

Incidence of Burnout and its Relationship with Musculoskeletal Disorders among Healthcare College Students in Lahore, Pakistan

TAMKANAT ILYAS¹, MAMOONA ANWAR², MUHAMMAD NOUMAN TABASSUM³, SANIA MAQBOOL⁴, QURATULAIN⁵, MADIHA ASGHAR⁶

¹Assistant Professor at Department of Physical Medicine and Rehabilitation SHS University of Management and Technology Lahore

²Lecturer at Department of Physical Medicine and Rehabilitation SHS University of Management and Technology Lahore

³Assistant Professor, Lahore College of Physicaltherapy, LM&DC

⁴Demonstrator at Department of Physical Medicine and Rehabilitation SHS University of Management and Technology Lahore

⁵Demonstrator at Department of Medical Imaging SHS University of Management and Technology Lahore

⁶Lecturer at Department of Biomedical Laboratory Sciences SHS University of Management and Technology Lahore

⁷Assistant Professor at Department of Physical Medicine and Rehabilitation ,SHS, University of Management and Technology Lahore

Correspondence to Dr. Mamoona Anwar, E-mail : mamoona.anwar@umt.edu.pk, Cell : 0332-4639957

ABSTRACT

Background: Burn-out is a syndrome defined as the result of chronic workplace stress that has not been successfully managed. It has three dimensions: 1) energy depletion or exhaustion 2) feelings of negativism about one's job 3) reduced professional efficacy. Burn-out & musculoskeletal disorders (MSD) are the most common health problem associated with work in Europe, affecting millions of workers. Several studies have found a high prevalence of burnout among medical and dental students.

Aim: To determine the prevalence of burnout syndrome & its association with MSK disorders among health care students of Lahore, Pakistan.

Methods: This was a cross sectional survey among 259 students from different health care colleges studied in different semesters using the sample of convenience. The Nordic Musculoskeletal Questionnaire & Maslach burnout inventory questionnaire were used for data collection.

Results: The frequency and percentage of our outcome according to the report, 149 of the total students and 57.5% of respondents have neck disorder. Due to burnout during their medical studies, 50 students (19.3% of respondents) have shoulder problems, and 59 students (22.8% of our sample size) have upper back problems. There are 40 students with mild neck pain among the 259 students, 86 students with moderate neck disorder, 23 students with severe neck disorder, and 149 students with no neck disorder. There were 50 students with shoulder disorders and 59 with upper back disorders in total. As a result of burnout, the majority of students suffer from neck disorders. Pearson Chi square test value is 13. It shows the validity of research as it is more than 5. The majority of the participants shows high levels of emotional exhaustion, desperation & low occupational effectiveness. This suggests if preventions are not taken & interventional strategies not guided, there will be symptom progression & reduced professional effectiveness may occur among targeted population.

Conclusion: There is a strong association between B.O and MSD. The cervical and neck area is more prevalent than the upper back and shoulder, out of 259 students 149 suffer from neck pain.

Keywords: Burnout syndrome, MSD/musculoskeletal disorder, WMDs/work related musculoskeletal disorders.

INTRODUCTION

Burnout is now understood to have three dimensions: weariness, pessimism, and inefficacy. It is a stress-related condition that is continuing. It can also be described as being physically, emotionally, and mentally exhausted as a result of persistent, emotionally taxing employment¹. The Copenhagen Burnout Inventory (CBI) claims that burnout is more than just being exhausted or fatigued; this tiredness or weariness may be linked to specific areas in a person's life². ICD-10/ International Classification of Diseases-tenth revision labeled burnout disorder as a major factor affecting the well-being status³. According to WHO, MSDs are one of the main reasons for poor work performance and the primary cause of impairments worldwide⁴. Occupational health has often been ignored which leads to less retention rate of employees & poor organizational commitments⁵.

Work-related musculoskeletal disorders (WMDs) are syndromes characterized by symptoms of soft tissue pain, paresthesia, stiffness, swelling, weakness, discomfort, and loss of function that can be caused or exacerbated by occupational exposures⁶. The prevalence of musculoskeletal conditions varies by age and diagnosis, with 20 to 33% of people worldwide suffering from painful musculoskeletal conditions¹⁰. MSDs affect many people from various countries, as well as people of all ages, occupations, and fields. Furthermore, MSDs have a negative impact on people's quality of life (QOL) and lead to poor health outcomes.

