

# Quality of life in women with fibromyalgia

Rasol Roshan<sup>1</sup>, Seyed Shamsia Shariatpanahi<sup>1</sup>, Azadeh Tavoli<sup>2</sup>, Zynab Qafari<sup>1</sup>, Ali Fathi-Ashtiani<sup>3</sup>

<sup>1</sup>Department of Psychology, School of Humanities, Shahed University, Tehran, Iran

<sup>2</sup>Department of Medicine, School of Medicine, Shahed University, Tehran, Iran

<sup>3</sup>Department of Psychology, Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran

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**Corresponding author:**

Prof. Ali Fathi-Ashtiani

Baqiyatallah University

of Medical Sciences

Tehran, Iran

E-mail: afa1337@yahoo.com

## Abstract

**Introduction:** Fibromyalgia is a chronic musculoskeletal syndrome whose main symptom is widespread pain in the body associated with particular tender points, which seriously affects the patient's functionality and quality of life. This study aimed to evaluate the effect of fibromyalgia on Iranian women's quality of life and to compare it with that of healthy women.

**Material and methods:** Eighty women with fibromyalgia attending the rheumatology clinic in Tehran and 74 healthy women were entered into the study based on inclusion criteria. SF-36 questionnaire was used to study quality of life. Independent *t*-test was used to analyze data.

**Results:** Comparing healthy women with fibromyalgic ones showed a significant difference between mean scores of the two groups on subscales of physical functioning, bodily pain, general health, vitality and emotional functioning. However, social functioning and mental health did not show a significant difference between the two groups.

**Conclusions:** The findings of the study show that fibromyalgia negatively affects different aspects of women's quality of life, especially physical functioning, emotional functioning and general health. So, health authorities should pay more attention to these patients.

**Key words:** quality of life, fibromyalgia, SF-36.

## Introduction

Fibromyalgia (FM), one of the most common chronic musculoskeletal pain disorders of unknown origin, is characterized by widespread pain with tender points [1]. Fibromyalgia affects about 2% of the general population, 90% of whom are women [2], and is among the three most common diagnoses in ambulatory adult rheumatology practice [3]. In Iran, about 1.3% of the general population suffers from fibromyalgia [4]. Smith presented the diagnostic criteria of fibromyalgia for the first time in 1979 [1]. The current criteria for diagnosis of fibromyalgia are the ones of the American College of Rheumatology [4], which include widespread pain associated with tender points in 11 of the 18 particular points [5].

Fibromyalgia is usually associated with fatigue, sleep disorder, anxiety and depression [6], and like any other disabling conditions can significantly affect work capacity, family life, social relations and quality of life [7, 8]. White *et al.* mentioned negative effects of fibromyalgia on quality of life of patients who are at an economically productive age and report that

the problems are caused by symptoms such as fatigue, lethargy, pain and in general, patients' disability [9]. Nowadays, assessment of quality of life is an important issue in chronic diseases [10]. Researchers in different domains of health have studied fibromyalgic patients' quality of life in different countries. For example, Israeli fibromyalgic patients had a lower score in quality of life scale (SF-36) than healthy people and those with widespread pain [11]. In another study in the United States, fibromyalgic patients gained a lower score in quality of life scale (SF-36) in all aspects when compared with the general population [12]. The same results were found in the Netherlands [13] and Brazil [14]. Quality of life is becoming more and more significant in health care systems. Since there has been no research done about quality of life in fibromyalgia patients in Iran, this study aimed to compare quality of life in fibromyalgia patients with that of healthy people.

### Material and methods

To assess quality of life in women with fibromyalgia and to compare it with that of the healthy control group, we did a retrospective cross-sectional study in 2006. Eighty women with fibromyalgia attending the rheumatology clinic in Tehran were entered into the study based on inclusion criteria. Inclusion criteria were fibromyalgia diagnosis by a rheumatologist according to ACR 1990, age over 25, not having severe psychiatric diseases and willingness to participate. In addition, 74 healthy women, who were matched with

the case group in age, marital status, education and occupation, were enrolled in the control group. Verbal consent was obtained from all patients prior to the interview.

### Instruments

Two questionnaires of personal information (age, marital status, education and occupation) and a quality of life scale (SF-36) were used. SF-36 was made to assess quality of life [15] and evaluate 8 important aspects: physical functioning, role functioning physical, bodily pain, general health, vitality, social functioning, role functioning emotional, and mental health. In this questionnaire, patients are also asked to evaluate their general health in the past year [16]. The score of people on each scale varies between 0 and 100, where a higher score shows a better quality of life in that scale [17]. Several studies have proved SF-36 reliable and valid as a means of evaluating people's quality of life [18]. Validity and reliability of SF-36 have been approved in Iran, as well [19]. Based on the results of this study, the reliability of all aspects of this questionnaire is suitable (internal correlation index of all eight aspects was between 0.70 and 0.85 and their re-test index after one week was between 0.43 and 0.79). Data were analyzed using SPSS13 and *t*-test.

### Results

#### Subject characteristics

Subject characteristics by group are shown in Table I. The FMS patients were typical of those seen in our clinical setting: Eighty women with fibromyalgia with mean age of 42.9 ±9.1 and 74 healthy women with mean age of 37.2 ±10.3 made up the study population. Reported pain duration for patients was 10 years. Both the control group and the case group (fibromyalgia) were matched for education, occupation, age and marital status (Table I).

