

## **A study to assess the effectiveness of health awareness programme on knowledge regarding prevention of text neck syndrome among students at College of Dehradun Uttarakhand**

**Bijaya Mohanta, Isha, Reshma, Samiksha, Kamlesh, Sonu, Deepti and Subodh**

Hemwati Nandan Bahugana Uttarakhand Medical University (HNBUMU) Dehradun, Uttarakhand, India

**Corresponding Author: Bijaya Mohanta**

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### **Abstract**

**Introduction and objective of study:** Text neck syndrome (TNS) is a growing health concern caused by prolonged use of handheld electronic devices, leading to musculoskeletal disorders. The estimated from the published data (2017) suggested that the age-standardized point prevalence was 3551.1, the incidence of neck pain was 806.6 and years lived with disability from neck pain was 352.0 per 1 lakh population. According to World Health Organization (WHO) 2017 recognized neck pain and musculoskeletal disease as public health concern.

**Objectives of study are as:** (i) To assess the pre-test and post-test knowledge regarding prevention of text neck syndrome among students at selected college of Dehradun, Uttarakhand. (ii) To determine the effectiveness of awareness programme on knowledge regarding prevention of text neck syndrome among students at selected college of Dehradun, Uttarakhand (iii) To find out association between pre-test knowledge score regarding prevention of text neck syndrome with selected demographic variables.

**Methodology:** A quantitative approach with a one group pre-test post-test design was used. A total of 67 students were selected using non-probability purposive sampling technique. Post test was conducted on the 7<sup>th</sup> day of administering health awareness program.

**Result** In the pre-test, 47.8% had moderate knowledge, 52.2% had adequate knowledge. In the post-test, 100% had adequate knowledge. The reliability coefficient was 0.92. The pre-test mean score was 13.24 and the post-test mean score was 16.06. The t-value was 12.19 and the p-value 0.00001.

**Conclusion:** indicating a significant difference between pre-test and post-test knowledge levels. The study found no association between knowledge levels and selected demographic variables. This study helps the students to understand about the importance of maintaining good postural habits and preventing text neck syndrome.

**Keywords:** Administering, understand, maintaining

### **Introduction**

Neck pain is a global cause of disability. It is a public health problem that has increased remarkably now a days. The prevalence, independent of age, is high, and equal to low back pain. The poor posture of head and neck has been correlated with chronic musculoskeletal pain of cervical spine and upper back, tightness and spasm in the upper extremity muscles.

The estimate from the published data from (2017) suggested that the age-standardized point prevalence was 3551.1, the incidence of neck pain was 806.6 and years lived with disability from neck pain was 352.0 per 1 lakh population. According to World Health Organization (WHO) 2017 recognized neck pain and musculoskeletal diseases as public health concern.

According to NLM (National library of Medicine) in April 2023, the paediatric population is particularly vulnerable to the development of text neck due to increasing use of mobile devices and screens at a young age. For most of us, the smartphone is our daily best friend. No one wants to be

parted from it. Smartphone provide various conveniences, such as sending and receiving email, accessing the internet, and engaging in entertainment. This creates a certain dependency in modern man to the extent that it could be said that he cannot survive in the new society without the smartphone. The prevalence of musculoskeletal condition in adolescent is always increasing day by day. Thus, study helps to investigate the condition early in life and understand the main aspects and risk factors and the onset of symptoms in the way to provide and develop the best and most effective treatment.

### **Materials and Methods**

A systematic, structured approach to collecting, analysing and interpreting data to answer research questions or test hypothesis, ensuring valid and reliable results. This chapter deals with the research approach, variables, population, sampling technique, development of tool, intervention, content validity of tools, data collection procedure. At the end investigator has given health awareness programme on

prevention regarding text neck syndrome. The samples were selected by purposive sampling technique based on sampling criteria, A total of 67 students were selected for the study subjects. The objectives and purpose of the study was explained and assurance of maintenance of confidentiality was given. Pretest was conducted to assess the knowledge regarding prevention of text neck syndrome with the help of self-structured questionnaire followed by health awareness program which was administered for 45 minutes. Post test was conducted on the 7<sup>th</sup> day of administering health awareness program.

**Research Approach**

A research approach refers to the general strategy or methodological framework that a researcher adopts to investigate a particular research question or problem. It encompasses the overall plan for conducting research, including the theoretical perspective, data collection

methods, data analysis techniques, and interpretation of findings. The present study suggests to find out the existing knowledge of students regarding the effectiveness of health awareness programme in the prevention of text neck syndrome. In this study researcher has adopted one group pre-test post-test design. In this design, subject is selected by purposive sampling techniques. Level of knowledge regarding prevention of text neck syndrome was assessed before and after the administration of health awareness programme.

**Results**

The data was planned and analysed based on objectives and hypotheses of the study. Data collected was processed for appropriateness and relevancy. The data collected from 67 samples were entered into master data sheet for the analysis. Differential statistics and inferential statistics were used to analyse the obtained data in order to achieve the results based on objectives and hypotheses of the study.

