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## Research Article

# Prevalence of neck pain among the undergraduate physical therapy students of university of Balochistan, Quetta, Pakistan

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## Abstract

**Objective:** To assess the prevalence of pain among the undergraduate physical therapy students of university of Balochistan, Quetta.

**Material & method:** A cross sectional study was carried out among the 158 participants who were enrolled in department of Physical Therapy, University of Balochistan, Quetta. The participants were requested to answer the self-developed questionnaire consists of different questions (demographics & onset of pain). The collected data was analyzed by using statistical package of social sciences (Spss) version 21.

**Results:** The Majority (n=101, 63.9%) of the participants were from the age group of 18 to 22 years and (n=91, 57.6%) were female. Whereas in marital status mostly (n=147, 93%) of the participants were un-married. Majority (n=49, 31%) of the participants were the enrolled in the 1st professional year. After checking their working status (n=144, 91.1%) were not doing any job, whereas (n=131, 82.9%) of the participants were not taking any medicines for the management of neck pain. In the onset of pain (n=109, 68.9%) of the participants reported the occasional onset of pain followed by the (n=21, 13.3%) frequent pain.

**Conclusion:** The study concludes that the prevalence of neck pain among the undergraduate physical therapy students of university of Balochistan was high and measured about 69%.

## Introduction

Neck pain is a typical however significant musculoskeletal problem in present day culture nowadays, with revealed 1-year prevalence in the total populace shifting from 16.7% to 75.1% for adults [1]. The Global Burden of Disease (GBD) 2017 reported that the musculoskeletal conditions are to be the second highest contributor of Global Disability [2]. Neck pain prevalence is high among undergraduate students, however the prevalence of neck pain is highest among physiotherapy and nursing students [3]. Approximately 30% of people with neck pain faces the restrictions in their activities of daily

living [4]. There are multiple evidences available, suggesting that patients with neck pain have reduced maximal isometric neck strength and endurance capacity [5-8]. There are many different causes of neck pain such as trauma, infections or inflammatory conditions, rheumatic disorders, and congenital diseases however, most often no particular reason can be found, and the condition is marked as non-specific neck pain [9]. History of previous neck pain, academic stress, smart phone and laptop use, senior years of study, anxiety and tall height are some of the risk factors associated with neck pain among undergraduate students [2,3]. Neck pain is more common among females as compared to males [1,10]. The Patient's



history and examination are significant in distinctive likely causes and identifying red flags. The Physiotherapists and other health care providers examine patient's active cervical range of motion to assess the levels of impairments as well as to measure treatment outcomes. Some of the practitioners also assess passive cervical range of motion and palpation procedures, however these reviews conclude poor methodological quality [11-15]. The clinical history and assessment of patients with neck pain direct the appropriate timing and choice of diagnostic investigations such as plain radiography, MRI, and myelography with CT [16]. Diagnostic imaging should be ordered only when necessary because of the high incidence of asymptomatic radiographic abnormalities [11]. Individuals having a habit of adopting same posture for prolonged time can be the leading factors and contributors in developing the pain in neck region so it's important to check the status of neck pain among the students.

## Material and methods

### Study design, settings and duration

A cross-sectional descriptive study was conducted from June to August 2018, and data was collected from the undergraduate students of Department of Physiotherapy, University of Balochistan, Quetta, Pakistan.

### Sampling

Convenient Non-Probability Sampling Technique among the 158 selected participants were used. Participants with both genders (male & female), suffering from neck pain and willing to participate were included in the study. While, patient with a previous history of any surgical intervention, with any pathology, with any malignancy, with fracture with central nervous system alteration and not willing to sign informed consent were excluded.

### Data collection tool

A self-constructed proforma was used to collect the data, which include the demographic characteristics age, gender, marital status, educational year, working status and use of medicines. While, the included disease characteristics were the occurrence of pain (No pain, frequently, occasionally or constantly).

### Data collection procedure

The participants were asked to fill the questionnaire on the spot, only the minor help was given upon the request of participants in order to understand the questionnaire.

### Data analysis procedure

Descriptive statistics; categorical variables were measured as frequency and percentage. Data was analyzed by using Statistical Package for Social Sciences (SPSS) version 23.

### Ethical concern

As the approval was taken from the ethical review committee of Department of physiotherapy, Faculty of Pharmacy &

Health Sciences, University of Balochistan, Quetta, Pakistan. Informed consent was taken from participants containing that their participation is voluntary, their information will be kept confidential and anytime they can leave the study, after that the proforma was filled for data collection.

## Results

### Demographic characteristics

Table 1 displays demographic characteristics of participants. Most (n=101, 63.9%) of the participants were having age of 18-22 years and were females (n=91, 57.6%). In marital status most (n=147, 93.0%) of the participants were unmarried and (n=49, 31.0%) were studying in first semester. Most of the after checking the working status majority (n=144, 91.0%) of respondents were not doing any job/ not working.

