

Find the relationship between mobile data usage and neck pain for physiotherapy college students – a questionnaire survey method

Abstract

Introduction: Increasing incidence of neck pain in youngsters, which affects college study performance in collegiate, even though various musculoskeletal causes may list by the orthopedic professionals for neck pain. One of the important causes is smart phone and data usage. This questionnaire study aims to find out the relationship between mobile data usage and neck tiredness and neck pain in college students.

Materials and methods: Google Forms Web-based Questionnaire Method: Google Form links were shared with college students in WhatsApp application batch groups; the ones shared requested that they fill out the questionnaire. The questionnaire covered age, data usage, mobile usage time, neck tiredness, neck pain, and occupation. Among these questions, we found that the response was received in a Google form. Once the stipulated date of the time period is over, we will have received 108 Google Form responses from the physiotherapy students, which and analyzed and presented.

Results: The questionnaire survey method found that significant relationship between mobile data usage and neck pain. Participants aged 18 to 26 years students studying in a private college of physiotherapy in India have a have an average time of mobile usage of 3 to 4 hours. In this shortquestionnaire survey found that highly associated with neck pain and mobile data usage in physiotherapy college students.

Keywords: Google, questionnaire, survey, data usage, neck pain

Volume 16 Issue 3 - 2024

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Received: June 17, 2024 | **Published:** June 28, 2024

Introduction

Mobile/hand phones are powerful communication devices, first demonstrated by Motorola in 1973, and made commercially available in 1984.¹ The number of Smartphone users in India was estimated to reach over one billion in 2023. It was estimated that by 2040, the number of Smartphone users in India will reach 1.55 billion. India, the second-most populous country in the world, passed the United States in the number of Smartphone users in 2017. By 2017, around 223 million people in the U.S. used Smartphone, compared to 340 million in India. The Smartphone penetration rate in India reached close to 71 percent by 2023, a penetration rate that the U.S. already reached in 2019.² Indian Smartphone users have an average use of 25 GB permonth. The average daily online activity on Smartphone amounts to 3 hours and 50 minutes. Today, approximately 4.88 billion individuals own a Smartphone. That's set to grow to 6 billion by 2017. On average, Smartphone users spend 4.37 hours per day using mobile apps. Time spent using Smartphone among American adults grew from 3 hours and 1.1 minutes in 2019 to 3 hours and 54.8 minutes in 2024.³ Overuse of mobile phones may cause psychological illnesses such as dry eyes, computer vision syndrome, weakness of the thumb and wrist, neck pain and rigidity, increased frequency of De Quervain's tenosynovitis, tactile hallucinations, nomophobia, insecurity, delusions, auditory sleep disturbances, insomnia, hallucinations, lower self-confidence, and mobile phone addiction disorders.⁴ Mobile phones are becoming an integral part of the lives of students with regard to managing critical situations and maintaining social relationships.⁵ This study suggests that there are 11 main risk factors affecting college students neck pain, including improper use of the pillow, lack of exercise, improper

sitting posture, history of neck and shoulder trauma, senior grade, staying up late, long-term electronic product usage daily, long time to bow head, high stress, emotional problems, and female gender.⁶ Frequent use of mobile devices may affect the brain function of youngsters, which leads to reduced study performance. The aim of this study is to find out the smart phone screen usage time of college students.

Purpose of this study

The Purpose of current study was to find out the connection between the smart phone usage, screen time and neck pain. A web based Google form survey done between the Physiotherapy students. Collected questionnaire survey has present in pictorial presentation.

Methods

Inclusion and exclusion criteria

Students aged 18–25 were included in this study. Students from 1st year, 2nd year, and 3rd year are involved in this study. Students were excluded from this study because they already had musculoskeletal conditions and chronic medical conditions, and had undergone any surgical procedures.

Methodology

A web-based Google Form survey that contains 8 questions, questionnaire was shared with batch class advisers, followed by class advisers sharing with their class students accordingly. Once their web-based Google form was filled out, they submitted it online with their mobiles. Students are advised by their class adviser to

fill out the form without delay, even though we received only 108 responses. The questionnaire was not evaluated prior to this is the formal study. Once we have received the survey response, we have started to analysis the report. As we have survey report response in the Google form, those reports started to be converted to the Google Excel sheet and Google document. After the collection of the survey, an analytical report was presented in readable format.

Data presentation

Among the students who participated in this survey, said that 35.1% of the students use their smart phone for 4 hours, 29.9% of the students use it for 3 hours a day, 18.9% of the students use their smart phone for 2 hours, and 18% of the students use their smart phone for 1 hour. From this questionnaire we came know that utility of smart phone in college students increased progressively (Figure 1).

What is the average user time of Gadgets per day
111 responses

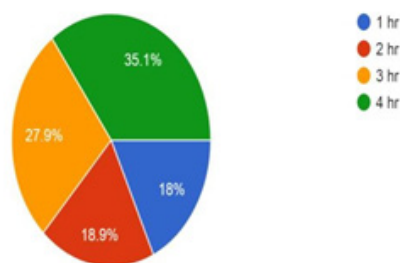


Figure 1 User time of gadgets.

