

Fibromyalgia among Physical and Occupational Therapists of Karachi, Pakistan

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Abstract-

Background: Increased work stress, low tendency of making judgments and bullying at jobs was linked with the increased risk for fibromyalgia (FM) to two to four times. Occupational Therapists and Physical Therapists are at risk of work-related injuries and musculoskeletal problems because of the demanding nature of their work.

Methods: A sample of 97 Physical Therapists and Occupational Therapists was collected from a reputable hospital in Karachi, Pakistan. The participants were provided with 2016 Fibromyalgia Diagnostic Criteria.

Results: Responses were obtained from 44 Physical Therapists and 53 Occupational Therapists. It was found that 9.3 % of the population met the criteria for fibromyalgia. All the participants found with FM were females. Moreover, 8 occupational therapists were found to meet the criteria for Fibromyalgia while only one physical therapist was found to have fibromyalgia. Furthermore, a ratio of 19 and 14 participants were found to experience symptoms of fibromyalgia; widespread pain index in the range of 4-6 and ≥ 7 respectively while 20 participants were found to experience symptoms severity score ≥ 5 . However, they were unable to meet the criteria of fibromyalgia which emphasizes on the early intervention to facilitate their wellbeing.

Conclusion: A prevalence of 9.3% was found from a sample of 97 physical and occupational therapists. Further studies are recommended to understand the medical and psychological risk factors. Moreover, changes in workplace dynamics needs to be considered to eliminate risk of work-related injuries and musculoskeletal problems. Awareness of fibromyalgia symptoms is required for its early detection and management.

Index Terms- Fibromyalgia, pain, Physical Therapist, Occupational Therapist, somatic symptoms, work-related injuries.

I. INTRODUCTION

Fibromyalgia is an ailment that not only affects individual's relationship with their bodies, but it also influences their daily activities which impact the quality of life, social relationships, and their regimen [1]. This is true for individuals who are identified with severe symptoms of criteria-based fibromyalgia, while not necessarily having a medical diagnosis for fibromyalgia [2]. Fibromyalgia Syndrome (FMS) has been defined as a chronic condition that causes discomfort, stiffness, and tenderness in muscles, ligaments, and joints along with difficulty in sleeping, body fatigue, and somatic symptoms accompanied with low mood, anxiousness, and poor bowel functioning [3]. The etiology and pathogenesis of fibromyalgia have not yet been discovered; however, stress plays an important key role [4]. A high occurrence of fibromyalgia has been found among females within the age range of 40 to 59 years, affecting their quality of life and their daily functioning [5]. The findings recommended physicians for the consideration of FM diagnosis for the patients from an outpatient pain clinic as a likelihood

of disturbed sleep, any physical injury and headache were found among people with FM [6].

Biological and genetic factors, environmental triggers, abnormalities of the Neuroendocrine and Autonomic Nervous System are the factors that add up in the fibromyalgia pathophysiology [7]. A relevance of psychosocial factors has been found in the etiology of fibromyalgia [8]. Moreover, abnormal pain processing and central sensitization have been indicated as the prominent pathophysiology features of fibromyalgia [9]. The biopsychosocial model and other interdisciplinary approaches have been found effective in chronic pain assessment, prevention, and treatment [10]. Lindell concluded in a structured cohort study that it was rare to find fibromyalgia and chronic widespread musculoskeletal pain [11].

Among environmental factors, the workplace environment has been found as one of many factors influencing stress among health professionals [12]. Likewise, work pressure has been found as a significant moderator between social care and stress among health providers [13]. Investigations have found associations of stress with job designation, gender role, and extended working hours. Moreover, irritable mood, headaches, and having bodily pain were found to be evident among individuals experiencing high levels of stress [14].

Job stress has been found as a risk factor for the onset of fibromyalgia. Moreover, it has been difficult for individuals with fibromyalgia to continue their respective work [9]. The severity of symptoms affects working capability as job nature can be overloaded with the physical aspects, causing difficulty in managing and carrying out job tasks [15].

A significant relationship between work-related musculoskeletal disorders has been found with an increase in job stress and negative attitude towards job [16]. Occupational Therapists and Physical therapists are at a high risk of profession-related injuries and musculoskeletal problems because of the challenging nature of their profession [17] affecting personal and professional life aspects. A higher rate of work-related injuries was more prevalent among female therapists [18].