#### Quality of life in fibromyalgia patients and healthy women

Table II lists total and individual domain scores of SF-36 measurement. The comparison of quality of life between the case group and the control group showed a significant difference between mean scores of women with fibromyalgia and those of healthy women in the following subscales: physical functioning, physical role limitation, bodily pain, general health, vitality and emotional role limitation (*p* < 0.05 to *p* < 0.01). However, subscales of social functioning and mental health showed no significant difference between the two groups (Table II).

**Table I.** Mean (SD) and number (%) of demographic and clinical characteristics of women with and without fibromyalgia

Variables		With FM	Without FM	Sig.
		F (%)	F (%)	
Education	under diploma (under 12 years)	20 (25)	22 (30)	0.25
	diploma (12 years)	36 (45)	30 (40)	
	college/university	24 (30)	22 (30)	
Marital status	single	16 (19)	13 (17)	0.32
	married	64 (81)	61 (83)	
Occupation	housekeeper	52 (65)	36 (48)	0.19
	retired	2 (2)	4 (6)	
	employee	18 (23)	19 (26)	
	student	8 (10)	15 (20)	
Age [years]	M ± SD	42.9 ±9.1	37.2 ±10.3	0.08
Mean no. of tender points	M ± SD	14.3 ±2.2	–	0.0001
Duration of pain	M ± SD	10 ±3	–	0.0001

### Association between health status and demographic characteristics

Table III shows the association (measured by Pearson's correlation coefficient,  $r$ ), for the 80 women with FM between eight domains of health status (SF-36) and some demographic characteristics such as age, education and marriage.

Strong associations ( $p < 0.01$ ) were noted for age with physical functioning, role functioning physical, bodily pain, and vitality subscales. Education was moderately correlated ( $p < 0.01$ ) with role functioning physical and bodily pain. Marriage had a low negative relation ( $p < 0.05$ ) to role functioning physical.

### Discussion

To our knowledge this is the first clinical study assessing quality of life in Iranian women with FM. The main objective of this study was to evaluate quality of life of women with fibromyalgia and its comparison with that of healthy women.

Statistical analyses of SF-36 subgroup parameters revealed that most domains of quality of life, including physical functioning, role functioning physical, bodily pain, general health, vitality, and role functioning emotional, were significantly impaired in the FM groups compared with those in healthy controls. Nevertheless, the role functioning physical domain in the FM group had the lowest scores compared with those in healthy controls (Table II). Our findings are in line with those of other researchers on quality of life in patients with fibromyalgia [11, 12, 20]. Supporting our findings, Neumann *et al.* [11] reported in a recent study that most subscales of SF-36 represent health dimensions relevant to patients with non-articular pain syndromes, namely FMS, and are useful to assess their quality of life. Patients with fibromyalgia have marked impairment in their functional status. The severity of impairment as assessed by SF-36 distinguishes patients with FMS from healthy individuals.

Fibromyalgia is a complex syndrome with significant effects on patients' quality of life, function and finances. It seems that the disability secondary to chronic pain in patients is caused by past experience, self-esteem, motivation, excitement disorder, fatigue, cultural background and financial status [21]. Based on these findings, it can be supposed that cultural and ethnic factors may explain the insignificant difference between the two groups regarding mental health and social functioning, although it should be tested in inter-cultural studies to determine the effects of cultural and ethnic factors on quality of life in patients.

Since fibromyalgia negatively affects quality of life, it is important that fibromyalgia be

**Table II.** Quality of life subscale scores for fibromyalgia patients and healthy women

Quality of life subscales	With FM		Without FM		<i>t</i>	Sig.
	M	SD	M	SD		
Physical functioning (PF)	69.70	18.47	79.69	19.28	3.42	0.0001*
Role functioning physical (RP)	28.72	33.84	48.01	36.27	3.42	0.0001*
Bodily pain (BP)	42.55	17.13	33.36	22.22	2.89	0.0004*
General health (GH)	51	20.34	63.65	21.12	3.82	0.0001*
Vitality (V)	40.36	2.55	52.09	22.04	3.34	0.0001*
Social functioning (SF)	76.73	20.69	71.96	23.32	1.53	0.18
Role functioning emotional (RE)	43.75	42.54	57.21	38.83	2.05	0.042**
Mental health (MH)	54.22	19.83	58.84	18.29	1.50	0.136

\* $p \leq 0.01$ , \*\* $p \leq 0.05$

**Table III.** Correlations between measures of health status (SF-36) and demographic characteristics: 80 women with fibromyalgia

Quality of life subscales	Age	Education	Marriage
Physical functioning (PF)	-0.46*	0.16	-0.11
Role functioning physical (RP)	-0.33*	0.27*	-0.17**
Bodily pain (BP)	0.48*	-0.27*	-0.06
General health (GH)	-0.27*	0.05	-0.09
Vitality (V)	-0.33*	0.11	-0.09
Social functioning (SF)	0.03	-0.15	0.03
Role functioning emotional (RE)	-0.15	0.06	-0.07
Mental health (MH)	-0.11	0.06	-0.15

\* $p < 0.01$ , \*\* $p < 0.05$

approached and managed in a multidisciplinary manner. Once the diagnosis of fibromyalgia is made, it is essential that health care specialists try to improve patients' function and reduce their complaints. This can be achieved by medical and non-medical interventions.

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