Original article

Who to assess pain using Orem Self-Care Model

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Abstract:

Introduction: Self-care is an important tool in controlling pain in patients with rheumatoid arthritis. The aim of this study was to investigate who to assess pain using Orem Self-Care Model in patients with rheumatoid arthritis.

Methods: This was a descriptive aspect of a clinical trial performed on 60 patients with rheumatoid arthritis who referred to a private clinic in Karaj. Data collecting tools were a demographic questionnaire consisted of 19 questions and Numeric Pain Rating Scale. The data result was analyzed using SPSS version 19. Less than 0.05 was considered significance.

Findings: The mean age was 44 years, 90% were married and 35% had diploma. ANOVS test with repeated measures showed a significant differences in three measures of pain in the intervention group, while in the control group, this difference was not significant (p=0.59).

Conclusion: Conclusively, Orem self-care model is effective in reducing pain in patients with rheumatoid arthritis.

Keywords: Self-care, Arthritis, Rheumatoid, pain, Orem Self-Care Model

Introduction:

Rheumatoid arthritis targets the age group of 35-50 years and women are 2.5 to 3 times more likely to be involved compared to men (1). The most important and widespread symptom of this disease is pain (2, 3). Pain is the main concern of patients with rheumatoid arthritis and therefore is the main concern of health care providers (4) and affects 2% of the adult population in the world (2).

Arthritis pain is a very complex phenomenon that has not been well investigated, and pain due to rheumatoid arthritis is the most common reason for referral to a doctor and follow-up of medical care (5). Pain despite the impact on patient assessment of yourself condition, can also affect the physician's assessment of the health status, functional disability and the state of use of medications (6).

Self-care is significantly recognized as an important tool in pain control in patients with rheumatoid arthritis (7, 8). Eccleston et al. (2007) in their study revealed that empowering people accompanied with chronic pain using self-care methods is more effective than other methods in pain control (9).

Patients with rheumatoid arthritis should be responsible for managing their symptoms daily in the home and for a long time, and self-care education is one of the non-medical aspects of managing the disease (10). Considering the various methods and medications used to relieve the signs and symptoms of the disease, especially pain in patients with rheumatoid arthritis, which

causes side effects and costs, it is important to find a method involving the patient to spend less and increase the treatment and it can reduce stress and anxiety and increase the potential ability of patients (11). The concept of self-care was first introduced by Orem. Orem believed that the patient's ability to carry out daily activities of life and establish a state of non-dependence on others depends on the nurse's skillfulness (12).

According to Orem model, when self-care is unable to provide own self-care needs of patients, we need nursing systems to maintain health. In this model, three types of care system are designed based on needs and deviations from patient health: wholly compensatory system, partly compensatory system, and supportive-educative system (13). Therefore, the present study was aimed to determine the effect of Orem self-care model on the pain of patients with rheumatoid arthritis.

Methods:

This was a descriptive study aspect of a clinical trial performed on 60 patients with rheumatoid arthritis who referred to a private clinic in Karaj. Sample size with 95% confidence interval and 5% error according to Pocock formula (14) and based on the study of HyunSoo in 2003 (15), were obtained 22. Considering attrition, 30 subjects were for the control group and 30 subjects for the intervention group, convenience sampling was done and subjects divided into two groups randomly.

Data collecting tools were a demographic questionnaire consisted of 19 questions and

Numeric Pain Rating Scale that was numbered from 1 to 10, and zero was considered as non-pain, 1-3 mild pain, 4-6 intermediate pain, 7- 9 severe pain and 10 unbearable pain. The validity and reliability of this tool were internationally defined in most countries (16, 17). During the three months period of the study, the researcher were in the clinic to fix possible probabilities of samples on Mondays every week as well as the researcher's contact number were given clients to take action if they had a problem or question. After collecting the data, the data were analyzed using SPSS version 19 software, descriptive and inferential statistics. Level of significance was considered less than 0.05.

Findings:

The results of this study in 60 women with rheumatoid arthritis showed that the mean age of the participants was 44 years (44.27 ± 11.35) and 78.3% of them had sufficient income, 90% were married, 35% had a diploma and 40% were under diploma, 43% had more than two children and the mean duration of rheumatoid arthritis was 9.1 years. Regarding occupation, 73.3% were housewives and 18.3% were employed. CRP was positive in 60% of participants and the mean ESR was 16.5. There was no significant difference in the demographic characteristics of the two groups. No variable was significant in this regard (P value>0.05) (Table 1).

