

ORIGINAL ARTICLE

Effectiveness of Structured Teaching Program on Knowledge Regarding Text Neck Syndrome Among Adolescents of Metropolitan City in View to Develop Information Booklet

Pratibha Sainath Athare¹, Anita Vaibhav Bagade²

HOW TO CITE THIS ARTICLE:

Pratibha Sainath Athare, Anita Vaibhav Bagade. Effectiveness of Structured Teaching Program on Knowledge Regarding Text Neck Syndrome Among Adolescents of Metropolitan City in View to Develop Information Booklet. Int J Pediatr Nurs. 2026; 12(2): 73–79.

ABSTRACT

Background: Text Neck is a worldwide public health problem, largely reported nowadays. Currently data have shown that the excessive use of personal computers and cell phones maybe correlated with various clinical symptoms that are defined “TEXTNECK SYNDROME”. The dangers of prolonged use of h Syndrome maybe be multifactorial consequences on the development of young and adolescents. World Health Organization has classified neck pain and other musculoskeletal diseases as the 4th and 10th pathological condition respectively.

Aim & Objectives: To assess the effectiveness of structured teaching programme on knowledge regarding Text Neck Syndrome among Adolescents of selected college of metropolitan city. Material: The research approach adopted for this study was quantitative research approach and the design used was one group pre-test and post-test design. The population of the study consisted of 100 adolescent students in selected school of metropolitan city. Non probability sampling method by using purposive sampling techniques was used to select sample that fulfilled the required criteria. The tool consisted of 20 structured knowledge questionnaires to assess the knowledge. The pilot study was done on 10 sample that fulfilled the inclusion criteria. The data collection was analyzed by using descriptive and inferential Statistics. Interpretation was based on objective and hypothesis of the study.

Result: There are 20 questions related to post-test knowledge score on Text Neck Syndrome. These questions were asked to the children of the age group 10–12 years and 12 to 14 years. For the 19 question there is no association with age and post-test knowledge score on Text Neck Syndrome among the school students except one. There is association of age with the question “Howtoavoid Text Neck Syndrome”

AUTHOR'S AFFILIATION:

¹ Ph.D. Nursing (Peadiatric Speciality), Terna Nursing College, Navi Mumbai, Maharashtra, India.

² Ph.D. Nursing (Peadiatric Speciality), Terna Nursing College, Navi Mumbai, Maharashtra, India.

CORRESPONDING AUTHOR:

Pratibha Sainath Athare, Ph.D. Nursing (Peadiatric Speciality), Terna Nursing College, Navi Mumbai, Maharashtra, India.

E-mail: saipratibha83@gmail.com

➤ Received: 10-03-2026 ➤ Accepted: 14-04-2026



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution NonCommercial 4.0 License (<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Red Flower Publication and Open Access pages (<https://www.rfppl.co.in>)

The pvalue is less than 0.05 ($p < 0.05$). Therefore, there is significant association with questions number 17.

Conclusion: Structural teaching program is significantly effective on knowledge regarding Text Neck Syndrome among the school students of metropolitan city, in view to develop information booklet.

KEYWORDS:

• Effectiveness • Knowledge • Text Neck Syndrome • Adolescents • Develop & Information Booklet

INTRODUCTION

Neck is an important structure which connects our Body with Head. It is surrounded by short and sensitive muscles on all 4 sides. The cervical spine is the most superior portion of the vertebral column, lying between the cranium and thoracic vertebrae. The main role of the cervical spine is to support and promote the movement of the head and the neck. It consists of seven distinct vertebrae and six intervertebral disc. Nowadays a mobile phone is a widely used and most popular device for various daily activities such as exchanging information, accessing the internet, watching movies, using social media sites, gaming, and a variety of other activities. In this current era of modern technology, the people are constantly indulged in using the mobile phones with improper positioning. And the continuous use of mobile and other devices with wrong posture leads to Text Neck Syndrome. Text Neck Syndrome refers to a repetitive stress injury to the neck caused by having your head in a forward position for extended period. The forward bending posture affects the curvature of the cervical spine, Neck, Shoulder muscles and supporting ligaments.²

