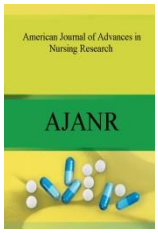
e - ISSN – 2349-0691

AMERICAN JOURNAL OF ADVANCES IN NURSING RESEARCH

Journal homepage: www.mcmed.us/journal/ajanr



A STUDY TO ASSESS THE PREVALENCE AND THE LEVEL OF KNOWLEDGE REGARDING TEXT NECK SYNDROME AMONG SELECTED COLLEGE STUDENTS IN COIMBATORE

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Article Info

Received 25/05/2025
Revised 14/06/2025
Accepted 17/06/2025

Key word:
Text Neck Syndrome, Statistical package for the Social Sciences.

ABSTRACT

Aim and Objective: To assess the prevalence of Text Neck Syndrome among selected college students in Coimbatore. Methodology: Quantitative approach, descriptive study design was adopted to assess the prevalence of text neck syndrome among college students in Coimbatore, (25 samples male and 25 samples female) studying in third year B.Sc Nursing in Ganga College of Nursing, Coimbatore who filled the inclusion and exclusion criteria. Non probability convenient sampling technique, random method was used to select the sample. We created the questions in google forms and received the response through the e-mail. The data analysis was done using SPSS – 27th version. Demographic profile was collected; level of knowledge was assessed by using self-structured knowledge questionnaire and assessed by standardized tool among selected college students. The study was conducted for two weeks. Results: The study revealed that there is no and moderate disability and indicated with mild (2%), severe (8%) and complete (90%) disability observed among selected college students in Ganga College of Nursing and majority of them using mobile phones. In this study males are more affected than the females. Conclusion: The research study revealed that TNS among selected college students was mainly due to the usage of mobile phones.

INTRODUCTION

Repeated stress injury and pain in the neck and shoulder area resulting from Excessive watching or texting on hand held devices over a sustained period of time. It is also known as "Turtle Neck Posture" or "Anterior Head Syndrome" leads to severe consequences like upper cross Syndrome-Dr. Fishman. Recent years, there is a drastic increase in smart phones, computers and phablets users among young adults for web assess social networking, educational purpose, gaming and other daily life activities. [1]. The smart gadgets emerge as an undeniable gadget in modern society and its increased usage leads to addiction and other physical problem among users. Addiction to the smart gadgets emerges as a crucial global concern in recent times, especially during COVID-19 pandemic. During the recent COVID-19 lockdown and social isolation, online platforms and web based tools were used to carry out employments and educational needs. Moreover, people

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spends a considerable amount of time engaging on social media and networking sites using smart phones, computers and phablets which further increased addiction among the young adults.[2]

During the last few years the growing reporting of data is showing that the "Text Neck Syndrome" might be considered as an emerging 21st century syndrome. This clinical condition refers to the onset of cervical spinal degeneration that results from the repeated stress of frequent forward head flexion while we look down at the screen of mobile devices and while we text for long period time. The Text Neck Syndrome is more common in adolescents who for several hours a day and for several days a year, hunch over smart gadgets and personal computers for frequently than in past[3].

Globally, musculoskeletal disorders emerge as one of the leading causes of disability affecting the activities of daily living and work capacity musculoskeletal disorders are effective in lowering the disability and related concerns. [4]. Smart gadgets addiction and overuse are associated with musculoskeletal disorders, especially in the neck and upper limbs. While viewing the smart gadgets the user flexes the neck to look down at the screen resulting in excessive lordosis in the lower cervical region with a compensatory kyphosis in the upper thoracic region. The faulty posture is referred to as the "forward head", "turtle neck" posture which due to excessive gravitational moment could abnormally load the articular structures of cervical spine and neck extensor muscles resulting inefficiency and fatigue. [5]

Background

Global Scenario: The text neck pain is a World wide public health problem, largely reported nowadays. Currently data have shown that erroneous use of personal computers and cell phones might be correlated with development of various clinical symptoms that are defined as Text Neck Syndrome. Globally 75% are affect Text Neck Syndrome. [6]

National Scenario

The prevalence of Neck pain also increased from 39.2% in the year 2016 to 60.8% in the year 2019 among young adults in India. After COVID-19 pandemic there is a drastic increase in neck pain among the younger adults 48% to 78% in the year 2023 in India due to overuse of smart gadgets in younger adults. All over the globe out of 283 responses,36.5% of respondent reported mild Text Neck Syndrome,23.4% reported moderate,2.1% reported severe and complete Text Neck Syndrome and 35.7% did not suffer Text Neck Syndrome. And 73.4% people reported mild to severe pain in the neck and upper back region. The Text Neck Syndrome which mainly affects the age group between 16 to 44 years that is children, teenagers and younger adults. [7]

Regional Scenario

90% of people were affected by Text Neck related muscle and skeletal problems in Coimbatore, Tamil Nadu [8].

