

## Original research

## Comparison of the Effectiveness of Short-Term Dynamic Psychotherapy, Schema Therapy, Cognitive-Behavioral Therapy, and Pharmacotherapy in Reducing Pain in Rheumatoid Arthritis Patients with Anxiety and Depression

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**Abstract:**

**Introduction:** Rheumatoid arthritis is the most common chronic inflammatory autoimmune disease. Continuous pain and chronic movement restriction in these patients can cause anxiety and depression. The purpose of this study was to compare the effectiveness of short-term dynamic psychotherapy, schema therapy, cognitive behavioral therapy with drug therapy in reducing pain and pain dimensions in patients with rheumatoid arthritis who have anxiety and depression and inconsistent coping strategies.

**Research method:** The research method was semi-experimental with a pre-test and post-test design and follow-up with the control group. The statistical population was all patients with rheumatoid arthritis with anxiety and depression in Tehran who referred to the rheumatology clinics of Imam Khomeini Hospital in Tehran in the spring quarter of 1400. 80 qualified volunteers were divided into four groups of 20 people according to Cohen's table. The second edition of Beck Depression Questionnaire, Beck Anxiety Questionnaire and McGill Pain Questionnaire were used to collect data. Data analysis was done using repeated measures analysis of variance and Bonferroni's post hoc test at a significance level of 0.05 with SPSS version 26 software.

**Findings:** The results showed that psychotherapies are effective in reducing pain, and schema therapy was the most effective method in reducing perception of pain and various pains in patients with rheumatoid arthritis who have anxiety and depression and inconsistent coping strategies ( $P < 0.001$ ).

**Conclusion:** The use of psychotherapies along with drug therapy can be more effective than drug therapy alone and help reduce the pain of patients with rheumatoid arthritis by treating anxiety and depression and improving coping strategies.

**Key words:** anxiety, depression, drug therapy, pain, Rheumatoid arthritis, short-term dynamic psychotherapy, schema therapy

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**Research Design:** A quasi-experimental design with a pre-test, post-test, and follow-up, and a control group was employed.

**Population:** The population consisted of all patients with rheumatoid arthritis, anxiety, and depression who visited the rheumatology clinics of Imam Khomeini Hospital in Tehran during the spring of 2020

**Sample:** Eighty eligible volunteers were divided into four groups of 20 participants each, based on Cohen's power analysis.

**Data Collection:** The Beck Depression Inventory (second edition), Beck Anxiety Inventory, and McGill Pain Questionnaire were used to collect data.

**Data Analysis:** Data was analyzed using repeated measures ANOVA and Bonferroni post hoc tests at a significance level of 0.05, using SPSS version 26.

### **Research Objective**

The aim of this study was to compare the effectiveness of short-term dynamic psychotherapy, schema therapy, cognitive-behavioral therapy, and pharmacotherapy in reducing pain, and maladaptive coping strategies in patients with rheumatoid arthritis, anxiety, and depression. Depression and anxiety are highly prevalent in patients with rheumatoid arthritis. Given the high prevalence of depression and pain in patients with rheumatoid arthritis, it is recommended that medical teams pay more attention to reducing pain through the management of depression and anxiety in these patients. In fact, depression exacerbates the symptoms of rheumatoid arthritis and leads to impaired important functional outcomes. The presence of depression and anxiety lowers the pain threshold, making individuals more sensitive to physical pain caused by chronic diseases

### **The results of study:**

"The results of the study showed that short-term dynamic psychotherapy was effective in reducing pain, anxiety, and depression in patients with rheumatoid arthritis, and the results persisted at the follow-up stage. This finding is consistent with numerous studies that have demonstrated the effectiveness of dynamic psychotherapy in reducing alexithymia, depression, anxiety, improving mood, and functional somatic disorders in rheumatoid arthritis patients." Breakdown and Explanation. "In explaining the effectiveness of short-term dynamic psychotherapy in reducing pain in rheumatoid arthritis patients with anxiety and depression, it can be said that short-term and intensive dynamic psychotherapy is one of those psychotherapies that significantly helps the patient in rebuilding their personality and is not limited to reducing symptoms. In this therapeutic process, the patient confronts their unconscious conflicts and emotions, emotions that are the product of suppressing and avoiding feelings that have led to intrapsychic conflict and psychological damage. Short-term dynamic psychotherapy helps patients overcome their avoided emotions. In this process, by experiencing painful emotions, the patient practically learns to face their painful emotions so that they can tolerate the painful emotions resulting from the wounds of their past life more healthily. As a result of this process, the patient's tolerance capacity increases, which reduces the patient's symptoms and defensive behaviors, and painful emotions such as

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shame, guilt, anger, depression, and anxiety subside, ultimately leading to a reduction in physical pain in rheumatoid arthritis patients with anxiety and depression."