Discussion:

The most important and widespread symptom of this disease is pain (3). Pain is the main concern of patients with rheumatoid arthritis and therefore is the main concern of health care providers (4). Medical research is involved in the study of the causes of pain reduction and control, but self-care is significantly recognized as an important tool in pain control in patients with rheumatoid arthritis (11).

In the study of Barlow after the implementation of self-care by patients with arthritis, their ability to manage pain and other symptoms of the disease increased and the pain of patients decreased (10). In the study of Loring et al., 6-week self-care program of arthritis was more effective than 3-week program, and this program was effective in increasing the knowledge and control of pain in these patients (18) and another study showed that after self-care behaviors, the pain rate of patients with rheumatoid arthritis decreased by 20% (19).

Shariff et al. declared that self-care can control the chronic pain of rheumatoid arthritis and create a positive sense of well-being (7). In the study of Cherkin that compared Chinese acupuncture and massage therapies and self-care education in patients with chronic lumbar pain, the results showed that self-care education, more than acupuncture and massage, had a role in controlling symptoms and reducing their pain. (20).

Fitz Charles revealed that patients with rheumatoid arthritis are more likely to be afraid of side effects of drugs, fear of drug addiction, fear of drug interactions, fear of concealment, and aversion to overdose, therefore refrain from taking the drug to control their pain, and most patients considered fear of side effects as the most

important barrier to not taking medication (21).

Obviously, self-care has a positive effect on patients' autonomy and can empower patients with rheumatoid arthritis to have better control on their disease complications, and also affects patients firmly in their care and helps to chooses and make decisions, since most patients prefer their strategies more than their doctor's advice and guidance to manage their chronic illness, but what should be considered is the nature of the program, which is based on the needs of the patient, as well as this model increases the motivation and desire of the patient and family and make them more capable. The present study also showed that the implementation of self-care Orem model based on the educational needs of patients was significantly effective in reducing their pain.

Conclusion:

The results showed that Orem self-care model has been able to play an effective role in reducing the pain of patients with rheumatoid arthritis.

Acknowledgment:

References:

1. Bakker M, Jacobs J, Verstappen S, Bijlsma J. Tight control in the treatment of rheumatoid arthritis: efficacy and feasibility. Annals of the rheumatic diseases. 2007;66(suppl 3):iii56-iii60.

2. Watkins K, Shifren K, Park D, A M. Age, pain, and coping with rheumatoid arthritis. pain. 1999;82(2):217-28.

3. Eugene B, ea. Harrison's Principles of Internal Medicine. edition t, editor2005.

4. Keefe FJ, Brown GK, Wallston KA, Caldwell DS. Coping with rheumatoid arthritis pain: catastrophizing as a maladaptive strategy. Pain. 1989;37(1):51-6.

5. Anderson DL. Development of an instrument to measure pain in rheumatoid arthritis: Rheumatoid Arthritis Pain Scale (RAPS). Arthritis Care & Research. 2001;45(4):317-23.

6. . Nadriyan H, Morowatisharifabad M, Mirzaee A, Bahmanpour K, Moradzade R, Shariati M. The relationship between quality of life, health care behavior in patients with rheumatoid arthritis in Yazd. University of Medical Sciences Elam. 2011;19(2):15-25.

7. Shariff F, Carter J, Dow C, Polley M, Salinas M, D. R. Mind and body management strategies for chronic pain & rheumatoid arthritis: strategies in search of wellbeing. Qual Health Res. 2009;19(8):1037-49.

8. Taal E, Rasker JJ, O W. Patient education and self-management in the rheumatic Diseases: A self-efficacy approach. Arthritis Care Res. 1996;9(3):229-38.

9. Eccleston C, G C. Worry and chronic pain: A misdirected problem solving model. pain. 2007;132(3):233-6.

10. Barlow JH, Williams B, CC W. Instilling the strength to fight the pain and get on with life": learning to become an arthritis self-manager through an adult education programme. Health Educ Res. 1999;14(4):533-44.

