant difference between the adjusted mean scores of physical function, role limitation due to emotional problems, social performance, general health, and quality of life of participants in terms of group's membership (test and control groups); However, treatment did not affect the limitation of role-playing due to physical health, energy and vitality, emotional health and pain, and it was concluded that cognitive-behavioral group therapy affected the quality of life of patients with psoriasis.

Discussion

The findings of the present study show that cognitive-behavioral group therapy has a significant effect on the quality of life of patients with psoriasis. This finding is consistent with the findings of Alipour et al. (20), Fathi et al. (21), Bundi et al. (22), and Fortune et al. (23). Alipour et al. in their research entitled "The effect of group cognitive-behavioral therapy on the severity of the disease and mental well-being of patients with psoriasis" showed that group cognitive-behavioral therapy did not affect improving the physical symptoms of psoriasis (severity, extent, and itching rate), but this method is significant in improving the psychological status of patients as a mediating role in the onset, exacerbation, and recurrence of the disease. In this regard, the research of Fathi et al. showed that the group cognitive-therapeutic method could be useful as a method of choice psychotherapy and complementary medical treatment in helping patients with psoriasis to control the clinical symptoms of the

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disease, and also reduce the consequences of psoriasis. The results of Bundy et al. and Fortune et al. also showed that the quality of life of patients with psoriasis due to cognitive-behavioral interventions improved.

Explaining these findings, it could be stated that people with psoriasis have negative automatic thoughts and cognitive distortions due to anxiety, stress, and abnormal schemas. One of the aspects of cognitive-behavioral training is identifying their thoughts and cognitive distortions and teaching them how to replace dysfunctional thoughts with positive thoughts, which also helps to manage anxiety, stress, and depression in people and thus improves their quality of life. The purpose of this method is to identify anger triggers in response to illness and training anger management strategies to improve the quality of life of these patients. In cognitive-behavioral group therapy, people are trained to learn the useful and harmful sources of social support and how to expand the social support network, which also helps to increase their quality of life (24); Therefore, the use of cognitive-behavioral therapy through stress management leads to reducing anxiety and depression and increasing the quality of life in people with psoriasis (25).

Conclusion

According to the results of research, cognitive-behavioral group therapy is also effective in reducing stress and consequently quality of life through how to manage stress, how to respond to stress, accepting stressors and how to deal with stress.

Considering the limitations of this research, it would be concluded that cognitive-behavioral group therapy could be useful in improving the quality of life of patients with psoriasis. Small sample size, lack of follow-up test, and poor cooperation of patients were the most important limitations of this research. It was suggested that due to the importance of lifestyle and its correlation with mental health, workshops related to increasing the quality of life should be held by health psychologists. The effectiveness of other psychological interventions along with drug treatment was also recommended for these patients.

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