



PREVALENCE OF FIBROMYALGIA AND CHRONIC WIDESPREAD PAIN IN PAKISTANI POPULATION; LITERATURE REVIEW

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ABSTRACT

Introduction & Background: Most Fibromyalgia (FM) prevalence estimates are from the western countries but prevalence data on the Pakistani population is sparse. The main objective of this review is to assess the FM prevalence in the Pakistani population.

Methods: Ovid- Medline at the McMaster University data base and the Pakistan society of Rheumatology and, Pakistan Medical Journal and Drugs data base and bibliographic references were searched for eligible studies and data.

Results: Only four studies were eligible in this review. The prevalence of the FM varied depending upon the socioeconomic status and geographic distribution. One study reported the FM prevalence data in general Pakistani population. The two English studies compared the prevalence of the musculoskeletal disorder in the South Asians with the western white population. One study reported higher prevalence of the FM in the Pakistani living abroad than the Pakistanis living in the Pakistan.

Conclusion: Prevalence of the FM/ CWSP is variable in the Pakistani's living in the in different geographic regions. More research using the modified ACR 2010 criteria is needed to provide the recent and updated estimates of the FM prevalence.

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INTRODUCTION

Fibromyalgia (FM) is a rheumatological condition of unknown etiology and one of the common reasons for the referral to rheumatologist (White 1995). Chronic widespread pain (CWSP; Yunus 2002), abnormal illness behavior, significant physical disability, and psychological impairment are the commonly reported symptoms of the FM (Croft 1993). FM can manifest at any age but prevalence increases with the age (Wolfe 1995). Prevalence estimate for an individual community is important to understanding the impact of the FM on the individuals, on society and on the economic resources.

Previous systematic reviews reported the FM prevalence in different countries (Neuman 2003, Queiroz 2013 and Gran 2003) but most estimates are from the western countries. These reviews reported variation in the FM prevalence across the countries. Gran 2003 reported higher FM prevalence in the Canada (3.3%), followed by

the Spain (2.4%) and the USA (2%). On the other hand, FM was less prevalent in the Denmark (0.7%) and the Finland (0.8%). As prevalence of the FM is variable across the countries, it is important have prevalence to estimates of the FM for an individual country.

The main objective of this review is to estimate the prevalence of the FM in the Pakistani population.

METHOD

Literature search was done using the Ovid Medline-McMaster University data base (from 1946- December 2016), Embase from 1974- December 2016, AMED (1985-December 2016), Pakistan Medical Journal and Drugs, the Pakistan society of Rheumatology data base and the bibliographic references of the previous reviews were searched to find the relevant studies and epidemiological data about the prevalence of the FM in Pakistani population. The key search words were Pakistan,

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Sindh, Punjab, Balochistan and Khyber Pakhtunkhwa, cross sectional studies, epidemiological studies, prevalence, etiology, epidemiology, ethnology, fibromyalgia, chronic widespread pain and musculoskeletal rheumatism.

The eligible studies reported prevalence of the FM or CWSP in the Pakistani population. Studies reporting the prevalence of the other rheumatological conditions but not the FM were excluded.

RESULTS

The search strategy gave 45 abstracts for the title and abstract screening. Out of the 45 articles two studies reported the FM-prevalence in the Pakistani population (Farooqi 1998 and Abbasi 2014) and two studies compared the prevalence of the FM/CWSP in the Pakistani living abroad.

Summary of the included studies

Summary of the included articles is provided in the table #1.

Abbasi 2014 reported the prevalence of FM in 120 rheumatoid arthritis (RA) patients. Patients were recruited from the Indus Hospital, Karachi, Pakistan. ACR 1990 criteria were employed to screen for FM and RA. Study sample included both genders; however, only female RA patient (n= 31; 25%) had FM and RA.

Farooqi 1998 explored the prevalence of common rheumatic conditions and their prevalence in the Pakistani population based on the socioeconomic and geographic regions. Authors employed a validated COPCORD Core Questionnaire.

Europeans living in the UK. Authors employed a valid a 28-item acculturation scale to determine the prevalence of the musculoskeletal conditions. The CWSP was more prevalent in the South Asians than in Europeans {OR= 3.7 (2.9-4.9)}. Among the South Asians the prevalence of the FM in the Pakistani ethnicity Urdu and Urdu/ Punjabi were 3.8 (2.6, 5.6) and 4.2 (2.5, 7) respectively in the age and sex adjusted model.

Allison 2007 explored the health care needs and the prevalence of the musculoskeletal symptoms among the major ethnic minorities in the UK. 2117 patients from the Indian, Pakistani, Bangladeshi and African Caribbean ethnicities and the English patients were recruited. Pain status such as presence of the pain in the last month, the sites of any musculoskeletal pain, the presence of pain in most joint were recorded forms the mailed questionnaires. The study sample consisted of 157 Pakistani men and women The prevalence of the pain in more than three regions in a model adjusted for age, gender, BMI, and residence was 2.1 (1.6, 2.5). It was not clear if pain in > 3 regions will meet the criteria for the CWSP, which is one of the important symptoms of the FM.