Review of Literature

- **Prevalence of Text Neck Syndrome:** Laldinpuii et al; Deepa S Nair,Richa K Jose (2022 April to June) conducted a cross sectional study among 500 undergraduate students in the department of medicine, to investigate among smart gadgets users. Lahore 2019 using no-probability convenient sampling technique, the neck Disability Index survey was given to 500 undergraduate medial students,292(58.4%) of who were female and 208 (41.6%) of whom were male. The study findings concluded that the students without disabilities (58.4%), those with mild disabilities (30%) and those with moderate disabilities (11.6%).
- **Contributing factors of Text Neck Syndrome among college students:** Suresh A et al; Sudhan S (2021) conducted a cross- sectional study among Garden City University in 2019 between 18 to 25 years in the department of Community Health Nursing at India, using non-probability sampling technique to find out the impact of smart phones addiction on neck pain and disability. A total 100 subjects (65 females and 35 males) were collected, the category of addiction was found to be more prevalent in woman. The study findings concluded that 3.07% of females fell into the category of no disability,53.8% of mild disability,41.5% fell into the category of moderate disability and 1.5% into severe disability. There was 2.9% of the male subjects who did not have any disabilities,37.1% who had mild disabilities, 60% who had moderate disabilities but there were no men with severe disability.
- **Knowledge related to Text Neck Syndrome**
  Amandeep Kaur et al; Tripti Kumari, Palak Kumar (2021) conducted a descriptive study among 300 university students between the age 18-25 years in the Lovely Professional University Jalandhar, Punjab, India to investigate smart gadgets users. The study findings concluded that out of 300 participants are aware about Text Neck Syndrome, 73% knows about the cause behind it and believes it can prevented. According to the study 53% participants suffer with pain and stiffness while using smart devices.

Statement of the problem

A study to assess the prevalence and the level of knowledge regarding Text Neck Syndrome among

selected college students in Coimbatore.

Objectives of the study

- To assess the prevalence of Text Neck Syndrome among selected college students.
- To assess the knowledge of Text Neck Syndrome among selected college students.

MATERIALS AND METHODS

A descriptive study was adopted in order to assess the prevalence of Text Neck Syndrome among college students in Ganga college of Nursing. The independent variable of this study was assessing prevalence of Text Neck Syndrome. The dependent variable was knowledge of Text Neck Syndrome. The study was conducted at Ganga College of Nursing, Coimbatore. The study sample consist of all third year B.Sc Nursing and Allied Health students studying in Ganga College of Nursing, Coimbatore. The sample size consisted of 25 males and 25 females (Who fulfilled the inclusion and exclusion criteria) selected by non-probability convenient sampling technique using simple strata simple random technique under lottery method. The study included young adults aged between 18-21 years and those who were willing to participate and available at the time of data collection. The study excluded the students with structural problems and spinal cord injury.

The tool consisted of three parts i.e., Data collection tool, self-structured questionnaire to assess the knowledge and Inferential analysis of Neck Disability Index. The data collection tool consists of three sections. Section A consists of demographic variables, Section B consists of a self-structured knowledge related questionnaire and Section C consists of questionnaires related to Neck Disability Index. It is composed of 10 sections like Pain Intensity, Personal Care, Lifting, Work, Headaches, Concentration, Sleeping, Driving, Reading and Recreation and all these composed of with 6 set of questionnaires.

Permission to use the tools was sought from the experts through email. In the majority of occasions, the original English versions of the scales and questionnaires were utilized.

Ethical consideration

Ethical approval was obtained from the Institutional Ethics Review Board and formal approval was obtained from the management of Ganga College of Nursing Coimbatore to conduct the study in the nursing college and also from the heads of the respective college. The researcher has followed fundamental ethical principles like the right to freedom from harm and discomfort, respect for human dignity. The researcher gave full freedom to the participant to decide voluntarily whether to participate in the study or to withdraw from the study and the right to ask questions at any time during the course of the study. One visit was made to meet the students and distribute the consent and assent forms, later on two visits were made for data collection, hence minimum of three visits were made in each class. Class hours were not disturbed for the students as the study conducted after the chief hours. The investigator has maintained the study participant's privacy throughout study. The investigator has administered the same questionnaire for all the third B.Sc Nursing and Allied Health Science students.

Statistical Analysis

The data from the proforma were entered in Microsoft excel 2016 and analyzed using Statistical Package for Social Sciences (SPSS) version 27.0. Descriptive statistical was used to describe the demographic variables. The frequency and percentage distribution was assessed for self- structured knowledge related questionnaire and for the Neck Disability Index.

