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Research Letter

Enhancing Depression Care Among Older Women Suffering from Rheumatoid Arthritis: A Self-Management Approach and Pre-Post Analysis

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Abstract

Objectives: Depression and arthritis are prevalent and debilitating conditions in older adults, often leading to a significant decline in the quality of life, especially among older women. This study aimed to assess the effectiveness of a structured self-management program in alleviating depression levels in older women with rheumatoid arthritis (RA).

Design: The study utilized a randomized controlled design and pre-post analysis.

Setting: Tabriz, Iran

Participants: Women aged 60 and above with musculoskeletal issues, referred to outpatient services, were included in this study.

Interventions: A six-week arthritis self-management program.

Outcome Measures: Depression levels were evaluated before and after a six-week arthritis self-management intervention. The intervention group participated in the program while depression was measured using the 10-item Centre for Epidemiological Studies Depression Scale and a demographic questionnaire.

Results: All participants were female, aged 60–87. A significant reduction in depression scores was observed in the intervention group compared to the control group ($P=0.000$). Within the intervention group, depression scores also demonstrated a significant decrease from baseline to post-intervention ($P=0.000$).

Conclusions: The findings suggest that self-management programs are a feasible and effective approach to integrated care. The combination of exercise and educational interventions may partially explain the observed improvements in depression. Further research is needed to explore the long-term benefits of self-management strategies in reducing depression among older adults.

Keywords: Depression, Rheumatoid arthritis, Elderly women, Self-management, Pre-post analysis, Aging

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Introduction

Rheumatoid arthritis (RA) is a chronic inflammatory condition that disproportionately affects elderly women, leading to pain, joint deformities, and significant disability. Elderly adults with RA are at an increased risk of comorbid depression, which exacerbates symptoms, reduces treatment adherence, and negatively impacts quality of life.[1,2] Despite this issue, depression care among RA patients remains largely unaddressed, highlighting the need for accessible and effective interventions.[3]

Recent studies have emphasized the role of self-management programs in chronic disease care, demonstrating their potential to improve both physical and mental health outcomes.[4] These programs usually empower older people to take an active role in their care by teaching coping strategies, symptom monitoring, and goal-setting, which are particularly beneficial for chronic conditions such as RA.[5] Self-management has also been shown to reduce depression, enhance quality of life, and improve mental health in older adults.[6,7]

This study aims to evaluate the effects of a self-management intervention on depression severity among elderly women with RA. By contributing to the growing body of evidence supporting self-management in chronic illness care, this research seeks to improve depression care for elderly adults suffering from RA.

Methods

Study Design

The study employed a randomized controlled trial and pre-post design. It was approved by the Iranian Registry of Clinical Trials (IRCT2015122425685N1- TBZMED. REC.1394.815).

Patient Selection

A total of 173 patients with chronic RA were referred to the rheumatology clinic in Tabriz, Iran. After excluding those with cognitive impairments or physical frailty, 80 eligible elderly women were randomly assigned to either the intervention (n = 40) or control (n = 40) group. Due to sociocultural considerations, only female participants were included in this study.

Process for Selecting Confounders

The values of independent variables were randomized and matched, and then the intervention group was restricted by only including subjects with the same values of potential confounding factors, and control group.

Data Collection

The required data were collected at baseline and after the intervention. Participants completed questionnaires during face-to-face interviews, which lasted 15–20 minutes. The intervention group underwent a six-week arthritis self-management program (ASMP).[8] Post-tests were conducted for both groups. Three participants from the intervention group and one from the control group were excluded due to logistical issues.

The ASMP consisted of six weekly group sessions led by trained instructors. Each meeting included educational components, peer discussions, and exercise routines (stretching, endurance, and resistance exercises). The program aimed to improve participants' confidence, self-efficacy, and ability to manage RA symptoms and depression.[9]

Questionnaires

The Iranian and valid Center of Epidemiologic Studies Depression Scale, a 10-item version, was used in this study. This scale is a self-report tool designed to screen for depressive symptoms in elderly adults.[10,11]

Data Analysis

The confounding variables were adjusted between two intervention and control groups at the beginning of the study. For quantitative data, normality was evaluated by the Kolmogorov-Smirnov test, and then Mauchly's test was applied to validate a repeated measure analysis of variance. Finally, the nested repeated measure was used. The results included three *P* values for comparing groups (the *P* value group for comparing depression between intervention and control groups, the *P* value time for comparing depression before and after the intervention, and the *P* value confounder for controlling confounding variables). Error bars were used to show the confidence interval, difference, and the relationship between them. The level of significance was set at a *P* value < 0.05. All results were reported as means ± standard error of the mean.

Results

All participants were female, with ages ranging from 60 to 87. Approximately 49% were married, 61% were illiterate, and 50% were homemakers. Half of the participants had insurance coverage.

Depression scores ranged from 0 (none) to 3 (always), with higher scores indicating greater depression. At baseline, the intervention group had a mean score of 53.61 (± 3.07), while the control group scored 42.56 (± 2.99). Post-intervention, the intervention group's score decreased to 37.41 (± 2.11), while that of the control group showed no significant change (41.56 ± 2.96). The intervention group demonstrated a significant reduction in depression scores compared to the control group (*P* = 0.000).

Discussion

This study evaluated the effectiveness of a self-management program in reducing depression among elderly women with RA. The results revealed a significant decline in depression scores in the intervention group, with no significant change in the control group. These findings align with those of previous research, demonstrating the benefits of self-management for chronic disease and mental health.[12-14]

The combination of exercise and education in the ASMP likely contributed to the observed improvements.[15] Exercise, particularly when combined with group support, has been shown to enhance mental health and reduce depressive symptoms.[16] The program's emphasis on peer education and skill-building also empowered participants to better manage their condition. Self-management programs offer a low-cost, accessible solution for improving mental health in RA patients, particularly in populations with limited access to health services. Thus, integrating these programs into routine care could address the physical and mental health needs of elderly adults with RA.[17,18]

Conclusions

This study highlights the value of self-management as an accessible and effective intervention among elderly women suffering from RA, empowering patients to manage the physical and mental aspects of their conditions. Furthermore, early intervention by healthcare providers is crucial to alleviate the public health burden of depression in this population.

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Author contributions

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Data availability statement

All data generated or analyzed during this study are included in this published article.

Ethical approval

This study was approved by the Ethical Review Committee of the of Tabriz University of Medical Sciences. Informed consent was obtained from all participants.

Consent for publication

Not Applicable.

Conflict of interests

The authors declare no potential conflict of interests.

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