



The Difference Between the Effectiveness of Self-Care Training and Mindfulness-Based Stress Reduction Therapy on The Health-Related Quality of Life of Patients with Rheumatoid Arthritis

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A B S T R A C T

Almost most of the treatment interventions for chronic pain, including drug interventions, surgery and cognitive therapies, have been aimed at eliminating pain, but sometimes these treatments do not help and may be more harmful than useful. In recent decades and in the third generation of psychological treatments, new treatments have been developed that use the meditation method to help with side effects, special conditions such as rheumatoid arthritis, a solution under the titles "mindfulness-based stress reduction" and "self-care training" have been used. Accordingly, in this article, the effectiveness of these two treatments on the quality of life of patients has been compared. The effectiveness of self-care training on the quality of life related to the health of patients has had a significant effect, and the stress reduction training based on mindfulness has also had a significant effect on the quality of life related to the health of patients; There was also a significant difference between the effectiveness of the two interventions on the health-related quality of life of the patients, so that the stress reduction training based on mindfulness had a higher effectiveness.

Keywords: Self-Care Training, Mindfulness-Based Stress Reduction Therapy, Health-Related Quality of Life, Rheumatoid Arthritis.

INTRODUCTION

Epidemiological studies show a combination of various environmental and genetic factors, the intervention of each of which is necessary to cause the disease ([Davey Smith & Ebrahim, 2003](#)); But it is not enough alone ([Rahaman et al., 2021](#); [Savka, 2019](#)). Joint and bone diseases and rheumatoid arthritis in general have a significant social and economic burden due to their chronic nature ([Fazal et al., 2018](#); [Rat & Boissier, 2004](#); [Uhlig, Moe, & Kvien, 2014](#)), accompanying disability and long-term disability. The costs caused by this disease include direct costs such as health care costs (doctor, hospital and medicine), costs caused by the disease (procurement of necessary equipment and arthroplasty) or the need to seek medical care ([Hsieh et al., 2020](#); [Pugner, Scott, Holmes, & Hieke, 2000](#); [Rat & Boissier, 2004](#)). such as patient transfer; Indirect costs or productivity costs (loss of work as a result of disability or death of the patient) ([Batko, Rolska-Wójcik, & Władysiuk, 2019](#); [Codreanu, Mogoșan, Popescu, & Paveliu, 2019](#); [De Azevedo, Ferraz, & Ciconelli, 2008](#)), and intangible costs include: costs associated with disability, pain, suffering and mainly, deterioration of the quality of life of patients ([Rat & Boissier, 2004](#)).

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Nowadays, awareness regarding the initiating or progressive role of stress in the occurrence or change of the course of many diseases, it has been used in the field of disorders related to pain and stress related to it. Due to the limiting role that chronic pain has in all aspects of the quality of life related to the patient's health, mindfulness is also used in the treatment of chronic diseases. Because in the path of mindfulness, the effort is to establish an artistic interaction between physical, cognitive, and emotional processes, which helps people by creating a fundamental change in self-regulation mechanisms, clarifying values, and revealing. They can control their stress by observing unpleasant experiences in a non-judgmental and non-reactive way. In addition to reducing stress, this method helps patients in creating, maintaining and improving coping styles, mood disorders and even improving the immune system.

METHODOLOGY

Among the patients with rheumatoid arthritis referred to rheumatology centers, the patients who met the research criteria were selected and randomly divided into three groups, which included two experimental groups (self-care training and mindfulness-based stress reduction treatment) and There was a control group. The selection of the sample of this research was done in such a way that qualified patients in rheumatology centers were given brief information about the research plan, its goals and the method of treatment implementation; Then, qualified people participated in the research as a sample group. The control group did not receive any intervention. At the end of the sessions, both groups were given a post-test, and after a month, both groups were followed up.

- *Self-care training*: In the process of self-care training, patients have been tried to become caregivers with the minimum ability to protect and understand their illness. In such a way that they act actively in the process of protecting themselves and take responsibility for their personal tasks related to their illness. such as checking medicine, diet and doing daily physical activities according to your physical condition. First, the risk factors and care behaviors of rheumatoid arthritis patients were identified, and according to the studies, the content of self-care treatment sessions was prepared and implemented.

- *Mindfulness-based stress reduction therapy*: Mindfulness training by training to focus attention on one sensation (for example, practicing eating raisins), and perceptions are performed, such as mindfulness on breathing, walking, and body inspection exercises. was concentrated. Each training session focused on one area (movement, taste, smell, taste, touch and vision) and related exercises. The purpose of the simple sensory exercises was to familiarize the subjects with the concept of mindfulness and the benefits and potential benefits of mindfulness in daily life. The continuation of these exercises has been done by encouraging the subjects for weekly home exercises. Basically, mindfulness training teaches people how to remove habitual skills from the automatic mode and prepare them for change by directing information processing resources towards neutral attention goals such as breathing or feeling the moment. The participants of each meeting wrote one of their current concerns and at the same time reviewed and discussed the homework of the previous week. The main techniques

based on mindfulness that were taught to the subjects during the sessions were: mindfulness of bodily sensations, body inspection practice, mindfulness of breathing, body/sounds and objects, mindfulness of eating, mindfulness of daily activities, five-minute looking or listening exercises, mindfulness of mental events (focusing on thoughts, emotions, and mental images), sitting and walking meditation, practicing the relationship between mood, thoughts and attitude, calendar of pleasant and unpleasant events, practicing discovering the relationship between activity and mood, list activity of pleasure and mastery, etc. In this way, the content of 8 stress reduction therapy sessions based on mind-awareness was implemented.