11.   Vadiee.M. The UK Expert patient peogram and self-care in chronic disease management: An Analysis. Eur Geriatr Med. 2012;3(3):201-5.

12.   Habibzadeh H, Ghofranipour F, AHMADI F. THE EFFECT OF SELF-CARE PLANNING ON THE DAILY ACTIVITIES OF PATIENTS WITH CEREBRO-VASCULAR ACCIDENT (HOSPITALIZED AT THE SELECTED URUMIA HOSPITAL). 2007.

13.   Mahmoudzadeh-Zarandi F, Hamedanizadeh F, Ebadi A, Raiesifar A. The effectiveness of Orem's self-care program on headache-related disability in migraine patients. Iranian Journal of Neurology. 2016;15(4):240-7.

14.   Pocock S J. Clinical trial, a practical approach. In: publishing JWS, editor. newyork1990. p. 834.

15.   HyunSoo Oh, Seo W. Decreasing Pain and Depression in a Health Promotion Program for People with Rheumatoid Arthritis. Int J Nurs Educ Scholarsh. 2003;35(2):127-32.

16.   Kessler R, Paterson D, Dane J. Hypnosis and relaxation with pain patient: Evidence for effectiveness. pain. 2004;1(2):67-78.

17.   Hjermstad MJ, Fayers PM, Haugen DF, Caraceni A, Hanks GW, Loge JH, et al. Studies comparing Numerical Rating Scales, Verbal Rating Scales, and Visual Analogue Scales for assessment of pain intensity in adults: a systematic literature review. Journal of pain and symptom management. 2011;41(6):1073-93.

18.   Loring K, Gonzalez V, Lsurent D, Morgan L. Arthritis self-management program variations: Three studies. Arthritis Rheum. 1998;11(6):448-54.

19.   Warsi A, Valley M, Wang Ph, Avorn J, Solomon H. Arthritis Self-Management Education Programs: A meta-analysis of the effect on pain and disability. Arthritis Rheum. 2003;48(8):2207-13.

20.   Cherkin D, Eisenberg D, Sherman K, Barlow W, Kaptchuk T, Street J, et al. Randomized Trial Comparing Traditional Chinese Medical Acupuncture, Therapeutic Massage, and Self-care Education for Chronic Low Back Pain. Arch Intern Med. 2001;161(8):1081-8.

21.   Fitzcharles M, Dacosta D, Ware m, Y S, 2009;10(3):300-305. P. Patient Barriers to Pain Management May Contribute to Poor Pain Control in Rheumatoid Arthritis. pain. 2009;10(3):300-5.

Tables and Charts:

Table 1: Comparison of demographic information of patients participating in the study.

	Variable	Intervention group	Control group	Chi-square
Educational level	Elementary	16.7 (5)	23.3 (7)	
	middle school	23.3 (7)	16.7 (5)	P=0.85
	Diploma	40 (12)	33.3 (10)	

	Collage	20 (6)	26.7 (8)	
Insurance status	Yes	63.33 (19)	73.33 (22)	P=0.40
	No	36.66 (11)	26.66 (8)	
Marital status	Married	93.3 (28)	86.7 (26)	P=0.69
	Single	3.3 (1)	6.7 (2)	
	Widow	3.3 (1)	6.7 (2)	
Body mass index	15-18.49	3.3 (1)	0	P=0.72
	18.5-24.9	3.3 (1)	3.3 (1)	
	25-29.9	40 (12)	43.3 (10)	
	30-35	23.3 (7)	23.3 (7)	
Occupation	Housekeeper	80 (24)	66.7 (20)	P=0.53
	Employee	13.3 (4)	23.3 (7)	
	Student	0	3.3 (1)	
	Retired	6.7 (2)	6.7 (2)	
ESR	0-19	70 (21)	63.3 (19)	P=0.91
	20-49	23.3 (7)	33.3 (10)	
	More than 50	6.7 (2)	3.3 (1)	
Duration of the disease	1-5	30 (9)	23.3 (7)	P=0.65
	6-10	46.7 (14)	43.3 (13)	
	11-15	6.7 (2)	20 (6)	
	16-20	13.3 (4)	10 (3)	
	20-30	3.3 (1)	3.3 (1)	
CRP	Positive	23.3 (7)	33.3 (10)	P=0.59
	Negative	6.7 (2)	3.3 (1)	