The Text Neck Syndrome is caused by excessive usage of mobile phone, prolonged study hours, wrong walk, body position while using devices, improper body positioning, excessive uses of electronic devices long duration of work on static posture specific on neck and shoulder, imbalance in cervical musculature, being overweight, having low physical activities. Prevalence of Text Neck Syndrome varies depending on the study & population, but is generally high. 73% University Students, 64.7% People who work from home have neck or back pain, 68.1% medical student and 32% Physiotherapy student.³ Text neck syndrome among students have been conducted in several nations. In 2021, a study was conducted in India, 46% of

students reported neck pain during prolonged smartphone use. In 2018, another study was conducted among physiotherapy students, Text neck syndrome had a prevalence of 32%. A systematic review of 15 articles showed that mobile devices user most prevalent musculoskeletal complaint where neck related (17.3-67.8%). Two studies conducted in Pakistan and India reported that the prevalence of Text Neck Syndrome was 43.6% and 42.5% respectively. Prevention is the first step in managing Text Neck Syndrome. These days, Text Neck Syndrome is an alarming problem as more people engage in technology due to the worldwide spread of smart phone.⁴

BACKGROUND

The background of the study establishes the context of the research. This section explains why this particular research topic is important and essential to understanding the main aspects of the study. Usually, the background forms the first section of the research thesis and justifies the need of conducting the study and summarizes what the study aims to achieve.⁵

Apart from psychological disorders, individuals may suffer from many physical disorder and Text Neck is one of the major problems among them. The term 'Text Neck' was first coined by US Chiropractor Dr. Dean L. Fishman.

The term Text Neck is used to describe neck discomfort and injury of upper back muscle which is caused by the frequent flexion of neck at various angle while staring down at the mobile phone which alters the normal curve of the cervical spine. 20.3% of the individuals had reported feeling neck pain at least once in the 12 months preceding the interview.⁶

Globally, prevalent cases, incident cases, and yearly lived with disability of neck pain were 222.7 million, 47.5 million, and 22.1 million, with an age-standardized point prevalence 2,696.5, incidence 579.1 and yearly lived with

disability of 267.4 per 100,000 population, respectively.⁷

India: In one study, the prevalence of Text Neck Syndrome among physiotherapy students was 32%. In another study, the prevalence of Text Neck Syndrome was between 25% and 47%. University students: In one study, 73% of university students had neck or back pain.⁸

The incidence of text neck syndrome in society is significant, with studies reporting that between 30% and 70% of individuals experience symptoms related to text neck syndrome, usually among populations who majorly use smartphones and digital devices, with young adults being most affected this often manifests as neck pain when looking down at screens for extended period.

This study aimed to identify the prevalence of Text neck syndrome among medical students, which was found to be 31.7%. This is consistent with the results of a study conducted in Navi Mumbai, India 2020 (32%).⁹

AIM & OBJECTIVES

1. To assess the effectiveness of structured teaching programme on knowledge regarding Text Neck Syndrome among Adolescents of selected college of metropolitan city.
2. To assess the pre-test and post-test knowledge regarding Text Neck Syndrome among Adolescents of selected college of metropolitan city in view to develop information Booklet.
3. To evaluate the effectiveness of structured teaching program on knowledge regarding Text Neck Syndrome among Adolescents of selected college of metropolitan city in view to develop information Booklet.
4. To find out the association between knowledge regarding the Text Neck Syndrome with their selected demographic variable among Adolescents of selected college of metropolitan city.
5. To develop information Booklet on text neck syndrome for the adolescents.

HYPOTHESIS

RESEARCH HYPOTHESIS

H1: There will be a significant difference in the post-test level of knowledge than the pre-test after administration of structured teaching

programme on Text Neck Syndrome

H2: There will be a significant association between post-test knowledge score on Text Neck Syndrome among college students with their selected socio demographic variables.

