Original Article

To Estimate and Compare the Prevalence of Fibromyalgia among Health Care Personals Working in Tertiary Care Centre of North India

Anjana Pandey[1], Ajay K Maurya[2], P K Maheshwari[3], Akhilesh Kumar Singh[4], Nikhil Pursnani[5], Ashish Gautam[4], Prabhat Agrawal[6]

Abstract

Background : The prevalence of the Fibromyalgia syndrome in the health care worker is considerable and constitutes a significant health care issue.

Aims and Objective : To estimate and compare the prevalence of fibromyalgia among health care personals working in Tertiary Care Centre of North India.

Materials and Methods : This cross-sectional prevalence study involved 377 adults of age group of 18-40 years at Tertiary Care Centre of North India over a period of one and half years. Study population included Undergraduates, Interns, non-clinical and Clinical Departments Junior Residents, fulfilling 2016 modification of 2010 American rheumatology criteria for diagnosis of Fibromyalgia. Consent was taken from all the participants. All participants were subjected to fibromyalgia questionnaire and interpretations were made.

Result : Overall prevalence of Fibromyalgia among hospital workers was 3.98%. Prevalence among female (5.73%) was more as compared to male (3.14%). Among MBBS students, prevalence was 2.94%.and in interns it was 3.51%. Prevalence among Non-clinical and Clinical Junior Resident of several department were 4.34% and 5.30 % respectively.

Conclusion : Fibromyalgia syndrome is common in health care workers and is associated with other comorbidities like headache, fatigue, IBS and migraine.

Key words : Fibromyalgia, 2016 modification of 2010 American rheumatology criteria, Health care workers.

Fibromyalgia is a rheumatic condition characterized by muscular or musculoskeletal pain with stiffness and localized tenderness at specific points on the body. Fibromyalgia is often associated with sleep disorders, fatigue, somatic and cognitive symptoms, as well as psychic disorders more common in females[1-3]. The primary symptoms of Fibromyalgia, wide spread pain and fatigue, can be found in many medical disorders. Similarly, Fibromyalgia can co-exist with other medical conditions[4-6]. The proper approach to avoid misdiagnosis is to ascertain the presence or absence of Fibromyalgia and then to determine whether other disorder with widespread pain and fatigue are present.

The diagnosis of Fibromyalgia is made in patients who present with persistent, widespread, and generalized pain who are otherwise normal on physical examination by assessing patients on various parameters incorporated in the (2016) modification of 2010/2011 American rheumatology criteria for diagnosis of Fibromyalgia[7]. This revision combines Physician and questionnaire criteria, minimizes misclassification of regional pain disorders and eliminates the previously confusing recommendation regarding diagnostic exclusions. The physician-based criteria are valid for individual patient diagnosis. The changes to the criteria allow them to function as diagnostic criteria, while still being useful for classification[7]. Fibromyalgia may now be diagnosed in adults when all the following criteria are met:

(1) Generalized pain, defined as pain in at least 4 of 5 regions, is present.

Editor's Comment :

- Medical professionals with fibromyalgia should learn to adapt their work environment, prioritize self-care and symptom management, develop coping strategies for chronic pain and fatigue and seek support to maintain their well-being and continue delivering quality patient care.

Department of Medicine, Sarojini Naidu Medical College, Agra, Uttar Pradesh 282002
[1]MD, Associate Professor
[2]MBBS, MD, Junior Resident
[3]DM, Professor, Department of Neurology and Corresponding Author
[4]MBBS, MD, Associate Professor
[5]MBBS, MD, Assistant Professor
[6]MBBS, MD, Professor
Received on : 28/07/2021
Accepted on : 07/08/2023

How to cite this article : To Estimate and Compare the Prevalence of Fibromyalgia among Health Care Personals Working in Tertiary. Pandey A, Maurya AK, Maheshwari PK, Singh AK, Pursnani N, Gautam A, Agrawal P. *J Indian Med Assoc* 2025; **123(11):** 16-8.

(2) Symptoms have been present at a similar level for at least 3 months.

(3) Widespread pain index (WPI) ≥7 and Symptom Severity Scale (SSS) score ≥5 OR WPI of 4-6 and SSS score ≥9.

(4) A diagnosis of Fibromyalgia is valid irrespective of other diagnoses. A diagnosis of Fibromyalgia does not exclude the presence of other clinically important illnesses.

Aims and Objective

To study prevalence of Fibromyalgia among health care personals working in Tertiary Care Centre of North India.

Material and Methods

This prospective, cross-sectional, observational study was conducted in a Tertiary Care Hospital of Northern India after ethical approval and subject consent over a period of one year ie, from March, 2017- August, 2018 & May, 2010. Total 377 health care workers of both sexes of age group ranging from18-60 years both from various Clinical and Non-clinical Departments, fulfilling 2016 modification of 2010 American rheumatology criteria for diagnosis of Fibromyalgia were enrolled. All participants were subjected to Fibromyalgia questionnaire and interpretations were made.

Modified 2010 ACR diagnostic criteria self-assessment questionnaire was provided to the patients. Patient was made to fill a self-report questionnaire before he / she entered examining Physician's chamber. The questionnaire was divided into 3 sections. The first section assessed the distribution of body pain using the same 19 body areas as in the WPI, patients marked each area either "yes" or "no" to indicate the presence or absence of pain or tenderness in that area over the past week. Patient scored 1 point for each painful or tender body area, yielding a self-report WPI score between 0 and 19, analogous to the WPI score in the Physician-assessed diagnostic criteria. The second section evaluated the severity of problems with daytime fatigue, no restorative sleep and cognitive dysfunctions (trouble thinking and remembering) using separate questions and scores given.

