



Prevalence of fibromyalgia in working women and house wives

Ali Asghar Mirjat^{1*}, Mairaj Hafeez Chang², Anwar Ali Malik³, Hafiza Aiman Rasool⁴, Shehrish Ghulam Rasool⁵, Ali Akbar Mirjat⁶, Hafiz Fahad Rasol⁷

^{1, 2, 3, 4, 7} Department of Epidemiology, School of Public Health, Nanjing Medical University, Jiangsu Province, Nanjing, China

^{2, 3} Department of Community Medicine & Public Health Sciences, Liaquat University Of Medical & Health Sciences (LUMHS), Jamshoro, Sindh, Pakistan

^{4, 3} Department of Physical Therapy and Rehabilitation Sciences, Imperial College of Business Studies, Lahore, Pakistan

^{4, 6} Department of Public health, Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology Clifton 100, Karachi, Pakistan

Abstract

Background: Fibromyalgia, a disorder of extensive pain, tenderness, fatigue, sleep disturbance, and psychological distress, is a frequent condition in the clinic. The estimation of prevalence of FMS in European countries was from 2.2 to 6.6%. Comorbidities having different practical somatic syndromes and mental issues are frequent. FMS is concerned with implementation and expenses of fitness. For clinical and financial deductions competent treatment is required. FM consequences would be studied on different levels, e.g, fatigue or pain depth, stage of purposeful limitation which are measured through standardized practical examination, extent of perceived disability, and psychological distress. Since there is no any causal treatment available for the FM.

Methods: Non-probability convenient sampling was used and data were collected from the females in Lahore Total 70 females of age 20 to 60 years were taken. The questionnaire asked to fill was consisted of two criteria: pain criteria and fatigue criteria. Pain criteria includes 4 questions and if a woman marks 3 questions out of 4 she would be positive for pain criteria and fatigue criteria involves 2 questions if a female mark 1 out 2 she would be positive according to fatigue criteria.

Results: Statistical analysis was used to evaluate the prevalence of FM in women. The study showed the prevalence of pain as 20%. And there is significant association between fibromyalgia and occupation (p value 0.023) and there is also significant association between fibromyalgia and weight (p value 0.011).

Conclusion: This study suggests that prevalence of FM in women was 20% in general population of females of age 20 to 60 years. Prevalence is seen greater in working women than in house wives and students.

Keywords: fibromyalgia, prevalence, pain, fatigue, working women, house wives

Introduction

Fibromyalgia, a disease of extensive pain, tenderness, fatigue, sleep disturbance, and psychological distress, is a frequent condition in the clinical setups ^[1]. The estimation of prevalence of FMS in European countries was from 2.2 to 6.6%. Comorbidities having different practical somatic syndromes and mental issues are frequent ^[2]. FMS is concerned with implementation and expenses of fitness. For clinical and financial deductions competent treatment is required. FM consequences would be studied on different levels, e.g., fatigue or pain depth, stage of purposeful limitation which are measured through standardized practical examination, extent of perceived disability, and psychological distress. Since there is no causal treatment for FM available, interest in redress aim at promotion of health, symptoms that are self-managed, and improvement of physical characteristic have been increased. The study focused on physical therapy have been shown accelerated grip strength, and improved capacity of work in patients with FM. Education programs of patient have indicated enhancement in pain and self-efficacy ^[3]. Fibromyalgia syndrome characterized via great

fatigue, pain and tenderness, and commonly its diagnosis is critical. Whereas many tests can be used to perform different probable causes of sign and symptoms of patients that is inflammation of joints and constellation, to diagnose FM nothing is sufficiently particular and sensitive. In 1990, the American College of Rheumatology (ACR) published standards for diagnosis of FM which were, considerable painful (each aspects of the body in the upper and lower side of the waist and in the thoracic spine anterior chest, lower back and cervical region of spine) and digital palpation of pain in somewhat 8 to 11 sites of particular tenderness point. If a affected person has standard FM signs but do not lie in the ACR criteria, then possible diagnosis for FM diagnosis for likely FM would appointed, and for that standard therapy trials may also be prescribed. Women are about 9 times greater than men to have possibility of FM. Symptoms commonly appeared between age of 20 and 55 years ^[4]. In the community the prevalence of FMS has been proven from 0.6 to 10.5 % (1-6) ^[5]. The majority of studies says that FMs in general population vary from 0.6 to 2.7 %. Interestingly, FMS has been