- *Health-related quality of life questionnaire*: this self-report questionnaire, which is mainly used to assess the quality of life and health, was created by Sherbourne, Meredith, Rogers, and Ware Jr (1992), and has 36 statements and 8 domains of physical performance, social performance, physical role performance, it evaluates emotional role, mental health, vitality, physical pain and general health.

The conduct of this research was approved by the Ethics Committee of the Research and Technology Vice-Chancellor of Iran University of Medical Sciences. Written informed consent was obtained from each participant at the beginning of the study. Before starting the work, a full explanation was given about the topic and the method of conducting the study. The participants were assured that their private information is protected and that they are free to leave the study if there is any discomfort at any stage of the research. In addition, participating in this research did not have any financial or life burden for the participants and this research does not conflict with the moral-human standards of the society.

RESULTS

There is a difference between the effectiveness of self-care training and mindfulness-based stress reduction therapy on the health-related quality of life of patients with rheumatoid arthritis. The main assumption of the research was that there is a difference between the effectiveness of health-related quality of life in groups based on self-care training and stress reduction treatment based on mindfulness. In this regard, two sub-hypotheses have been proposed in order to analyze the results more accurately. The sub-hypotheses were as follows. In order to evaluate the research hypotheses from the ANCOVA test Self-care training has a significant effect on the health-related quality of life of patients with rheumatoid arthritis. - Mindfulness-based stress reduction treatment has a significant effect on the health-related quality of life of patients with rheumatoid arthritis.

Table 1. Analyzing results of ANCOVA test to compare the average post-test scores of self-care training and mindfulness-based stress reduction therapy on quality of life related to patients' health

Source	Sum Square	df	Mean Square	F	p	Eta
Group	3135.2	2	1567.6	33.34	0.001	0.712
Error	1269.5	27	47.019			
Total	322057	30				

In evaluating the effectiveness of self-care training and mindfulness-based stress reduction therapy on the health-related quality of life of patients with rheumatoid arthritis, the

results regarding the comparison of post-test scores between the two interventions considering that the value of $F=33.34$ and $p=0.001$ There is a significant difference between the post-test scores of health-related quality of life in self-care training and mindfulness-based stress reduction therapy. In the following, to determine the exact details of the difference in the effectiveness of the two interventions, the results of the Benferoni post hoc test are presented.

Table 2. The results of Benferoni's post hoc test in order to compare the mean quality of life scores related to the health of patients in the groups of self-care training and mindfulness-based stress reduction therapy and the control group.

Groups (i)	Groups (j)	Mean different	p
Mindfulness-based stress reduction treatment	Self-care training	9.4	0.01
Self-care training	Control	15.4	0.001
Self-care training	Control	24.8	0.001

The results of the effectiveness of two interventions on the health-related quality of life of patients showed that the significance level (p) is less than 0.01, and as a result, stress reduction treatment based on mindfulness and self-care training with 99% confidence in improving health-related quality of life Patients are effective. Comparing the effectiveness of self-care training with mindfulness-based stress reduction therapy on the health-related quality of life of patients also indicated that mindfulness-based stress reduction therapy is more effective and significant with a significance level of 0.01 compared to Education is self-care and actually there is a difference between the effectiveness of two variables.

CONCLUSION

Chronic pain almost always causes changes in the beliefs of affected people, which shape the psychological aspects and perception of pain and illness. The probability of engaging in a specific health behavior is determined by two factors: 1. Beliefs about the impact of the disease and its outcomes (perception of risk) and 2. Beliefs about the health behavior and the possibilities and efforts to implement them. Many researches have been conducted with the aim of knowing the contributing factors in the occurrence of chronic pain and all of them equally show that the patient's attitudes, beliefs and expectations about his illness, his resources to deal with the disease as well as the health care system have been effective on the level of expression of pain, disability and the type of patient's response to treatment ([Amiri, Isazadegan, Mahmood Alilo, & Banafsheh, 2016](#)).

Mindfulness-based stress reduction treatment creates conditions that improve the quality of life related to the health of patients and creates better conditions for patients. However, education and self-care programs have an effect on improving the quality of life, but what is certain is that the quality of effectiveness is more effective in the treatment of stress reduction based on mindfulness. Reibel, Greeson, Brainard, and Rosenzweig (2001), have also confirmed that mindfulness-based stress reduction therapy leads to extensive and uniform improvement in patients' quality of life. In fact, knowledge and understanding are two essential factors in better understanding the conditions and environment, which can be transmitted through education and force the recipient to compromise. In fact, the results in this hypothesis

are mostly based on the axis that conscious and mind-based knowledge is more effective than the dos and don'ts that a person learns.

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