The third section asked patients whether they experienced pain or cramps in the lower abdomen, depression, or headache during the past 6 months, for every positive answer patient scored 1.

Scores from the second and third sections were summed up to yield a 0-12 SS Scale score analogous to the SS Scale score in the physician-assessed diagnostic criteria. Scores from the WPI and SS Scale sections were summed up to yield a 0-31 index termed as Polysymptomatic Distress Scale (PSD). Patients with a PSD scale score of 13 or more were diagnosed with Fibromyalgia provided, the symptoms have been present at a similar level for at least past 3 months and the patient did not have any other disorder that would otherwise explained the symptoms.

Observation

Overall prevalence of Fibromyalgia among hospital workers was 3.98%. Prevalence among female (5.73%) was more as compared to Male (3.14%). This study included 170 MBBS students (45.05%), 132 junior residents from clinical departments (35.01%) and 46 Junior Residents from Non-clinical Departments (12.20%). Among MBBS students, prevalence was 2.94%.and in Interns it was 3.51% (Table 1). Prevalence among Non-clinical and Clinical in which we included Junior Resident from several department were 4.34% and 5.30 % respectively (Table 2).

Some other condition such as Depression, Stress, IBS, Migraine are related to Fibromyalgia. Out of 15 subjects in which who fulfilled the 2016 modification

Table 1 — *Designation wise prevalence*

Designation	Total		Affected		Prevalence of FM
	No	%	No	%	
Undergraduates (MBBS)	170	45.09	5	53.33	2.94%
Interns	28	7.42	1	0.00	3.51%
Postgraduates					
Clinical	132	35.01	7	46.67	5.30%
Non-clinical	46	12.20	2	0.00	4.34%
Total	377	100.00	15	100.00	3.97%

Table 2 — *Prevalence among Clinical and Non clinicals Resident Doctors*

Designations	Total	Affected	Prevalence
Clinical	132	7	5.30%
Others {Undergaduates (MBBS) +Interns+Non-clinicals resident doctors}	245	8	3.26%
Total	377	15	3.97%

of 2010 American rheumatology criteria for Fibromyalgia, 7 subjects (46.67%) diagnosed as depression whereas if we compare the overall prevalence of depression in 377 subjects, it was 7.6% it showed depression was strongly associated with Fibromyalgia. Other factors such as Fatigue (40%), IBS (33.3%) and Migraine (40%) were also related with Fibromyalgia (Table 3).

Table 3 — *Other symptoms related to fibromyalgia*

	Not affected (N=377)		Affected (N=15)	
	No	%	No	00.00%
Depression	16	4.24	7	46.67
Fatigue	24	6.36	6	40.00
IBS	42	11.14	5	33.33
Migraine	37	9.81	6	40.00

Discussion

As we moved from MBBS, Intern, Non-clinical to Clinical Resident Doctors, prevalence also increased. Several factors affected the varied prevalence rate among various groups but there were two main factors responsible for this difference, first increasing age and second is long working hours resulting into continuous increase in stress levels. This study very clearly interpreted higher prevalence in Junior Residents Working in Clinical Departments. Probably this was attributed to time pressure, rigorous work schedule, erratic sleep schedule, high self-imposed expectations and high expectations from seniors as well as from patients, delayed gratification, limited control and a loss of autonomy, conflict between career and family, feelings of isolation, as well as research and teaching activities. FM were two to seven times more likely to have one or more of the following comorbid conditions: Depression, Anxiety, Headache, Irritable Bowel Syndrome, Chronic Fatigue Syndrome, Systemic Lupus Erythematosus and Rheumatoid Arthritis. All the above factors probably have led to increased prevalence of fibromyalgia alone or in association with comorbidities like Fatigue, depression, IBS and Migraine in Health Care workers.

Conclusion

The prevalence of the Fibromyalgia syndrome in the health care worker is considerable and constitutes a significant health care issue. It is desirable and important to have more nation-wide epidemiological studies on FM to have a better view of the prevalence of this disorder Worldwide, and to measure the burden of FM on health care persons. Our findings underline the possibility that work-related stress may play a major role in the development of FM symptoms among individuals working as Health Care Worker.

Funding : None

Conflict of Interest : None

References

1 Wolfe F, Clauw DJ, Fitzcharles MA — The American College of Rheumatology preliminary diagnostic criteria for fibromyalgia and measurement of symptom severity. *Arthritis Care Res (Hoboken)* 2010; **62(5):** 600-10.
2 Wolf F, Smythe HA, Yunas MB — The American College of Rheumatology 1990 criteria for the classification of fibromyalgia: report of the Multicentre Criteria Committee. *Arthritis Rheum* 1990; **33(2):** 160-72.
3 Lawrence RC, Felson T, Helmick CG — Estimates of the prevalence of arthritis and other rheumatic conditions in the United States. *Arthritis Rheum* 2008; **58(1):** 26-35.
4 Yunus MB — Fibromyalgia and overlapping disorders: the unifying concept of central sensitivity syndromes. *Sem Arthritis Rheum* 2007; **36(6):** 339-56.
5 Smith HS, Harris R, Clauw D — Fibromyalgia: an afferent processing disorder leading to a complex pain generalized syndrome. *Pain Physician* 2011; **14(2).**
6 Russel IJ, Larson AA — Neurophysiopathogenesis of fibromyalgia syndrome: a unified hypothesis. *Rheum Dis Clin North Am* 2009; **35(2):** 421-35.
7 Wolfe F, Clauw DJ, Fitzcharles MA — 2016 revisions to the 2010/2011 fibromyalgia diagnostic criteria. *Semin Arthritis Rheum* 2016; **46(3):** 319-29.