**Table 1:** Frequency and percentage distribution of students according to their socio-demographic variable

S. No	Demographic Variable		Frequency (F)	Percentage (%)
1	Age (in years)	a. 18-21 years	52	77.6
		b. 22-25 years	12	17.9
		c. 26-30 years	3	4.47
2	Gender	a. Male	50	74.6
		b. Female	17	25.3
3	Mostly Used Handheld Devices	a. Mobile phone	59	88
		b. Tab	0	0
		c. Computer	1	1.49
		d. Laptop	7	10.4
4	Duration of Using Handheld Devices	a. 2 hours	15	22.3
		b. 6 hours	27	40.2
		c. 8 hours	17	25.3
		d. 10 hours	8	11.9
5	Previous Knowledge About Text Neck Syndrome	a. Yes	12	17.9
		b. No	55	82
6	Source of information	a. Health care personnel	7	10.4
		b. Books	5	7.4

The data presented in table 1 revealed out that, with regards of the age majority is comes under 18-21 year of age which is about 77.6% and 17.9% and 4.47% comes under 22-25 year and 26-30 years respectively.

**Out of 67 sample, 17 were female and 50 were males.**

About 88% of students were mostly used mobile phone as a handheld devices whereas 1.49% and 10.4% were used computer and laptop respectively. In regards of the duration of using handheld devices 40.2% were using for at least 6 hours and 22.3%, 25.3%, 11.9% were using for 2 hours, 8 hours and 10 hours respectively. According to the previous knowledge regarding prevention

of text neck syndrome: The table depicts that 17.9% of the students states that they are having prior knowledge regarding prevention of text neck syndrome but 82% of the student does not possess any prior knowledge. It shows majority of students do not have knowledge regarding prevention of text neck syndrome. Table shows that the source of knowledge of the students is 10.4% gain knowledge from health care personnel and 7.4% gain knowledge from books.

**Finding related to knowledge of students regarding prevention of text neck syndrome**

**Table 2:** Frequency and percentage distribution of pre-test and post-test knowledge score

Knowledge Score	Inadequate (0-6)		Moderate (7-12)		Adequate (13-18)	
	Frequency	%	Frequency	%	Frequency	%
Pre test	0	0	32	47.8	35	52.2
Post test	0	0	0	0	67	100

Table 2: Illustrates that the level of knowledge in pre-test is moderate in 47.8% students and adequate in 52.2%,

meanwhile in post-test 100% students had adequate knowledge

**Table 3:** Findings related to overall knowledge on pre-test and post test score regarding prevention of text neck syndrome among students N=67

Assessment	Overall knowledge	
	MEAN	SD
Pre Test	13.24	2.41
Post Test	16.06	1.73

The table reveals that in pre-test the minimum score of the students was 8 and the maximum score was 17. The pre-test mean was 12.5 with SD 4.5. In the post-test the minimum score of the students was 8 and the maximum score was 18. The post-test mean was 15.5 with SD 2.5.

**Table 4:** Findings related to association between pre-test knowledge along with selected demographic variables. N=67

Variable	Moderate	Adequate	Df	Chi-square value		P Value
<b>Age (in years)</b>						
18-21			30	22		
22-25			6	6	2	0.85
26-30			1	2		
<b>Gender</b>						
Male			28	22		
Female			9	8	1	0.04
<b>Mostly used handheld devices</b>						
Mobile phone			33	26		
Tab						
Computer				1	2	1.25
Laptop			4	3		
<b>Duration of using handheld devices</b>						
2hours			9	6		
6hours			15	12	3	2.76
8hours			7	10		
10hours			6	2		
<b>Previous knowledge about TNS</b>						
Yes			6	6		
No			31	24	1	0.16
<b>If yes, specify the source</b>						
No knowledge			31	24		
Health care personnel			4	3	2	0.50
Books			2	3		

S= significant at the level of  $p < 0.0001$   
 NS=Not significant

Table shows the association of pre-test score with their socio-demographic variables. It was concluding that the pre-test knowledge of students are not significantly associated with socio demographic variables (age, gender, mostly used handheld devices, duration of using handheld devices, previous knowledge and sources of previous knowledge) regarding prevention of text neck syndrome. Thus H2 is rejected.

**Recommendation**

The study can be conducted in a variety of settings, including medical colleges, university & other institutions. The study should be more emphasis on students on raising awareness of necessity of maintaining appropriate sitting posture. The study should assess the effectiveness use of ergonomic accessories while working on electronic devices. The study can be replicated using large sample size. The similar study can conducted to investigate the impact of self-management corrective excercises on text neck syndrome.

**Implications**

This study has several important implications for nursing, especially in education, practice and administration

**1. Nursing Education:** Nursing students should be trained on ergonomics, digital health risks, preventive

strategies for conditions associated with excessive screen time. Organizing seminars, webinars and simulation-based training on posture correction and physical exercises can enhance knowledge among nursing students.

**2. Nursing practice:** Nurses play a crucial role in early detection and intervention by identifying students at risk and advising proper posture and preventive exercises.

**3. Nursing administration:** Nurse can collaborate with physical therapist to develop comprehensive care plan and communicate with patient's employe to promote workplace to prevent text neck syndrome.

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