Several studies have discovered a high rate of burnout among medical and dental students⁷. The prevalence of

musculoskeletal conditions varies by age and diagnosis, with 20–33% of people worldwide suffering from painful musculoskeletal conditions⁸.

In another study, researchers found that depressive symptoms were strongly associated with burnout. The purpose of this study was to find a relationship between burnout and stress symptoms in medical students. After the survey, they concluded that they were students who experienced symptoms of suicidal ideation, fatigue, depression, and quality of life. The study showed that 35.2% of his students were diagnosed with burnout and also suffered from depressive symptoms and suicidal thoughts. This can be prevented by the relaxation therapies they suggest to achieve an environment of freedom and anticipation of success/goals that mentally frees medical students from depression and suicidal thoughts⁹.

Therefore, a great lot of comprehension and awareness are needed when planning preventive physiotherapy for the demands of occupational groups among hospital personnel¹⁰.

Almost all occupations experience work-related stress. According to Cox's definition of occupational stress, the term stress refers to a complicated psychological condition that results from an individual's analysis of their intellectual adaptability to job expectations. The two main elements that this notion conveys are the subjective nature of the experience and the significance of striking a balance between job needs and one's capacity for meeting those demands¹¹.

Another study found a high prevalence of burnout among medical students in Pakistan. They found that 35.9% had high levels of burnout and 29.8% of men had burnout, thus concluding that women are at higher risk compared to men. This result was examined using the Christenson Burnout Score¹². In another study,

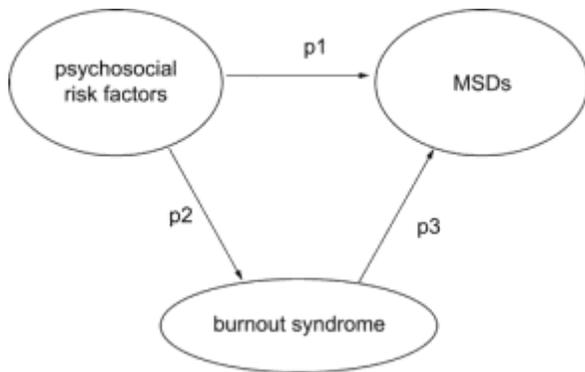
Received on 13-05-2022

Accepted on 19-09-2022

researchers discovered that primary care providers were most commonly affected by burnout syndrome in the neck, shoulder, and lower back regions of the body. According to previous research, PCP has a high prevalence of burnout syndrome and Musculoskeletal disorder. They discovered burnout syndrome primarily among computer workers in the hospital, which is why they were diagnosed with right wrist pain. They discovered that 37% of hospital nurses spend more time typing because of musculoskeletal discomfort (neck and wrist pain)¹³. MSDs affect many people from various countries, as well as people of all ages, occupations, and fields¹⁴.

The risk factor's exposure to the causes of MSDs: When a person is exposed to risk factors for this condition they experience fatigue. Anatomically speaking, the phrase "upper extremity" refers to bodily parts that include the upper limbs. The upper extremity consists of the shoulder, arm, forearm, wrist, and hand¹⁵.

Physical risk factors resulting from professional use (e.g., exercise, handling stress, repetitive motion, or vibration) are evidence work environment risk factors for the development of musculoskeletal disorders such as high psychosocial needs, improper job control, and low social assistance, may also have a key role in such jobs¹⁶.



The importance of this study is to consider how students suffer from burnout and how it affects a student's physical and psychological health as no study has assessed the prevalence of burnout among students of health care colleges in Pakistan and its relationship to MSDs, as well as compared the results of each health care college. As a result, this is the purpose of this research. We also investigated the relationship between burnout and MSDs, as well as the significance of burnout as a risk factor for MSDs.

MATERIALS AND METHODS

The Institutional Review Board granted ethics approval. In this study quantitative approach used for collecting data. The research was carried out in different medical colleges in Lahore & the target population was 259 medical students from 1st year to final semester, selected randomly as our sample size. The study lasted 6 months after the summary was approved.