presented in each warm and cold climate, whereas it is more frequent in well developed countries with good financial status. It was probably also occurs in those countries whose investigators had not have much time and financial resources to undergo research in their area. The sample of FMS intently closely related to the information from many CWP; such as it can take place in any climate but it was more frequently described in developed countries. North American research recommended the estimated FM prevalence of women was 3.4% and for men was 0.5%, ascending to the range of 7.1 and 1.1% to the age of 60–69 years range respectively. Presently, there isn't constantly successful therapy for FM. For the relief of sleep difficulties tricyclic antidepressants could be given, however this assist painful and stiff range of muscles. Exercising had become greater recognition for the complete management of FM [6, 7]. In FM several RCT of exercise therapy have given wonderful results. However, they were underpowered, excluded many cases and lack generalizability because the interventions needs regions in hospitals which were supervised through experienced healthcare professionals. RCT record that was evaluated in patients with FM who were prescribed neighborhood-based exercise program, considered in a hospital outpatient rheumatology clinic. Our trial was inclusive from all other cases, which was extensively generalized and properly powered [8]. Strength of muscles depends on neural activity and anatomical sectional of muscles. In people with FM cross sectional region for the the muscle such as quads had suggested. Whereas, several studies have shown that maximum isometric and active muscle strength in shorter examination (1–5 sets of repetitions) has estimated decrease in people having FM than those to healthy people. Therefore, reviews are contraindicated in longer exams which are greater associated with resistance. Lower outcomes in useful exams involves with daily actions (sit to stand and take a seat down onto chair, during walk) in FM humans with extended disability, specifically in women with rheumatoid associated with decrease maximum strength of muscles of knee extensors. In fact, gait deformity, decline, and lack of independency has been related with decrease of knee extensors electricity. In management of muscle pain, Bath treatment, or hot-water bathing, has proved effective, commonly evaluated through cognitive ways that is with VAS [9]. A new inventory had developed to examine existence activities in the course of younger age and in adulthood as properly as with lifestyles occasions skilled in relation to the onset of the disorder. During infancy or puberty 51% of the sufferers have practiced very contradict lifestyles occasions in comparison to 28% of the controls. Common life event was conflict with their parents. Primarily to the occurrence of 65% patients were skilled some unfavorable lifestyles occasions. Financial issues and disputes with spouse or any family member were commonly seen. While the end of year, 51% of the patients had lifestyles occurrence which were knowledgeable as very adverse, tensed life activities in infancy/puberty and in adult age appeared as very frequent in FM. Moreover, the lifestyles occasions had been experienced as more negative than the lifestyles events skilled via population of healthy people [10]. The research reflected that by whom 39 females suffering from fibromyalgia (FM), residing in two nations (USA or Sweden), file the circumstances facing FM on basis of daily tasks. Information was accumulated by the usage of draft of questions, diary and

interviewing. The end outcome of the study demonstrated that they had an effect on their daily based activities which was once substantial. The mostly females were with acknowledgeable discomfort and tiredness, for above 90 % of interval when they were aroused. They had no important variations within categories used country wide duration, issues involved within daily tasks, or tendency of life. Mostly, prevalence ratio of men and women vary from country to country. The majority of Swedish patient with FM had presented with reduced working whereas patients in USA group team were giving full hours of working. Patients who had been successful in achieving less working hours to fit in less stressful and exhausted life in daily basis activities to have better quality of life with happy events [11]. In addition, White *et al.* [12] spotlight that who had worked heavily in the past of the lifestyles and it became difficult to return to work with greater age.