NULL HYPOTHESIS

H01: There will be no significant difference in the pre-test and post-test level of knowledge after administration of structured teaching programme on Text Neck Syndrome.

H02: There will be no significant association between post-test knowledge score on Text Neck Syndrome among college students with their selected socio demographic variables.

METHODOLOGY

Research Approach

The study adopted a quantitative research approach to assess the effectiveness of a structured teaching programme on knowledge regarding Text Neck Syndrome among adolescents.

Research Design

A pre-experimental one group pre-test and post-test research design was used to evaluate the effectiveness of the structured teaching programme.

Variables

Independent Variable

In this study, the independent variable is the Structured Teaching Programme on Text Neck Syndrome provided to adolescents.

Dependent Variable

In this study, the dependent variable is the knowledge regarding Text Neck Syndrome among adolescents.

Demographic Variables

In this study, the demographic variables included:

- Age
- Gender
- Education/class of study
- Usage of mobile phones
- Reasons for using mobile phones
- Exercise habits
- Diet pattern

Setting of the Study

The study was conducted in a selected school in Nerul, Navi Mumbai.

Population

The population of the study consisted of adolescent students studying in the selected school.

Sample Size and Sampling Technique

A total of 100 adolescent students aged 10–14 years were selected as samples using a non-probability purposive sampling technique.

Inclusion Criteria

Students who:

- Were willing to participate in the study
- Were available during the time of data collection
- Were aged between 10–14 years
- Could understand English language
- Included both male and female students.

Exclusion Criteria

Students who:

- Had previous formal education regarding Text Neck Syndrome
- Were not willing to participate in the study.

Description of the Tool

Data were collected using a self-administered structured questionnaire consisting of two sections:

- Section A: Demographic variables such as age, gender, education, mobile phone usage, exercise, and diet.
- Section B: Structured knowledge questions related to definition, causes, risk factors, clinical manifestations, diagnostic evaluation, management, complications, and Prevention of Text Neck Syndrome.

Data Collection Procedure

Data collection was carried out from 27 October to 2 November in the selected school. Permission was obtained from the school authorities. The purpose of the study was explained to participants, informed consent was obtained, and confidentiality of the information was assured.

Plan for Data Analysis

The collected data were analyzed using descriptive and inferential statistics.

- Descriptive statistics: Frequency, mean, and standard deviation.
- Inferential statistics: Paired t-test and Wilcoxon test to determine the effectiveness of the structured teaching programme.

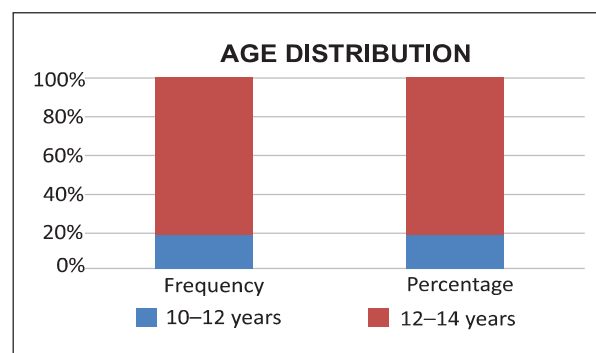
RESULT

The present study assessed the effectiveness of a structured teaching programme on knowledge regarding Text Neck Syndrome among adolescents (n = 100). The results are presented in tables and graphs.