RESULTS

Socio-demographic Characteristics

A total of 50 third B.Sc Nursing and Allied Health Science students from Ganga College of Nursing participated. The majority of the students were aged 21years that is 44% in female and 64% in male samples. It is observed that, most of them were B.Sc Nursing course (96%) and only 4% of students from Allied Health Science course students participated in this study. Most of the students use smart gadget as Mobile phones (100%).Most of their average screen time is more the 5-7 hours per day.

Level of Knowledge regarding Text Neck Syndrome (TNS)

A self-structured questionnaire with multiple choice questions to assess the knowledge of Text Neck Syndrome which consists of what is Text Neck Syndrome and its causes, symptoms, complications, anatomical parts mostly affected by TNS, poor posture that leads to TNS, vulnerable age group for TNS and the ways to prevent TNS etc.,

Each correct answer was awarded a score of "1" mark and each wrong answer was given the score of "0". The maximum score of the knowledge assessment semi-structures questionnaire was 20.

The resulting score was interpreted as follows

Inferential analysis of Neck Disability Index (NDI)

The Neck Disabilty Index (NDI) is a standardized questionnaire used by health care professionals to assess how neck pain affects a person's

daily life and functional abilities. The study assessed NDI scores for 50 participants. The NDI is scored from 0 to 50, with higher scores indicating greater disability. It can be converted into percentage disability.

The above Table 2 depicts that the participants with no disability (0 %), mild disability (2%), moderate disability (0%), severe disability (8%) and complete disability (90%).The result of this study reveals that most of the students who are selected for the research study at Ganga College of Nursing; Coimbatore faced complete disability while using smart gadgets.

Table 1: Distribution of Knowledge levels regarding Text Neck Syndrome among selected college students N=50

S. No	Level of knowledge	Category	Frequency (f)	Percentage (%)
1	Inadequate Knowledge	< 50%	**16**	**324**
2	Moderate Knowledge	51-74%	**22**	**40%**
3	Adequate Knowledge	>75%	**12**	**24%**

Table 2: Inferential Analysis of Neck Disability Index (NDI) N=50

NDI SCORE	NDI PARAMETER	PARTICIPANT SCORE
0-4 (0-8%)	No Disability	0
5-14 (10-28%)	Mild Disability	2%
15- 24 (30-48%)	Moderate Disability	0
25-34 (50-68%)	Severe Disability	8%
35-50 (70-100%)	Complete Disability	90%

DISCUSSION

The outcome of this study has provided the prevalence of Text Neck Syndrome among selected college students, Coimbatore. The study revealed that there is no disability and moderate disability and indicated with mild (2%), severe (8%) and complete (90%) disability observed among the college students and most of them were using mobile phones as their smart gadget. But the other study finding has shown that mild, moderate and severe Text Neck Syndrome and 37% did not suffer Text Neck Syndrome and 73.4% people reported with mild to severe pain in the neck.

According to this study, males are more affected than the females with the age group of 21 years old by using mobile phones. Where the other study shows that female is more affected than the males.

According to this study,46%population heard of text neck syndrome out of which only 32% population has the knowledge of text neck syndrome. Other study stated that 35% population had heard of text neck syndrome out of which only 8% population has knowledge of text neck syndrome.

Limitations

The study was limited only to the selected colleges and may not generalize.Self – reported data may include bias.

CONCLUSION

The findings of this study highlight a concerning prevalence of Text Neck Syndrome among college students, closely associated with prolonged mobile device use and poor postural habits. A significant number of participants reported symptoms such as neck pain, stiffness and headaches, yet many demonstrated only a moderate level of knowledge about the condition and its prevention. This knowledge gap emphasizes the need for targeted educational interventions to promote awareness, proper ergonomics and preventive strategies such as regular breaks, posture corrections and reduced screen time.

Given the increasing dependency on digital devices for academic and social purposes, immediate attention from educational institutions and health professionals is essential to minimize the long-term musculoskeletal consequences among young adults.

Source of Support: None

Conflict of Interest: None declared

Acknowledgement

We offer our heartfelt thanks to the omnipotent originator of the universe for the abundant grace at all times in being here and doing what he has willed to do to us. We would like to thank the Management, Dean cum Principal Dr. Esther Rakel and the Class Coordinators of Ganga College of Nursing, Coimbatore for their excellence guidance, constant encouragement and skillful suggestions and who granted permission to conduct the research study.

Contributors

SK: Conceptualization of the study, collection, analysis of the data, writing the manuscript, finalized the manuscript and will act as the guarantor of the paper; **JS:** Edited and critically evaluated the manuscript.

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