STUDENT CORNER

MUSCULOSKELETAL PAIN AMONG UNDERGRADUATE PHYSICAL THERAPY STUDENTS: SINGLE CENTERED SURVEY

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ABSTRACT

Background: Musculoskeletal discomfort not related by a syndrome is very communal in juvenile and puberty getting lifetime prevalence as great as 40%. It affects student's quality of life and their productivity in education. So, the main objective of current study was to access musculoskeletal pain among undergraduate physical therapy students.

Methods: A Descriptive type of cross sectional survey was conducted at Lahore Medical and Dental College (LM&DC) for duration of almost six months from April 2018 to October 2018. Sample size recruited was 321 physical therapy students and they were included according to inclusion exclusion criteria. Assessment of Musculoskeletal pain was done using Nordic musculoskeletal questionnaire. An analysis was done using SPSS 21.

Results: The findings showed that musculoskeletal pain among students was most commonly prevalent in lower back region constituting 65.4% (n = 210) followed by upper back 53.9% (n = 173) and neck region 48.6% (n = 156).

Conclusion: Musculoskeletal pain was highly prevalent among medical students and most commonly found in lower back region.

Keywords: Medical Students; Musculoskeletal Pain; Nordic Questionnaire.

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doi.org/10.36283/PJMD8-4/018

INTRODUCTION

Pain is a complex condition and is well-described as 'An obnoxious sensory and psychological attitude linked with definite and potential tissue injury or defined in relation to damage', identifying that discomfort does not have to be inevitably related with injuries[1]. Automatic load such as uncomfortable position, manual material hold long standing, extend inactive and uncomfortable invigorating are recognized as hazard issues for local musculoskeletal ache[2].

Musculoskeletal discomfort not related by a syndrome is very communal in juvenile and puberty getting lifetime prevalence as great as 40%[3]. The physique areas further frequently affected include neck, shoulder girdle, low back region and lower extremities[4]. Whereas 36.9% of the female nursing novice practitioners in the dominant Japan identified their musculoskeletal discomfort, which arisen most frequently in shoulder girdle region, more than 50% of the qualified nurses in China stated musculoskeletal ache, with lower lumbar region being the most frequently described location[5].

As musculoskeletal pain affects student's quality of life and their productivity in education, the basic purpose of current study was to identify most commonly involved region of musculoskeletal pain among students so that preventive strategies could be taken to eliminate pain and enhance the productivity in education. So, the objective of

current study was to assess musculoskeletal pain among undergraduate physical therapy students and to determine which areas of body were most commonly presented with musculoskeletal pain.

METHODS

A cross-sectional type of descriptive study was performed at Lahore College of Physical therapy (LM&DC) for a period of six months from April 2018 to October 2018. 321 students were enrolled in the study students of department of physical therapy from 1st year to final year from Lahore medical and dental college was included. Exclusion criteria constitute those students with musculoskeletal pain of pathological origin.

Each research participant was questioned before conducting an assessment for inclusion and exclusion criteria. Assessment of the musculoskeletal symptoms was done utilizing Nordic Musculoskeletal Questionnaire. Nordic Musculoskeletal Questionnaire measures the pain in 9 regions of body which are cervical, shoulder girdle, elbow, distal upper extremity, upper thoracic, lumbar, pelvis, knee, ankle and foot. Reliability of questionnaire is 0.72-1.006. The sampling technique used was non probability convenient sampling. Analyses was done using software SPSS version 20. Data was presented in the form of frequency and percentages. The areas of musculoskeletal pain were reported.

RESULTS

For pain in Neck region, out of total number of students, 48.6% (n =156) said yes to have pain in last 12 months and 51.4% (n =165) replied No. When considering the neck pain during last 7 days, 19.6% (n = 63) had pain and 80.4% (n = 258) had no pain. The shoulder region pain during last 12 months was present among 18.7% (n =60) students and was absent in 81.0% (n =260). Pain in elbow region was present among 4.0% (n = 13) during last 12 months and absent in 96.0% (n=13) students. For pain in hand region 7.2% (n = 23) reported the presence of it while 92.8% (n = 298) denied its presence during the last 12 months. In the Upper back region 53.9% (n = 173) said Yes to pain in last 12 months and 46.1% (n = 148) said No to pain but in the last 7 days out of total sample 25.5% (n = 82) said Yes to pain and 74.5% (n = 239) reported absence of pain. 65.4% (n = 210) said Yes to pain during last 12 months and 34.6% (n = 111) said No in lower back region. During last 7 days 25.2% (n = 81) said presented with pain in lower back region and 74.8% (n = 240) replied absence of pain in that region. Out of total number of students 6.2% (n = 20) said Yes to pain during last 12 months in hip region whereas 93.8% (n =301) said No to pain. Pain in knee region in last 7 days was reported by 0.9% (n = 3) students while 99.1% (n = 318) said No to pain in this region. Pain in Ankle region during last 12 months as reported by 6% (n = 18) and rejected by 94.4% (n = 303) undergraduate medical students.