1. Demographic Characteristics of Participants

Table 1: Distribution of School Children by Age

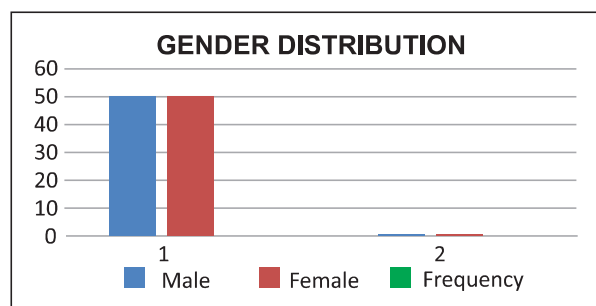
Age Years	Frequency	Percentage
10–12 years	19	19%
12–14 years	81	81%
Total	100	100%



Graph 1: Age Distribution

Table 2: Gender Distribution

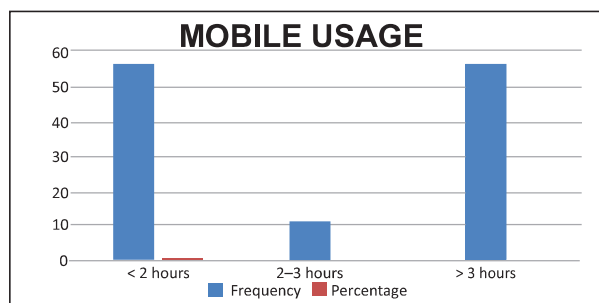
Gender	Frequency	Percentage
Male	50	50%
Female	50	50%
Total	100	100%



Graph 2: Gender Distribution

Table 3: Duration of Mobile Phone Usage

Duration	Frequency	Percentage
< 2 hours	57	57%
2-3 hours	11	11%
> 3 hours	32	32%
Total	100	100%

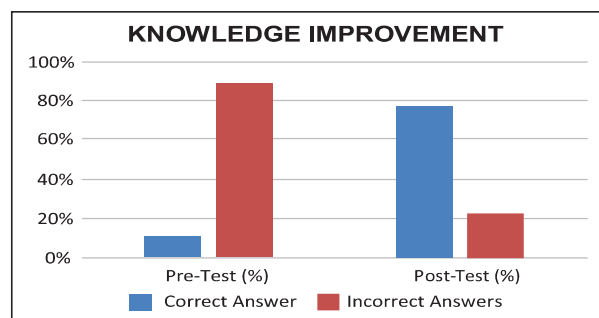


Graph 3: Mobile Usage

2. Knowledge Regarding Text Neck Syndrome

Table 4: Knowledge about Text Neck Syndrome

Response	Pre-Test (%)	Post-Test (%)
Correct Answer	11%	77%
Incorrect Answers	89%	23%

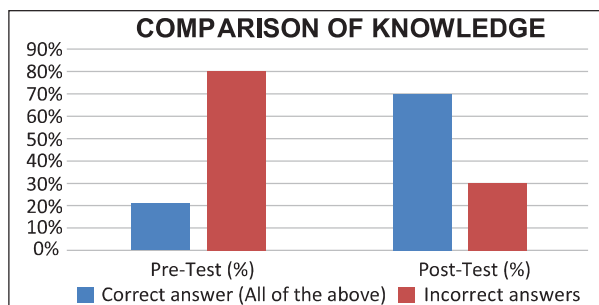


Graph 4: Knowledge Improvement

3. Knowledge about Home Remedies for Text Neck Syndrome

Table 5: Pre-test and Post-test Knowledge

Response	Pre-Test (%)	Post-Test (%)
Correct answer (All of the above)	21%	70%
Incorrect answers	79%	30%

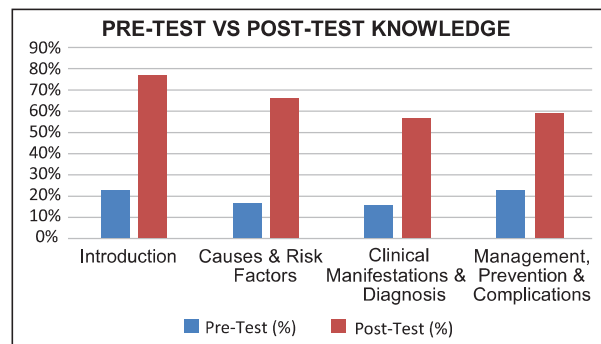


Graph 5: Comparison of Knowledge

4. Overall, Knowledge Improvement by Content Areas

Table 6: Pre-test and Post-test Knowledge Scores

Content Area	Pre-Test (%)	Post-Test (%)
Introduction	23%	78%
Causes & Risk Factors	17%	67%
Clinical Manifestations & Diagnosis	16%	57%
Management, Prevention & Complications	23%	57%



Graph 6: Pre-test vs Post-test Knowledge

5. Association Between Age and Knowledge

There was no significant association between age and most knowledge questions, except for the question related to "How to avoid indicating a significant association."