A recent study with the help of questionnaire that were sent via email to 176 females having FM, that were taken from discomfort and rheumatological centres at the third fitness grade, confirmed that 50% were employed: 35% were halftime and 15% with full working hours. The uppermost frequent signs and symptoms presented in them were painful, deprived sleep, fatigued, stiffness of muscles, and extended discomfort after struggle of muscle. 80% working women continue to precede their work role, while 34% non-working women were unable to unable even in the easiest work tasks assigned to them. The majority of women with FM find difficulty in processing work with increase potential which makes disability of work a serious concern. Earlier researches shows that adjustments of the person in the work place has to be made in the desired scenario, and those females who meet that stage and their capacity would proceed to work and finds enjoyment in functioning of tasks [13].

Methodology

Totally 70 females of aged 20 to 60 years were selected for the study strictly based on inclusion criteria. Sample size was calculated from epitool. Statistical calculations were made through SPSS version -21.0. All the study participants were asked to answer a standard questionnaire LFESSQ to check the prevalence of fibromyalgia. The questionnaire was filled by the researcher. To meet the objectives mentioned, the research design that used was the cross-sectional type survey, with convenient sampling method. The questionnaire used was consisted of two criteria: pain criteria and fatigue criteria. Pain criteria includes 4 questions and if a woman marks 3 questions out of 4 she would be positive for pain criteria and fatigue criteria involves 2 questions if a female mark 1 out 2 she would be positive according to fatigue criteria. Associations of fibromyalgia were made to see interlinkage of age, weight, working hours and occupation with fibromyalgia. Data was collected through Questionnaire LFESSQ (The London Fibromyalgia Epidemiology Study Screening Questionnaire). Data will be tabulated and analyzed by SPSS version 21.0. Mean, standard deviation, minimum value, maximum value, percentages, graphs, and pie charts, cross tabs, histograms etc. will be drawn.

Results

There were 70 women with different occupations. House wives were (44.3%), working women (41.4%) and students were (14.3%). In our results we found that out of 70 women, 20 (66%)

working women were negative with fibromyalgia however 10 (33%) were positive with fibromyalgia while of 29 (93.5%) housewives gave negative results and 2(6.5%) gave positive results, and 56 (80%) student females gave negative results and 2 (22.2%) gave positive results of fibromyalgia. There is significant association between occupation and fibromyalgia (p-value 0.023) (Table 1 and figure 1). Among pain criteria 30(42.9%) have pain in muscles, bones, or joints, lasting at least 1 week, pain criteria 26(37.1%) have pain in shoulders, arms, or hands, pain criteria 11(15.7%) have pain in legs or feet and pain criteria 3(4.3%) have pain in neck, chest, or back.

Among fatigue criteria 9(12.9%) have no pain and fatigue criteria 34(48.57%) felt tired or fatigued over the past 3 months and fatigue criteria 27 (38.57%) significantly limit activities due to tiredness or fatigue. In comparison of fatigue with occupation, Out of 30 working women had no fatigue, 17(56%) had felt tired and fatigued over the 3 months in the past, 12 (40%) had limit their activities due to tiredness and fatigue, Out of 31 housewives 7(22.5%) had no fatigue,12(38%) had felt tired and fatigued over 3 months in the past,12(38%) had limit their activities due to tiredness and fatigue, Out of 9 students, 1(11.1%) had no fatigued, 5(55%) had felt tired and fatigued over 3 months in the past, 3(33%) had limit their activities due to tiredness and fatigue, Out of 70 females, 9(12%) had no fatigue, 34(48%) had felt tired and fatigued over 3 months in the past, 27(38%) had limit their activities due to fatigue and tiredness (Tabl2 and figure 2).

