



Cross sectional survey using neck disability index scale in physiotherapy students having neck pain

Krishna Jain¹, Sabina Salim Kazi Hakim², Shweta Satish Devare Phadke³, Pranati Tilak⁴

¹ TMVs' Lokmanya Tilak College of Physiotherapy, Navi Mumbai, Maharashtra, India

² Assistant Professor, Department of Cardiovascular Respiratory Physiotherapy, TMVs' Lokmanya Tilak College of Physiotherapy, Navi Mumbai, Maharashtra, India

³ Professor, TMVs' Lokmanya Tilak College of Physiotherapy, Navi Mumbai, Maharashtra, India

⁴ Director, TMVs' Lokmanya Tilak College of Physiotherapy, Kharghar Campus, Navi Mumbai, Maharashtra, India

Abstract

Neck pain is the major cause of morbidity and absenteeism among medical students worldwide. Medical students are more exposed and appear to have neck pain because of their length of study to achieve their professional goals, online lectures, practical, manual therapy. However, up to the knowledge of the researcher, there is a scarcity of literature conducted on prevalence and associated factors of neck pain among medical students of physiotherapy in Lokmanya medical college of physiotherapy.

Neck pain is a chronic episodic condition characterised by persistent, non-transient or fluctuating pain. Neck pain is a major public health problem, in both ways that is in personal health and overall well-being as well as indirect expense. Neck pain is a major cause of sickness, reduced educational attainment which will affect students' future careers. The objective of the study was to find the presence, and impact of Neck pain in physiotherapy students. A cross sectional study among 198 students using purposive sampling from physiotherapy students (aged 18-25) was carried out. We used a validated questionnaire Neck Disability Index to collect data. Neck Disability Index is a valid and reliable questionnaire having a Cronbach alpha value=0.82=good.

Data was analysed using descriptive analysis. Neck Pain was present in 60.1% students. Most of the students were seen to have Mild Disability which can lead to significant impairment. The presence of high risk of Neck Pain in physiotherapy students emphasises the need to plan treatment and active lifestyle advice for this group of people. The presence of Neck Pain among students of TMV's Lokmanya Tilak College of physiotherapy is high. Identifying risk factors early will minimise the prevalence of Neck pain and progression to a chronic disease, thereby improving an individual's quality of life and increasing productivity.

Keywords: neck pain, physiotherapy students, bad posture

Introduction

Neck Pain was defined as pain, ache or discomfort in the area between the occiput and the first thoracic vertebra at any time in the last 12 months [1].

Neck pain is a chronic episodic condition characterised by persistent, non-transient or fluctuating pain (2). Neck pain (NP) is a major public health problem, in both ways that is in personal health and overall well-being as well as indirect expense (3). Neck pain is a major cause of sickness, reduced educational attainment which will affect students' future careers [2,1]

It is seen that young adults having complaints of 14-71% incidence sometimes in their lives [3].

The most common area is lower cervical, scapular and shoulder and is usually associated with tenderness, inflammation and limitations of movements [4,3]

The origin and exact pathophysiologic mechanisms of chronic neck pain often remain obscure because trauma or severe degenerative conditions at working age found only in a few cases. Excessive physical strain may cause micro-trauma in connective tissue's and psychosocial stress can cause increased muscular tension and pain [5,4].

In Medical students during the period of medical training, the students are exposed to stress, study problems, training

in hospital wards and clinics during the period of their medical training [6].

Physiotherapy students seemed to have a higher risk of developing neck pain compared to the general population as they manually treat patient [7].

Besides the factors predisposing to pain in the general population, students subject themselves to hours of prolonged reading, writing, and being in the clinical practice which makes them high-risk group for neck pain. Furthermore, computer or tablet use is very common among medical students [8, 9].

Previous studies have reported a high prevalence of Neck pain in medical students [9].

Assessment of pain is difficult as pain is subjective, multi-dimensional, and variable in its manifestation and varies over time. (5) Chronic musculoskeletal pain has large impact on many aspects of daily life. Several questionnaires have been developed to assess these different dimensions and characteristics of pain [10, 9, 8].