Nordic Musculoskeletal Questionnaire (NMQ) & Questionnaire for the Mashlach Burnout Inventory were used to collect data. The reason for using this tool was that all of the respondents were able to read and understand the questions that would be asked of them. Subjects were informed of the goal, and written consent was obtained, which included the volunteer's declaration, the right to withdraw, and the confidentiality of their personal information. Demographic information and questions about the MSK problem are requested. We gathered data and entered it into SPSS.V21 that an in order to determine the outcomes of our research.

The first three questions were demographic in nature. The remaining questions were designed to determine the prevalence of burnout among health care students.

RESULTS

Table 1 shows the severity of burnout in correlation with MSK disorder affecting neck, upper back & shoulder. Table 2 shows the frequencies & percentage of students suffering with mild moderate and severe neck, shoulder and upper back MSK disorders. Table 3 shows chi square test results of the MSK and Severity of burnout. Pearson Chi square test value is 13 & it shows the validity of research as it is more than 5. Table 4 shows the total number of students respond to questionnaire.

Table 1:

MSK Disorder * Severity of burnout Crosstabulation					
Count		Severity of burnout			Total
		mild	moderate	severe	
MSK Disorder	neck	40	86	23	149
	shoulder	17	29	4	50
	upper back	25	29	5	59
	23	0	0	1	1
Total		82	144	33	259

Table 2:

Severity of burnout					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	mild	82	31.7	31.7	31.7
	moderate	144	55.6	55.6	87.3
	severe	33	12.7	12.7	100.0
Total		259	100.0	100.0	

Table 3

Table 4: MSK disorder severity of burnout (cases processing summary)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.352 ^a	6	.038
Likelihood Ratio	10.686	6	.099
Linear-by-Linear Association	.095	1	.758
N of Valid Cases	259		

a. 3 cells (25.0%) have expected count less than 5. The minimum expected count is .13.

Cases		
Valid	Missing	Total
259(100%)	0	159(100%)

DISCUSSION

This study is based on the onset of regional musculoskeletal pain (neck, shoulder, and lower back pain) with a baseline level of burnout syndrome. They concluded that workers with burnout syndrome are 1.67 times more likely to experience musculoskeletal discomfort. We concluded that female health care workers were at a higher risk than males because 29.8% of females had burnout syndromes.

One survey that was given to both daytime and nighttime shift workers was used to examine the case organisation, and the results were analysed using the non-parametric Spearman correlation and Mann Whitney U Test. The study emphasises the need for an efficient reward and gratification system (Young Worker Avg. 3.12 - Old Worker Avg. 3.82), caring for older workers (Muscle Pain Old Avg. 4.47 - Young Avg. 3.84), quitting smoking (Depression Smoking Avg. 3.79 - Non Smoking Avg. 3.12) and reducing fatigue from smoking (Smoking Avg. 3.92 - Non Smoking

A Although working the night shift may increase productivity, it is not the best option¹⁸.

Employees working at Kenneth Kaunda International Airport , Lusaka consider stress as a major health issue that affects their work performance & recommended that all companies must take steps to protect their employees from being exposed to undue stress¹⁹.

Burnout occurs majorly in medical schools ,half of them suffered burnout during their medical educational life .Tis a moderate to high degree burnout found among medical students of first , second, third & fourth years as 21%, 41%, 43% & 31% respectively²⁰. Burnout syndrome may lead to professional exhaustion and has been reported among dental students that dramatically affect their academic performance, specifically those taking medications due to studies or thoughts to withdraw their courses²¹.

CONCLUSION

This study concludes a strong association between Burnout syndrome and MSD. Neck area is more common than upper back and shoulder. Depression& stressful conditions leads to musculoskeletal disorders among students .Hence, preventive & Interventional measures must be developed by educational authorities that promotes emotional , personal & collective strategies to overcome stress among medical students. By managing stressors in medical students environment , helping the needs & aspirations of students & providing interventions by pyscho-educational support centres may facilitate the medical students & improve their quality of life.

Conflict of interest: Nil

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