In comparison of pain and occupation, out of 30 working women there were 14(46%) working women who had painful muscles, bones and joints and 6(20%) had painful arms, shoulder and hands, 7(23%) had discomfort in feet and legs, 3(10%) had painful chest, neck and back while out 31 housewives 14 (45.16%) housewives complaint with painful bones, joints and muscles, 15(48.3%) had painful arms, hands and shoulders, 22(70%) were with painful legs and feet,0(0%) were having painful check, neck and back, out of 9 students, 2(22.2%) students had painful bones, muscles and joints, 5(55%) were with

painful, arms, shoulder and back, 2 (22%) had painful feet and legs,0(0%) student had painful chest, neck and back, out of 70 women 30(42%) had painful muscles, joints and bones, 26(37%) had painful hands, arms and shoulders, 11(15%) were having painful feet and legs, 3(21.4%) had painful chest, neck and back. (Table 3) and in the frequency distribution according to occupation and pain there is significant association between occupation and pain criteria p value 0.039 (Figure 3).

Table 1: The association between occupation and fibromyalgia

Occupation	Fibromyalgia	
	Negative	Positive
Working women	20(66.7%)	10(33.3%)
Housewife	29(93.5%)	2(6.5%)
Student	7(77.8%)	2(22.2%)
Total	56(80.0%)	14(20.0%)

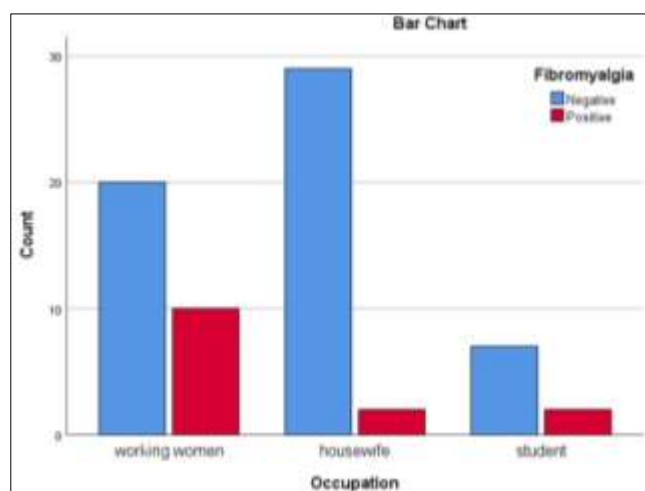


Fig 1: The association between occupation and fibromyalgia

Table 2: Comparison of fatigue with occupation

Occupation	Fatigue Criteria			Total
	No	1. Over the past 3 months, do you often felt tired or fatigued	2. Does tiredness or fatigue significantly limit your activities	
Working women	1(3.33%)	17(56%)	12(40%)	30
Housewife	7(22.5%)	12(38%)	12(38%)	31
Student	1(11.1%)	5(55%)	3(33%)	9
Total	9(12%)	34(48%)	27(38%)	70