Fibromyalgia has found to reduce functioning in physical, psychological, and social spheres, and has a negative influence on cognitive performance, personal relationships (including sexuality and parenting), work, and activities of daily life routine. A strong relation of comorbid conditions was found with fibromyalgia. Around 2595 patients identified with fibromyalgia likely reported having one or more of the comorbid conditions such as depression, anxiety, frequent headaches, fatigue, arthritis, and irritable bowel syndrome. This indicated a strong relationship for the comorbidities [19].

A high occurrence of psychiatric comorbidities has also been found in Fibromyalgia [20] such as depression, anxiety, borderline personality, obsessive-compulsive personality, and post-traumatic stress disorder. Furthermore, depression and anxiety have found to be comorbid with chronic pain and fibromyalgia both [21].

An occurrence of fibromyalgia was found more probable among male physicians than as compared to female physicians [22]. However, females are more likely to have fibromyalgia as compared to males and an association was found with affecting daily functioning, quality of life, and depression [5].

Epidemics on the incidence of FMS might benefit in pointing efforts intended at the anticipation and regulation of the disease. It will facilitate in identifying stressors causing work-related injuries and fibromyalgia which may affect the job and self-efficacy. The study aimed to investigate the prevalence of fibromyalgia among Physical Therapists and Occupational Therapists. As known about the evidence available in Pakistan, there was limited work for professions such as Physical and Occupational Therapists. As they are not any less of professions that go through stressful pace of work due to the nature of work, therefore, the study was conducted to explore the prevalence to facilitate the affected population in the future and to find and resolve the desired manifestations so that their work efficiency and quality of life are not compromised.

II. METHODOLOGY

Cross-sectional research was designed by collecting a study sample of 97 Individuals, working as occupational and physical therapists from a reputable hospital in Karachi, Pakistan. The 2016 Fibromyalgia Diagnostic Criteria was administered to find the frequency of

III. RESULTS

Table 1 Demographics and Descriptive Statistics of the Participants

Variables	f	%
Age	(Mean \pm SD)	32.13 \pm 6.479
Gender		
Male	28	28.9
Female	69	71.1
Occupation		
Physical Therapist	44	45.4
Occupational Therapist	53	54.6
Widespread Pain Index (WPI)		
0-3	64	66
4-6	19	19.6
\geq 7	14	14.4
Symptoms Severity Score (SSS)		
0	18	18.6
1	22	22.7
2	14	14.4
3	16	16.5
4	7	7.2
5	9	9.3
6	3	3.1
7	3	3.1
8	4	4.1
9	1	1
Symptoms Present \geq 3 months		
Yes	26	26.8
No	71	73.2

Table 1 represents the sample of 97 participants with the mean age of 32.12 (SD= 6.479).

fibromyalgia among the study participants. Each individual was interviewed face to face to minimize the misinterpretation of study questions by the participants undertaking the consent. The purpose of the survey was explained to every therapist before obtaining their written consent. All the participating members were provided with proper informed consent in which the individual's confidentiality and right to withdraw throughout the process was assured. A self-report 2016 Fibromyalgia Diagnostic Criteria Survey has questions in regard to wide pain index and symptoms severity scale with three kinds of criteria to be matched to predict fibromyalgia. Demographic information was collected which included their age, gender, and respective profession.

included. Participants who had any gynecological complication, or where

Table # 2 Percentage of Fibromyalgia Cases

Identified Cases of Fibromyalgia	n	%
Positive Case(s)	9	9.3
Did Not Meet Criteria	88	90.7

n=No. of Participants, %= Percentage.

Table 2 represents the prevalence of fibromyalgia among Physiotherapists and Occupational Therapist.

Table # 3 Descriptive Statistics of Fibromyalgia Cases

	n	Diagnosed with Fibromyalgia	Criteria did not Meet
Profession			
Physical Therapist	44	1	43
Occupational Therapist	53	8	45
Gender			
Male	28	0	28
Female	69	9	60

n= No. of Participants

Table 3 represents that out of 44 physical therapists, only one therapist met the criteria of Fibromyalgia while 6 out of 53 occupational therapists met the criteria for fibromyalgia. Moreover, all the participants diagnosed with FMS were found to be females.

Table # 4 Fibromyalgia with Gender and Profession

	n	Mean	SD	t	P-value	95% CI	
						LL	UL
Gender							
Male	28	2.000	.000	2.028	.045*	.002	.258
Female	69	1.869	.339				
Profession							
Physiotherapists	44	1.977	.150	2.198	.030*	.012	.244

Occupational Therapist	53	1.849	.361				
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Note: n= No. of Participants, m= Mean, SD= Standard Deviation, p= Significant Value, CI= Confidence Interval.