### Intake of medications.

Figure 1 displays intake of medication for neck pain by participants. Most of the participants (n=131, 82.9%) were not taking any medications for managing the neck pain.

### Occurrence of neck pain

Table 2 displays occurrence of neck pain reported by participants. Most (n=109, 69.0%) of the participant reported that felt neck pain occasionally, followed (n=21, 13.3%) by frequent neck pain.

### Percentage of participants having neck pain

Figure 2 displays percentage of participants having neck pain. 69% of participants reported that they are suffering from neck pain.

**Table 1:** Demographic Characteristics.

Demographic Characteristics	Frequency (n=158)	Percentage (%=100.0)
<b>Age group</b>		
18-22 years	101	63.9
23-27 years	57	36.1
<b>Gender</b>		
Male	67	42.4
Female	91	57.6
<b>Marital status</b>		
Married	11	07
Unmarried	147	93
<b>Education</b>		
1 <sup>st</sup> Professional	49	31
2 <sup>nd</sup> Professional	20	12.7
3 <sup>rd</sup> Professional	16	10.1
4 <sup>th</sup> Professional	41	25.9
5 <sup>th</sup> Professional	32	20.3
<b>Working status</b>		
Working/ Doing job	18	8.9
Not working	144	91.1

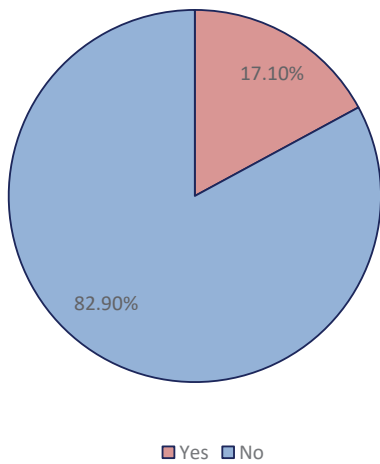


Figure 1: Intake of medications for neck pain.

Table 2: Occurrence of Neck Pain.

Pain Pattern	Frequency (n=158)	Percentage (%=100.0)
No pain	10	6.32
Occasionally	109	68.9
Frequently	21	13.3
Constantly	18	11.4

Participants Having Neck Pain.

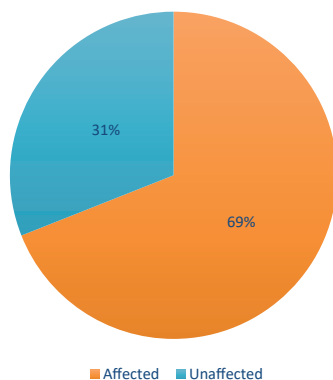


Figure 2: Percentage of participants having neck pain.

## Discussion

The results of present study concludes that 69% of undergraduate students of university of Balochistan Quetta, Pakistan were suffering from neck pain. This finding is consistent with similar studies reporting higher rates of neck pain occurrence in undergraduate students, conducted in China with (45.0%) [3], India with (58.3%) [17], Ethiopia with (49.2%) [18], Pakistan with (44.8%) [19], Australia with (52.8%) [20], USA with (35%) [21], Iran with (39.4%) [22], Brazil with (35.69%) [23], Malaysia with (41.8%) [24] and in Thailand it was (46%) [25].

In Previous conducted studies, the reported reasons that makes undergraduate students prone to develop the neck pain

were the usual Lack of physical activity, the stress related to studies, and universal adoption of different digital gadgets make the undergraduate students prone to develop musculoskeletal pain-related issues specially in the neck region [17]. Another study claimed that neck pain among the undergraduates were associated with anxiety, low back pain, tall stature and prolonged smart phone usage [3]. Pratek bahera reported that joining the Graduate level studies is found one of the leading cause for neck pain and it's also directly associated with high risk of pain in different regions especially in back as well. He further suggested that psychological burden during study years causes neck pain, while the over burden and prolong sitting in same posture were found the most aggravating factors for neck pain. It's also stated that the neck pain leads to reduction in neck range of motion in most of the directions [17]. Furthermore, poor adopted posture during study hours was found causative agent for neck pain among the undergraduate students [26,27].

## Conclusion

The study concludes that the prevalence of neck pain was 69% among the undergraduate physical therapy students of university of Balochistan, Quetta, Pakistan.

## Recommendations

The study was conducted among the undergraduate students of physical therapy. In future the studies should be conducted in other departments in detail as well, in order to analyze the factors and predictors of neck pain.

## Limitations

The study was conducted among the under graduate physical therapy student only, in future the study should be conducted in other departments as well. In this study few demographics like smoking and Body mass index which are highly contributing factors in neck pain were not asked, the next studies they should be added.

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## Author contributions

All authors contributed equally.

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