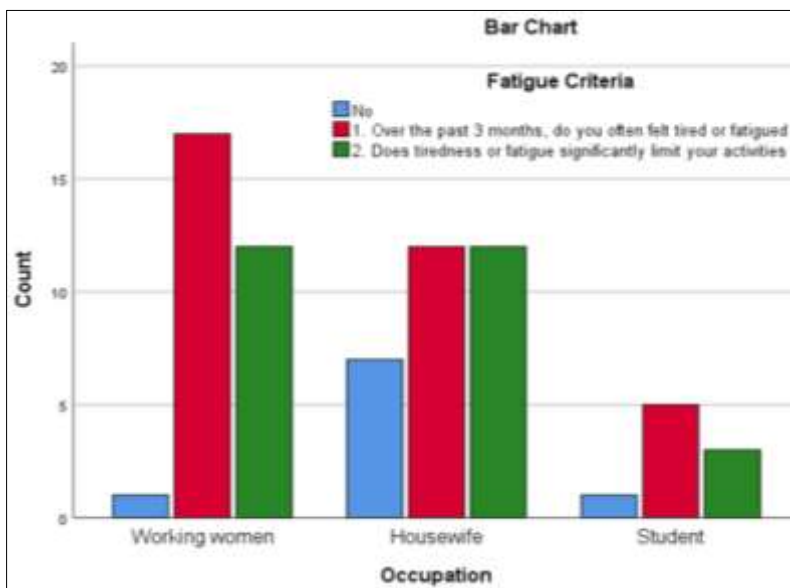


Fig 2: Comparison of fatigue with occupation

Table 3: Comparison of pain and occupation

Occupation	Pain Criteria Pain in muscles, bones, or joints, lasting at least 1 week	Pain in shoulders, arms, or hands	Pain in legs or feet	Pain in neck, chest, or back	Total
Working women	14(46%)	6(20%)	7(23%)	3(10%)	30
House wife	14(45.16%)	15(48.3%)	22(70%)	0(0%)	31
Student	2(22.2%)	5(55%)	2(22.2%)	0(0%)	9
Total	30(42%)	26(37%)	11(15%)	3(21.4%)	70

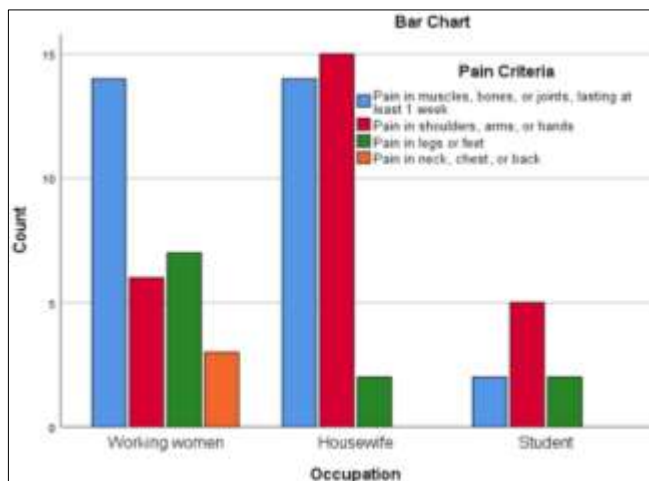


Fig 3: Comparison of pain and occupation

Discussion

Fibromyalgia (FM), a disease of unknown etiologic that takes place most often among women of middle age, was characterized by means of massive chronic musculoskeletal pain and fatigue. Tremendous effort had been devoted to inspecting incidental two and chief aspects correlated with FM, however significant debate stays in regard to the corresponding significance of these factors in the analysis of two this syndrome For example, it had been determined consistently that patients with two FM display two low pain two inception levels two at unique two tender points [14]. A research was conducted on females of age 20-49 years in

Norway. Collectively 45% of the women participated was experienced painful joints, back, muscles, back or to full body ache for interval of 3 months last year. The prevalence of FM in Norway was 10.5%. This high rate can also point out that study was alternatively sensitive in the sense of detecting individuals with such complaints. Fibromyalgia was observed greater than 6 times more in women than in men among those with age 50 and older than this fibromyalgia was concord with failure to complete their school and with limited income of their household [15]. Whereas, this present study showed prevalence of FM in women aged 20 to 60years was 20%. There were 70 women with different occupations. House wife (44.3%), working women (41.4%), students (14.3%). They got results for prevalence of FM by using LFESSQ questionnaire which gave following results. Out of 70 women, fibromyalgia with positive results were 14(20%) and women with negative results were 56(80%). Applying fisher’s exact test there is association between pain and occupation (p value 0.039) In comparison of pain and occupation, out of 30 working women there were 14(46%) working women who had painful muscles, bones and joints and 6(20%) had painful arms, shoulder and hands, 7(23%) had discomfort in feet and legs, 3(10%) had painful chest, neck and back while out 31 housewives 14 (45.16%) housewives complaint with painful bones, joints and muscles,15(48.3%) had painful arms, hands and shoulders,22(70%) were with painful legs and feet,0(0%) were having painful check, neck and back, out of 9 students, 2(22.2%) students had painful bones, muscles and joints, 5(55%) were with painful, arms, shoulder and back, 2(22%) had painful feet and legs, 0(0%) student had painful chest, neck and back, out of 70 women 30(42%) had painful muscles, joints and bones, 26(37%)

had painful hands, arms and shoulders, 11(15%) were having painful feet and legs, 3(21.4%) had painful chest, neck and back as in women, working full day plus psychological factors aggravates pain and fatigue because depression and domestic violence were commonly seen in women suffering FM. Many studies supported domestic violence correlation with fibromyalgia.