DISCUSSION

The present study was conducted to assess the effectiveness of a structured teaching programme on knowledge regarding Text Neck Syndrome among adolescents in a selected school. With the increasing use of smartphones and other electronic devices, adolescents are increasingly exposed to poor posture habits that may lead to musculoskeletal problems, particularly Text Neck Syndrome. Therefore, improving knowledge regarding prevention and management is essential for promoting healthy digital habits among students.

In the present study, the demographic findings revealed that most of the adolescents belonged to the age group of 10-14 years, and both male and female students participated in the study. A large proportion of students reported regular use of mobile phones for educational purposes, social media, and entertainment, which reflects the growing dependence of adolescents on digital devices. Similar findings have been reported in several recent studies, which indicate that adolescents

spend a significant amount of time on smartphones and tablets, thereby increasing the risk of developing musculoskeletal discomfort, especially in the neck and upper back region.

The results of the study showed that the pre-test knowledge level regarding Text Neck Syndrome among adolescents was inadequate to moderate, indicating a lack of awareness about the causes, symptoms, complications, and preventive measures related to Text Neck Syndrome. This finding highlights the need for educational interventions targeting adolescents to improve their knowledge regarding posture-related problems caused by prolonged mobile phone use. Similar results were reported in previous studies where adolescents demonstrated limited awareness regarding ergonomic practices and the health consequences of excessive smartphone use.

After the implementation of the structured teaching programme, there was a significant improvement in the post-test knowledge scores among the participants. The findings clearly indicate that the structured teaching programme was effective in enhancing the knowledge of adolescents regarding Text Neck Syndrome. Educational interventions such as lectures, demonstrations, and awareness sessions are effective strategies for promoting health education among school students. The improvement in knowledge suggests that adolescents are receptive to structured educational programmes and can benefit from targeted health education initiatives.

The present study findings are consistent with several research studies that have demonstrated the effectiveness of educational programmes in improving awareness and preventive behaviours related to musculoskeletal health among adolescents. Structured teaching programmes provide comprehensive information about the definition, causes, risk factors, clinical manifestations, complications, and preventive strategies of Text Neck Syndrome. Such programmes encourage adolescents to adopt correct posture while using electronic devices and to limit prolonged screen time.

Furthermore, the results also suggest that early health education in schools plays an important role in preventing posture-related disorders. Adolescence is a critical stage of

growth and development, and improper posture habits developed during this period may lead to long-term musculoskeletal problems. Therefore, integrating health education programmes related to digital device use and ergonomic practices into school curricula may help reduce the risk of Text Neck Syndrome and other posture-related disorders.

The findings of this study also emphasize the role of nurses and health educators in promoting awareness regarding digital health and posture-related problems among adolescents. Community health nurses and school health nurses can play a vital role in conducting awareness programmes, screening for early symptoms, and educating students about proper posture and preventive strategies.

Overall, the findings of the present study indicate that the structured teaching programme was effective in improving the knowledge of adolescents regarding Text Neck Syndrome. Educational interventions in schools can significantly contribute to promoting healthy digital habits and preventing musculoskeletal disorders associated with excessive smartphone use. Therefore, it is recommended that similar educational programmes be implemented regularly in schools to improve awareness and promote preventive practices among adolescents.