IV. DISCUSSION

The study aimed to explore the prevalence of Fibromyalgia (FM) among physical therapists (PTs) and Occupational Therapists (OTs) of a Public Sector Hospital in Karachi, Pakistan. Based on the 2016 Fibromyalgia Diagnostic Criteria, 9.3% (9/97 physical and occupational therapists) had FM. A similar study also yielded similar results in which, 8.2% participants were found to have FM [22]. Moreover, 9.6% prevalence of FMS was found among Lebanese nurses, linked with salary dissatisfaction [23]. A prevalence of 13.38% was found among patients who visited outpatient pain clinics in Korea [6]. Likewise, an estimated prevalence of FM was found to be 4.7% among general population of 5 European countries [24].

Keeping in view the literature, there is low prevalence of fibromyalgia among general population while higher prevalence is there in people with stressful work or atmosphere. If the clinical culture of both the professions, that is Physical Therapists and Occupational Therapists is compared, both have high physical workload, but sustaining an injury was seen as unlikely in Physical Therapists because of their abilities, knowledge, and perceived level of fitness [17]. A qualitative study of Occupational Therapists reported that they have high risk of musculoskeletal injuries and they blamed themselves for the injury and experienced anger (towards self and others), depression, and occupational restrictions [25]. A high prevalence of fibromyalgia was found among nursing staff which reflected towards the work-related stress and traumatic events [26].

In the present research, 9 positive cases of fibromyalgia (9.3%) were identified, and all the reported cases were diagnosed among females. It concurred with the prior research; a finding on gender differences revealed similar results; 3.48% females were found to have more symptoms of fibromyalgia along with psychiatric disorders [20]. A similar study found that risk factors are related to workplace such as conveyance time, repetitive work, stress, career related problems, lack of recognition and unfavorable working conditions rather than the fibromyalgia characteristics among females with fibromyalgia [27]. Individuals with FM are prone to anxiety and depression which may lead to other psychological issues as well [20,21].

Around 15.09% (8 Participants) of the Occupational Therapists was found to meet the criteria for fibromyalgia while only 2.3% (One Participant) of Physical Therapist met the criteria for fibromyalgia. Exploring the significant risk factors of causing fibromyalgia among occupational therapist, it can be their high physical work stress in routine. Fibromyalgia

Syndrome have found to be linked with different stresses such as negative life event, occupational problems and over inactive lifestyles [28]. Such factors may explain why frequency of fibromyalgia syndrome has been found to be significant in the current study.

Moreover, around 19 (19.6%) and 14 (14.4%) individuals were found to experience pain and scored on the Widespread pain index in the range of 4-6 and ≥ 7 respectively. However, they did not meet the full criteria for FMS. As far as Symptoms Severity Score (SSS) is concerned, around 20 (20.6%) participants were found to experience symptoms severity score ≥ 5 . Keeping in view the percentage of symptoms reported for fibromyalgia, awareness sessions and psychoeducation of the individuals regarding the early recognition of fibromyalgia can provide with better health management and interventions can be tailored to facilitate wellbeing.

Conclusion

The frequency of fibromyalgia was found to be 9.3% among the study population. Gender differences were found in the reported cases of

Table 4 represents that there was a significant difference found in fibromyalgia positive cases between gender and profession.

fibromyalgia; it was more prevalent among females. A significant difference was found in the profession as well. Future studies are recommended to cater to psychological issues along with early evaluation of the fibromyalgia among healthcare professionals.

Limitations and Recommendations

As the current study only caters to physical and occupational therapists, it is important to explore the symptoms of fibromyalgia among other healthcare professionals as well. The work and workplace dynamics seem to play a significant role which can be explored along with other factors such as psycho-social perspectives. Moreover, the emphasis on modification of workplace through effective ergonomics change can be made to reduce the risk factors of fibromyalgia among Occupational Therapists.

Awareness sessions and training programs can be designed to avoid and reduce the musculoskeletal pain by changing lifestyles and adding physical activity to daily routine. Prevention of musculoskeletal injuries can help in betterment of overall health and improving work efficacy. Incorporation of psychological interventions can also be a valuable component to pharmacological treatments which can improve clinical symptoms and reduce the impact of fibromyalgia on health-related quality of life [20].

CONCLUSION

The frequency of fibromyalgia was found to be 9.3% among the study population. Gender differences were found in the reported cases of fibromyalgia; it was more prevalent among females. A significant difference was found in the profession as well. Future studies are recommended to cater to psychological issues along with early evaluation of the fibromyalgia among healthcare professionals.

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