**Further results** of this study indicated that schema therapy was effective in reducing pain in patients with rheumatoid arthritis who experienced anxiety, depression, and maladaptive coping strategies. Moreover, the results persisted in the follow-up phase, aligning with the views of Young and colleagues and Beck. Recent research has also confirmed the existence of a correlation between maladaptive schemas and chronic pain. For example, Sariyahu and colleagues (2011), in a study of 271 healthy adults and those with chronic pain, found that more than half of those with chronic pain obtained significant scores on maladaptive schemas. They also showed that the most common schemas in men were demandingness, excessive criticism, and self-sacrifice, while in women, the most common schemas were first self-sacrifice and then demandingness. Another study, examining 602 adult patients with chronic pain and healthy individuals, found that those with chronic pain had higher scores on maladaptive schemas, with the schema of emotional deprivation obtaining the highest scores. In another study, Aramesh, investigating 60 female patients with chronic rheumatoid arthritis, showed that firstly, all patients had primary maladaptive schemas. Secondly, patients scored higher on schemas of abandonment, self-sacrifice, punishment, and demandingness, respectively. Furthermore, research demonstrating that schema therapy was effective in reducing depression, anxiety, emotional schemas, and pain self-efficacy in patients with chronic pain and depression in patients with rheumatoid arthritis was consistent"**In addition**, the results of this study showed that schema therapy was the most effective method in reducing pain in rheumatoid arthritis patients with anxiety and depression and coping strategies. Schema therapy led to cognitive, emotional, and behavioral changes. This approach was effective by modifying early maladaptive schemas and correcting the patient's ineffective responses and replacing them with adaptive thoughts and healthier responses. In addition to cognitive changes, schema therapy seemed to be able to reduce patients' pain by expressing patients' suppressed emotions and feelings. Schemas acted as a source of bias in human interpretation of events, and these biases manifested as misunderstandings, distorted perceptions, incorrect assumptions, and unrealistic expectations. Also, the human tendency towards cognitive consistency caused people to always misinterpret situations in a way that reinforced their previous schemas, so participating in schema therapy sessions led to the modification of schemas and consequently reduced pain."

Here's a more concise and easier-to-understand version:"The study found that schema therapy was the most effective treatment for reducing pain in rheumatoid arthritis patients who also experienced anxiety and depression. This therapy helped by changing negative thought patterns and behaviors, and by encouraging patients to express their emotions. By modifying these negative thought patterns, schema therapy helped patients interpret situations more realistically, leading to reduced pain.

**Another key finding** was that the provided training techniques led to cognitive flexibility, the modification of maladaptive beliefs, and a change in the patient's attitude. As a result, patients were able to accept their pain and rationally confront its psychological consequences. By using mindfulness techniques and creating positive schemas, they were able to manage their pain. In

summary, based on the findings of this research, the efficacy of schema therapy has been demonstrated. From a clinical standpoint, patients can be taught to change their beliefs and strive for a better life. **Another result** of this research indicated that there was no significant difference between short-term dynamic psychotherapy and schema therapy in reducing the sensory perception of pain, the emotional perception of pain, and the overall pain score in patients with rheumatoid arthritis. It is likely that in both treatment groups, by going through the therapeutic process and learning new coping skills, individuals' cognitive and behavioral repertoires were strengthened. This led to an increased ability to cope with painful life situations and consequently reduced pain. **Another result** of this research indicated that there was no significant difference between short-term dynamic psychotherapy and schema therapy in reducing the sensory perception of pain, emotional perception of pain, and overall pain scores in patients with rheumatoid arthritis. It is likely that in both therapy groups, by going through the therapeutic process and learning new coping skills, individuals' cognitive and behavioral repertoires were strengthened. This led to an increase in their ability to cope with painful situations in their lives, and consequently, a reduction in pain.. **Additional results** of this study also demonstrated that cognitive-behavioral therapy was effective in reducing pain in patients with rheumatoid arthritis. Targeting maladaptive thoughts and behaviors played a key role in cognitive-behavioral interventions. Accordingly, individuals' beliefs about their illness often influenced how they coped and adapted to the disease. Cognitive-behavioral therapy has been increasingly used in psychosomatic illnesses to help better control individuals' reactions to life stressors. Effective coping with stressors could influence pain." **Additionally**, results showed that there was no significant difference between short-term dynamic psychotherapy, schema therapy, cognitive-behavioral therapy, and drug therapy in reducing the perceived sensation of pain in patients with rheumatoid arthritis. Therefore, it cannot be stated that one treatment is superior to another in reducing the perceived sensation of pain. However, the most important finding of this research was that if these therapies work similarly, then they can be suitable alternatives to drug therapy for reducing pain in rheumatoid arthritis patients who experience anxiety, depression, and maladaptive coping strategies. One of the problems for these patients is the use of medication for rheumatoid arthritis, and due to its side effects, most people stop taking it. Moreover, if rheumatoid arthritis patients take medication for the accompanying depression, it not only imposes unwanted side effects on the patient but also makes it difficult to continue taking the medication. Therefore, if left untreated, the patient may stop taking the medication, experience physical problems, and disrupt social and personal relationships.

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