KEY MESSAGE:

This topic of Text Neck Syndrome is needed emerging urgent condition due to the improper excessive usage of phone or any hand-held device in wrong posture. According to a recent study, the 12 months prevalence of neck disorders due to smartphone use among the participants was found to be 46%. The Text Neck Syndrome should be considered as "pain of modern era" since it is caused by modern era gadgets such as cell phones, computers and other smart devices and it causes acute to chronic pain in the neck and upper back area. A report shows that when the head is flexed 15 degrees, the force acting on the neck are 27 pounds, 40 pounds when the neck is flexed 30 degrees, 49 pounds when the neck is flexed 45 degrees and 60 pounds when the neck is flexed 60 degrees; the model prediction at 90 degrees is not accurate.¹

CONCLUSION

The study concluded that the structured teaching programme was effective in improving the knowledge of adolescents regarding Text Neck Syndrome. The findings showed that students had inadequate to moderate knowledge in the pre-test, whereas a significant improvement was observed in the post-test scores after the educational intervention. This indicates that structured health education is an effective method for increasing awareness about Text Neck Syndrome, its causes, risk factors, and preventive measures. Therefore, regular school-based educational programmes are recommended to promote correct posture and healthy smartphone usage habits among adolescents to prevent musculoskeletal problems.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest related to this study. The research was conducted solely for academic purposes as part of a scholarly project. The authors confirm that there were no financial, commercial, or personal relationships that could have influenced the design, conduct, analysis, or reporting of the study.

No funding was received from any commercial organization, pharmaceutical company, or external agency that could have affected the objectivity of the research. All data were collected, analyzed, and interpreted by the researchers independently and without any external influence.

The authors also confirm that the study was conducted in accordance with ethical guidelines, and the results presented in this research are accurate and unbiased. There was no involvement of any organization or individual that could have created a potential conflict in the outcomes of the research. Therefore, the authors declare that there is no potential conflict of interest regarding the publication of this study.

Funding: No funding was received.

Ethics Declaration:

- Approval from Institutional Ethics Committee

- Informed consent from participants
- Confidentiality of data maintained
- Participants may withdraw at any time
- No physical or psychological harm expected

REFERENCES

1. Prevalence of text neck syndrome and its impact on neck dysfunction [Internet] Available from: <https://pmc.ncbi.nlm.nih.gov/articles>
2. Text Neck- physiopedia [Internet] Available from: [https://www.physio-pedia.com/Text Neck](https://www.physio-pedia.com/Text_Neck).
3. Neupane S, Ifthikar Ali UT, Mathew. Text Neck syndrome systemic review. Imperial journal of interdisciplinary research. July 2019; pg.no 141-148.
4. Text neck syndrome: Disentangling a New Epidemic. [Internet] Available from: <https://pmc.ncbi.nlm.nih.gov/articles>.
5. The prevalence of text neck syndrome [Internet] 2021 Available from: <https://journalmsr.com/the-prevalence-of-text-neck-syndrome>.
6. Word vice [Internet] cited on Aug 5 2023 Available from: <https://blog.wordvice.com/what-is-the-background-of-the-study-in-a-research>.
7. Daniela David, Cosimo Gianini, Francesco, et al; "text neck syndrome in children and adolescents." International journal of environmental research and public health, department of pediatrics, University of Chieti; Feb 18; pg. no 20-30.
8. National institute of health [Internet] 2021 Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10897950/>
9. Prevalence of text neck syndrome in the young adult population - Research Gate [Internet] June 2020. Available from: https://www.researchgate.net/publication/342723604_Prevalence_of_Text_Neck_Syndrome_In_Young-Adult_population
10. Prevalence of text neck syndrome and its impact on neck dysfunction [Internet] Available from: <https://pmc.ncbi.nlm.nih.gov/articles>
11. Suresh K. Sharma (2018). Nursing Research and Statistics (3rd ed.). New Delhi: Elsevier India.
12. Basavanthappa B. T. (2014). Nursing Research (3rd ed.). New Delhi: Jaypee Brothers Medical Publishers.