Purpose of utility

Among the students who participated in this survey, 38.7% percent of the students said that they watch entertainment like cinema, 29.7% percent of the students sometimes watch movies or social network and very few i.e. 9.9% said that they watch entertainment like cinema (Figure 2).

would you like to download and watch movies in your mobile
111 responses

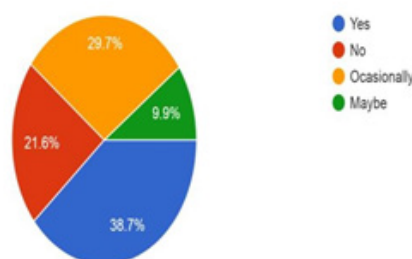


Figure 2 Percentage of watching movies in mobile.

Neck tiredness

47.7% percent students reported having neck tiredness, 37.8% sometimes percent students reported neck pain, and only 12.6 percent students reported no neck pain (Figure 3).

would feel neck tiredness sometimes
111 responses

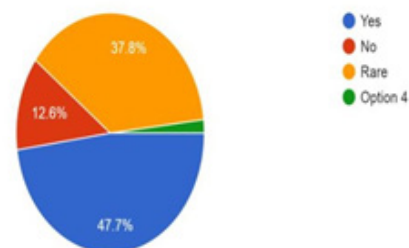


Figure 3 Neck tiredness.

How much Data usage per day you use it
111 responses

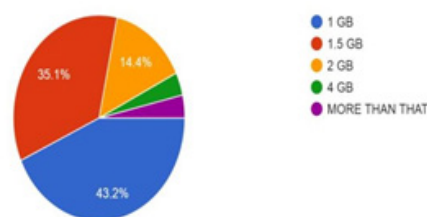


Figure 4 Data usage.

Age of the participants

73.3% percent of students are in the age group of 18 to 25 years and 10.8% percent of students are in the age group of 15 to 18 years (Figure 5).

Age of participant
111 responses

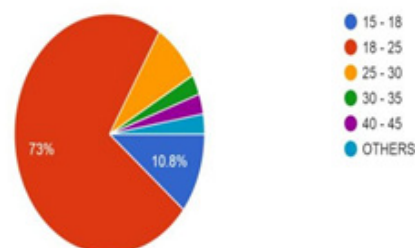


Figure 5 Age of participants.

Participants occupation

Those who are participated in this study, 79.3% are from studying in the college 20.7% are from working professionals (Figure 6).

Are you studying or Working
111 responses

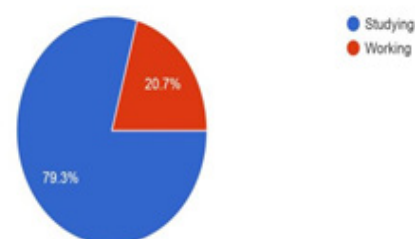


Figure 6 Participants occupation.

Discussion

The purpose of this study is to find the relationship between mobile data usage and neck pain for physiotherapy college students- A questionnaire survey method. The information available from the above data is that the smartphone used by each student is used for three to four hours. The data suggests that the tightness in their neck muscles is likely to become chronic day by day. The participants in this study were between the ages of 18 and 25, so this suggests that smartphone use at a young age is more likely to cause chronic pain in the neck, muscle spasms, and muscle fatigue. This study suggests that smartphones may be a major factor in Chronic neck pain in future. Smartphone is also one of the major causes in future generation specially those who were born after year of 2000. Pain intensity was found that age and duration of mobile phone use are the main determinants. In addition, the duration of mobile phone use was significantly and positively associated with the severity of neck pain.⁷ When we tried to conduct this study by taking many students, it was not possible to conduct it due to several reasons. The fact that one hundred and eight students participated in this data and gave answers to his question adds to the strength of the study.

Q&A online survey method found that physiotherapy college student who uses a handheld Smartphone for approximately 4 hours a day is more likely to develop neck pain. In this way, it is good for them to reduce the use of smart phones while quoting the research report when giving an advice to students about their bodies.

Limitation of study

The same questionnaire study should be done with a large number. It was possible to increase the number of participants; however, due to a lack of time, we were unable to think of more than those chosen for the study. Furthermore students should include as they are in exam study leave, couldn't able to participate. Because some of the students from rural area can't able access the internet frequently.

Recommendation

The same questionnaire study was recommended to find the relationship between data utility and back pain. In person

questionnaires and manually filled-out forms provide real data on pain presentation site quantity and quality. The connection between back pain and screen utility time will be analyzed in the future. Furthermore studies recommended to find the relation between the data usage per day and musculoskeletal pain.

Conclusion

A questionnaire survey method Q&A online survey method found that physiotherapy college student who uses a handheld Smartphone for approximately 4 hours a day is more likely to develop neck pain. In this way, it is good for them to reduce the use of smart phones while quoting the research report when giving advice to students about their bodies.

Acknowledgments

None.

Conflicts of interest

The authors declare that there are no conflicts of interest.

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