A previous study suggested FM prevalence in 5 western countryside using similar methods. To this aim they used screening questionnaire LEFSSQ. Their study was aged related which suggested the FM prevalence in the mature population was described with increasing with age from 70 to 79 years for male and female. In outpatients of rheumatology, positive results of extensively spreading pain (LFESSQ-4) were given by 46% of screening people, 32% was for painful and fatigued population using (LFESSQ-6), and 14% were cases who confirmed diagnosis of FM. In general population, 13 and 6.7% population were with positively screened LFESSQ-4 and LFESSQ-6. Adjacent to age and sex, the possibility of FM occurrence was not appeared to be stimulated through other social academic and demographic statuses. In spite, some research determined low levels of education, low social economic status, divorce, and psychological stress to be considerable risk factors for FM. Furthermore, it was identified that past or current depression and anxiety are common in patients with FM [16]. In this study we used LFESSQ-6 questionnaire of screening to check the FM prevalence in women of age from 20 – 56 years. According to which 20% females meet pain criteria according to LFESSQ questionnaire and 87.1% meets fatigue criteria. In comparison of fatigue with occupation, Out of 30 working women had no fatigue, 17(56%) had felt tired and fatigued over the 3 months in the past, 12 (40%) had limit their activities due to tiredness and fatigue, Out of 31 housewives 7(22.5%) had no fatigue, 12(38%) had felt tired and fatigued over 3 months in the past, 12(38%) had limit their activities due to tiredness and fatigue, Out of 9 students, 1(11.1%) had no fatigued, 5(55%) had felt tired and fatigued over 3 months in the past, 3(33%) had limit their activities due to tiredness and fatigue, Out of 70 females, 9(12%) had no fatigue, 34(48%) had felt tired and fatigued over 3 months in the past, 27(38%) had limit their activities due to fatigue and tiredness. This occurrence of positive results showed women in Pakistan were more prevalent to fatigue as compared to pain in age between 20 to 56 years. This study contradict the results of previous study as this study only includes female subjects also mean age used in this study was 30 years whereas previous study conducted females were more prevalent to FM as compared to male and age upto 70 and above reported more cases of FM. Out of 70 women, 20(66%) working women were negative with fibromyalgia however 10(33%) were positive with fibromyalgia while of 29(93.5%) housewives gave negative results and 2(6.5%) gave positive results, and 56(80%) student females gave negative results and 2(22.2%) gave positive results of fibromyalgia There is significant association between fibromyalgia and occupation and working women were seen more prevalent to FM as there is more physical and psychological stress in working women as compared to housewives and students also the working hours associated with working women is greater than housewives and students so this adds up the stress of body which leads to the deprived sleep and formation of tender

points and widespread painful range. This contradict the previous study which includes both sex ; male and female while study was comprises of only females of age 20 to 60 while previous study includes age of 15 to 80 years and suggested FM was seen more in females in older age than that of males.

Limitations

The study was done on small sample size; there should be a large sample size. Advanced studies should be considered for this study. Male gender should also be considered for the study. Greater age group should be considered to get more knowledge and awareness about fibromyalgia syndrome.

Conclusion

This study suggests that prevalence of FM in women is 20% in general population of females of aged 20 to 60. Prevalence is greater in working women than in house wives and students.

Declaration

Abbreviation

Not applicable in this section.

Ethics approval and Consent to Participate

The ethical approval was obtained from the Ethical Review Committee of Imperial College of Business Studies, Lahore Pakistan. And Informed consent was taken from each participant and records were kept anonymous.

Consent for Publication

Not applicable in this section.

Availability of Data & Materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing Interests

The authors declare that they have no competing interests in this section

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