The acute neck pain can be reduced by correct posture, changing position while sitting in chair or lying on bed or floor, changing working habits and daily regular exercises [11].

Aims and Objectives

To find functional disability caused by the neck pain in undergraduate physiotherapy students of 1st, 2nd, 3rd, 4th year and interns of TMV's Lokmanya tilak college of physiotherapy Kharghar.

Procedure

Ethical approval was taken by the ethical committee. The purpose of the study was discussed with all the participants. The questionnaire was explained to all the students. Consent and demographic data was taken. Screening was done for neck pain and students having neck pain were selected, Neck Disability Index was handed over to them on one to

one basis which was self administered by them. Data was formulated based upon these recorded responses. Result and conclusion have been noted.

Results

This study concluded that out of 198 undergraduate physiotherapy medical students of Lokmanya Tilak medical college of physiotherapy Kharghar among them 60.1% had neck pain. Out of these students more prevalent in female students than in males having a percentage of 82.3% in females and 17.7% in males. Neck pain is more common among third year students i.e., 29.8% due to increased study hours and online lecture which held past 1 year.

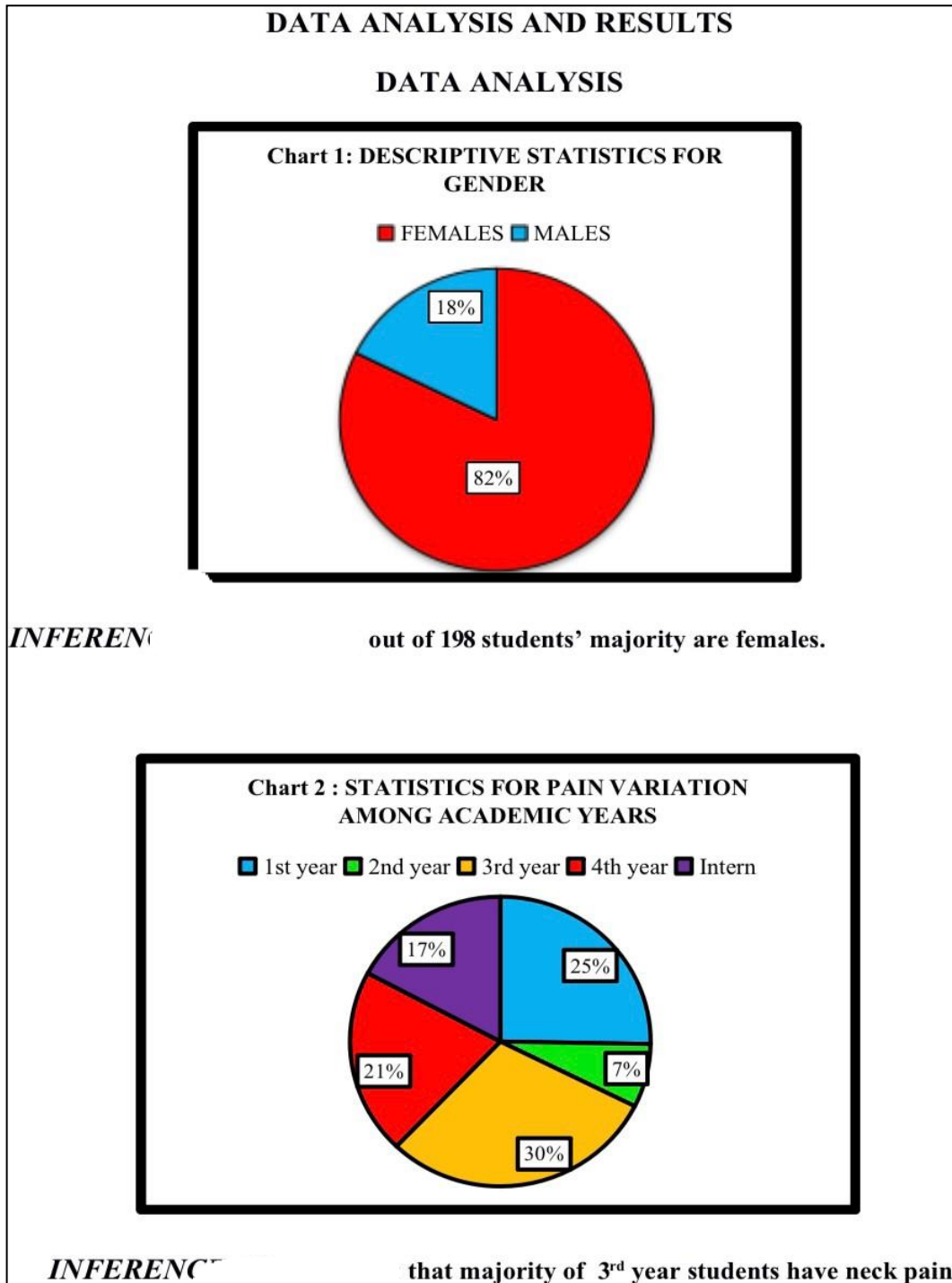


Fig 1

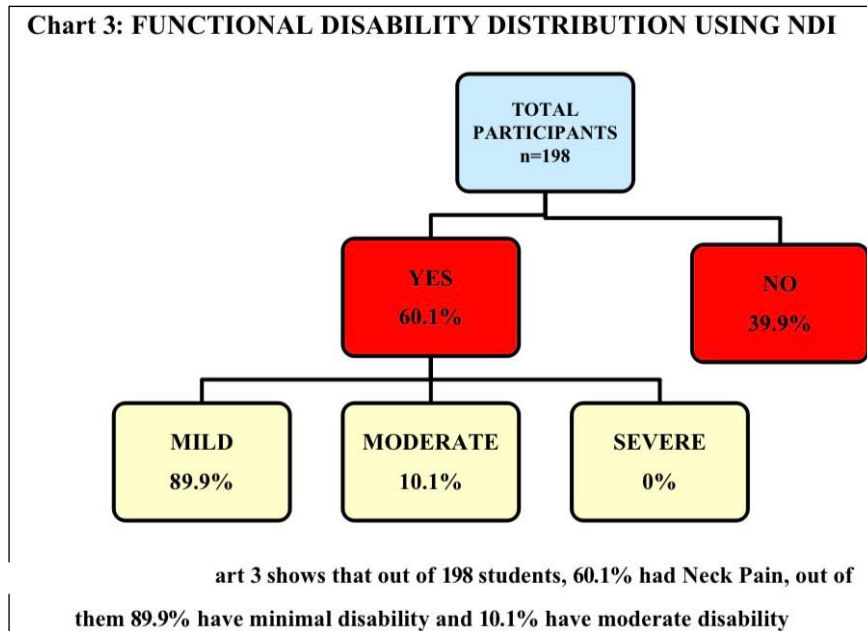


Fig 2

Discussion

The study was done to investigate the functional disability caused by neck pain in the physiotherapy students and to measure the adverse effects of neck pain on everyday life. 199 students participated in the study. The age of the participants was between 18-25. Out of 199 participants, 163 (82%) were female and 36 (18%) were male. Among them 60.1% students were having neck pain and rest 39.9% students were not suffering from neck pain. The cross sectional study demonstrated that a remarkable number of physiotherapy students had developed neck pain. Neck pain has become an escalating issue among the undergraduate students of physiotherapy.

This study indicates that the prevalence of neck pain among undergraduate medical students of physiotherapy was high. Moreover, the risk factor for increasing neck pain is awkward posture adopted during studying as they study in sitting position on the floor while flexing their head.

However, in a study named Prevalence of Neck Pain among undergraduate students of Lahore showed that prevalence is 56.7% which is less than this study (2). The problems that students usually face are difficulty in reading, headache and disturbed sleep due to pain.