Table 1: Characteristics of students.

Variable	Domain	Frequency	Percentage
Gender	Males	50	15.5%
	Females	271	84.4%
Social Status	High Class	152	47.3%
	Middle class	160	49.8%
	Lower class	9	2.80%
Class	1st Professional	58	18.0%
	2nd Professional	58	18.0%
	3rd Professional	80	24.9%
	4th Professional	57	17.7%
	5th Professional	68	21.1%
Total		321	100%

Table 2: Presence of musculoskeletal pain in different body areas.

Areas of Musculoskeletal pain	Frequency	Percentage%
Neck pain	156	48.6
Shoulder pain	60	18.7
Elbow pain	13	4.0
Hand pain	23	7.2
Upper back pain	173	53.9
Lower back pain	210	65.4
Hips pain	20	6.2
Knees pain	23	7.2
Ankle pain	18	5.6
Total	321	100.0

DISCUSSION

The current study shows the striking feature of most involved region of musculoskeletal pain is lower back with percentage of 65.4%, followed by upper back 53.9% and then neck region 48.6%. These results are the same with other studies, in India the percentage of students who reported lower back pain was almost 47.5%[7], 46.1% in Malaysian students[8], 53.4% medical students from Austria[9], 17.2% in medical students of Belgrade[10], 59.9% in Brazilian based study which conducted on population of medical and physical therapy students[7]. In the present study musculoskeletal pain was present in almost all body regions.

However in a previous study that was conducted

among medical undergraduates of public region institute of higher education in Karachi, where the area of higher occurrence of musculoskeletal ache was lower back, pursued by neck ache and on last the shoulder region[5]. But in our current study the frequency is significantly higher than that in university of Karachi which is an alarming sign because it affects the student performance and activities of daily life.

A study was carried out at four institutes in Poland signifies that musculoskeletal pain provide hindrance with or restricts activities of daily life of the student like sitting, standing tasks as well as physical activities[11]. Therefore, it is important to organize learning and awareness sessions that explains useful knowledge about body biomechanics and ways to protect and look after back.

Due to extremely challenging course throughout the educations, medical pupils are bare to stress, inactive routine, and extended periods in hospital indoors and health center that consequently lead to the great incidence of low back discomfort[7]. Occurrence of low back discomfort can upset medical college student's efficiency, their presence at lectures and hospital rotations, and thus their upcoming professional role[12]. Increased incidence of low back discomfort was witnessed in students who have undergone five or more than five semesters, proposing that high level students who are commonly exposed to everyday events present with greater threat of disease.

CONCLUSION

Musculoskeletal pain was highly prevalent among medical students and most commonly found in lower back region. Future studies should be conducted on the strategies to prevent musculoskeletal pain so, that the efficiency of students could be increased.

ACKNOWLEDGEMENTS

We specifically thank Dean Prof. Hafiz Muhammad Asim Lahore College of Physical therapy, Supervisor Dr. Zunaira Mehdi, HOD Community Health Sciences LCPT Dr. Samreen Sadiq and the whole Department of Community Health Sciences LCPT for their assistance and facilitation throughout the research process.

CONFLICT OF INTEREST

There was no conflict of interest among the authors.

ETHICS APPROVAL

The study was approved from Lahore college of Physical Therapy.

PATIENTS CONSENT

Verbal and written informed consent was obtained from all participants.

AUTHORS CONTRIBUTION

KN conceived the idea, did bench work. SS wrote the manuscript, ZM helped in sampling and bench work, KN, ZM helped in designing of the project, ZM, SS facilitated in and data collection, HMA overall supervised the project and finalized the manuscript.

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