DISCUSSION

This is the first review to report FM prevalence in the Pakistani population- living in Pakistan and Pakistani living abroad. Only Farooqi 1998 provided the FM prevalence in the general population living in the Pakistan. Farooqi 1998 study was conducted in collaboration with the WHO and the International League against Rheumatism (ILAR) under the Community Oriented Programme for Control of Rheumatic Disease (COPCORD).

Table #1: Summary of the included studies

Author (year)	Study design	Sample size	Age group (years)	Population type	Demographic Region/ Province	Criteria	Prevalence of CWSP/ FMS
Abbasi L 2014	Cross-sectional study	120	Median (IQR)= 40 (32 - 51)	Rheumatoid Arthritis but no other systematic condition	Hospital setting, Karachi, Sindh	disease activity score (DAS-28)	FM with RA= 25.83%
Farooqi A 1998	Cross-sectional study	1997 (683= rural; 706= Urban; 608= Affluent)	15 or older	3 geographic areas	Rural and Urban communities	COPCORD Core Questionnaire	0.1- 3%
Pakistani Living in the UK							
Palmer 2007	Cross-sectional study	401 Pakistani/ 2847 total sample	41 (32-54)	age-sex registers of 13 general practices in areas with high densities of South Asian populations across the three target groups, based on the 2001 Census	Birmingham, UK	Not clear	Pakistani ethnicity – Urdu= 3.8 (2.6, 5.6) Pakistani ethnicity - Urdu/ Punjabi= 4.2 (2.5, 7)
Allison 2002	Cross sectional	157 Pakistani/ 1506 (total population) (stratified random sampling)	16 and older	Ethnic minorities in UK (India, Pakistan, Bangladesh, African Caribbean communities) and English	three general practices in Greater Manchester	modified Health Assessment Questionnaire (mHAQ)	2.1 (1.6, 2.5); Not clear if pain in > 3 region will meet the criteria for CWSP

The point prevalence of the FM was 3.1% in the general Pakistani population. FM was more prevalent in the poor urban population (32%) rural population (26%) whereas 1% of the affluent urban community had FM. Farooqi 1998 data showed female predominance (13:1). Palmer 2007 compared the prevalence of the common musculoskeletal disorder among the south Asians and the

Farooqi study reported variation in the FM prevalence between the rural and the urban communities. Palmer 2007 reported higher FM prevalence in the Pakistani living abroad than the Pakistani living in the Pakistan. Also, the FM prevalence was higher in the Pakistani residing in the UK than the Pakistani’s residing in Pakistan (Palmer 2007). The difference between the

prevalence reported in the Farooqi 1998 and Palmer 2007 indicates the possible influence of the socioeconomic and environmental factors in the prevalence of the FM across the different geographic regions.

Previously, ACR-1990 criterion was commonly used to screen and diagnose FM. ACR 1990 criteria required eliciting pain at the multiple tender points (Wolfe 1990), whereas, ACR-2010 (Wolfe 2010) and modified ACR-2010 criteria (Wolfe 2011) do not require eliciting pain at the multiple tender points, rather the modified ACR criteria focuses on the symptom severity and the wide pain index (Wolfe 2010, Wolfe 2011). Jones 2013 did survey and examined 104 patients to estimate the difference in the FM prevalence based on the three criteria's. Variation in FM prevalence was reported across the ACR 1990 criteria {1.9% (95%CI: 0.8–3.1%)}, ACR-2010 criteria {1.2% (0.3–2.1%)} and the modified ACR 2010 criteria {5.3% (4.7–6.0%)}. The difference in FM prevalence based on the above criteria is also important particularly when categorizing patients, whose symptoms and tender points improve with the treatment. Such patients may not meet the multiple tender point criteria but may exhibit other symptoms of FM (Wolfe 2010). The modified ACR 2010 criterion allows capturing of FM patients with the variable presentations based on the symptoms severity and the wide pain index (Wolfe 2010). To our knowledge, no other study reported FM prevalence in the general Pakistani population. Pakistan is the 7th populous country in the world, therefore having its own estimate of the FM prevalence is important. Also with the modified ACR 2010 criteria, increase in the FM prevalence is reported. Therefore reporting FM prevalence estimates based on the new criteria is necessary. Updated/ newer estimates of the FM prevalence are also important to determine the variation in the FM presentation, and to help reduce the disease burden by utilizing the most appropriate resources for the targeted population.

This review also has few limitations. First, very few studies were eligible in this review, which is an obvious weakness of this review. We included studies with the prevalent data in Pakistani's living abroad. Studies comparing the data within the contrasting communities of the developing countries and the developed countries have the potential to provide insight in to the disease etiologies (Farooqi 1998). Secondly, Abbasi 2014 reported the FM prevalence in the RA patients and thus their data is not representative of the general population. Abbasi 2014 study was conducted at the rheumatology clinic and the prevalence of FM was higher (25.83%) than the Farooqi 1998. Buskila 2001 also reported higher prevalence of the FM (15%) in the clinical or hospital patients than the general population.

In conclusion, studies reporting the FM prevalence in the Pakistani population are sparse. The current data shows variation in the FM prevalence in the Pakistani population living in the different geographic regions with the female predominance. It would be important to have a recent FM-prevalence data with employing newer criteria.

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