This pain thus increases their level of fatigability and decreases their efficiency and affects their capability in examinations. Thus, the Study can be used to educate students about neck exercises and strengthening of weak muscles and also it is highly recommended good postural support during study time.

Conclusion

A total of 60.1% students had neck pain, which varied from mild to moderate.

Major aetiology of neck pain was prolonged static posture and long study hours, especially in those who study with bend neck.

Acknowledgement

First of all, I am grateful to The Almighty God without whose blessings this research would not have been possible. It is my pleasure to acknowledge the roles of several

individuals who were instrumental for completion of my research. I wish to express my sincere thanks to my college Principal, Dr. Shweta Phadke for granting me the permission to carry out this research & providing me with all the necessary facilities. It is a genuine pleasure to express my deep sense of thanks & gratitude to my guide, Dr. Sabina Salim Hakim. Her dedication & keen interest above all her overwhelming attitude to help her students had been solely & mainly responsible for completing my research work. Her timely advice & scientific approach have helped me to a very great extent to accomplish this task. My deepest appreciation with greatest debt of gratitude belongs to my father Kamlesh Bastimal Jain & mother Sheetal Kamlesh Jain for their patience, unceasing support & encouragement.

References

1. Gidey Gomera Weleslassie1*, HagaziGebre Meles2, Tsiwaye Gebreyesus Haile1, GebresslassieKahsay Hagos1. Burden of neck pain among medical students in Ethiopia; Weleslassie *et al.* BMC Musculoskeletal Disorders,2020:21:14.
2. Aishwarya Bulbule1, Sayali Gijare. Prevalence of Mechanical Neck Pain among Beauty Service Buisness Employees in Karad; Indian Journal of Physiotherapy and Occupational Therapy, 2019, 13.
3. René Fejer, Kirsten Ohm Kyvik Jan Hartvigsen. The prevalence of neck pain in the world population: a systematic critical review of the literature; Eur Spine J,2006:15:834-848. DOI 10.1007/s00586-004-0864-4
4. Wasfi A Al Hadid. Prevalence and Factors Influencing Neck Pain among Health Worker in Dentistry in Jordan; JOJ Nurse Health Care, 2018, 7(2). DOI: 10.19080/JOJNHC
5. Ayesha Malik, Umer Pasha M, Sadia khalid, Ashfaq ahmad, Syed Amir Gilani. Prevalence of Neck Pain among Undergraduate Students of Lahore; InternationalJournal of Scientific & Engineering Research,2017:8(10):569. ISSN 2229-5518.
6. Vernon H, Mior S. The Neck Disability Index: a study of reliability and validity. J Manipulative Physiol Ther.,1991:14(7):409-15.

7. Muhammad Sajid Paracha^{1*}, Breera Amjad², Kanza Masood³, Mushyyaida Iqbal⁴, Seemab Mughal⁵, Rabbia Naseer⁶, *et al.* Prevalence of Neck Pain and Its Different Associated Factors Among Undergraduate Students of Sargodha Medical College, 2019, 8(1). DOI: 10.19080/JYP.2019.08.555731
8. Anna Grimby-Ekman*, Mats Hagberg. Simple neck pain questions used in surveys, evaluated in relation to health outcomes: a cohort study; Grimby-Ekman and Hagberg BMC Research Notes, 2012.
9. Prateek Behera, Anindo Majumdar, Revadi G, John Ashutosh Santoshi, Vivek Nagar, NituMishra. Neck pain among undergraduate medical students in a premier institute of central India: A cross-sectional study of prevalence and associated factors. Journal of Family Medicine and Primary Care, 2020, 9(7).
10. Fahad Tanveer, Sana Shahid; Prevalence of Neck Pain among Doctor of Physical therapy Students of University of Lahore due to bad posture.; Rawal Medical Journal, 2017, 42(2).
11. Yakshi Bhardwaj¹, Richa Mahajan. Prevalence of Neck Pain and Disability in Computer Users; International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2015): 78.96 | Impact Factor,2015:6:391.