IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A Study To Assess The Effectiveness Of Structured Teaching Program On Knowledge Regarding Text Neck Syndrome Among Students In Selected Nursing Colleges Of Guwahati, Assam.

1Nyajuni Mengnia, 2Bhanita Barman

1Clinical Instructor/Tutor, 2Assistant Professor

1The Assam Downtown University ,

2The Assam Royal Global University

ABSTRACT

"A study to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam."

Background: In the digital age, it is a common sight to see people of all ages hunched over their digital devices. Technology has indeed helped us in many ways, but on the downside, it has also led to the rise of lifestyle disorders. The cervical spine is a continuous and coordinated network of muscles, nerves, and joints, the pathway ranging from the brain to the spinal cord. Irritation along this pathway leads to pain. Text neck syndrome leads to harmful symptoms such as neck pain, upper back pain, shoulder pain, chronic headaches and increased curvature of the spine while we look down at the screens of mobile devices and while we "text" for long periods of time. **Aim: -** The aim of the study to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.

Pre-Experimental Study was conducted at St. Martha Institute of Nursing and Dispur Nursing Institude, Guwahati, Assam; 100 samples drawn by purposive sampling technique. The knowledge was assessed by using a self-structured questionnaire**. Results: -** the study reveals that majority of the students 40% fall under the age group of 21 – 25 years and least 20% of the student fall under age group >25 years. Also, majority (93%) are female students and (7%) were male students. Again, majority of the students, i.e., 60%, are using smartphone 2-4 hours daily and least 5% are using smartphone >6 hours daily. Again, majority of the students, i.e., 86% have never heard about TNS and 14% has heard about TNS previously. Again, majority of the students, i.e., 44% are using smartphone from 2-3 yrs and least 4% are using smartphone from <1 yr. Again, majority of the students, i.e., 97% don't have history of TNS and least 3% are having history of TNS. Study findings also revealed that majority (58%) had moderately adequate knowledge, (29%) had adequate knowledge, and (13%) had inadequate knowledge regarding text neck syndrome. There was no significant difference between pre-test (M = 5.42, SD = 1.85) score and post-test (M = 8.45, SD = 1.18) score with a mean difference of 3.03 and pair t test score is 25.68 and df = 60 at p <0.001 which shows that mean structured teaching programme brought an effect among B.Sc. Nursing students in improving the knowledge on Text Neck Syndrome. **Conclusion: -** The moderately adequate knowledge and practice of the students regarding prevention and treatment exercise of TNS should be considered an important concern for the health system.

Key Word: - TNS: Text Neck Syndrome, WHO: World Health Organization, B.Sc. nursing: Bachelor of Science in Nursing, STP: Structured Teaching Program.

CHAPTER I

INTRODUCTION

Background of the Study

this **Text neck syndrome** is a term coined to describe a repetitive stress injury or pain in the neck resulting from excessive and prolonged forward head flexion, a common posture during the use of mobile devices such as smartphones and tablets. This syndrome is characterized by symptoms such as neck pain, stiffness, shoulder pain, and headaches. With the rapid technological advancements and widespread use of mobile

devices, the incidence of text neck syndrome has significantly increased, particularly among younger populations who are the most frequent users of these devices[1.]

The human head weighs about 10-12 pounds in a neutral position; however, as the head tilts forward, the effective weight exerted on the neck increases dramatically. At a 15-degree angle, this weight increases to about 27 pounds, and at a 60-degree angle, it surges to approximately 60 pounds. This sustained forward head posture can lead to musculoskeletal problems, including early wear and tear, degeneration, and possible surgeries[2].

Nursing students are a group that is particularly at risk. Their academic and clinical responsibilities require extensive use of mobile devices for studying, communication, and leisure. This constant device use often results in prolonged periods of poor posture, making them susceptible to text neck syndrome. The demanding nature of their education and the physical demands of their profession can exacerbate these musculoskeletal issues, potentially impacting their performance and well-being [3]

Despite the increasing prevalence of text neck syndrome, there is a significant gap in the knowledge and awareness among nursing students regarding its prevention and management

Given their future role as healthcare providers, nursing students must be educated about text neck syndrome, not only to protect their health but also to be able to educate and manage their patients effectively[4].

There is a growing body of evidence suggesting that ergonomic education and interventions can significantly reduce the incidence of musculoskeletal problems. Structured teaching programs are effective in enhancing knowledge and promoting behavioural changes. These programs typically include information on the importance of maintaining proper posture, ergonomic practices, and exercises to strengthen neck and shoulder muscles[5.]

Guwahati, Assam, with its burgeoning student population and increasing digital engagement, provides a pertinent context for this study. The findings can offer valuable insights into the current knowledge levels and the effectiveness of educational interventions among nursing students in this region. This study aims to bridge the gap by assessing the impact of a structured teaching program on improving knowledge about text neck syndrome among nursing students in selected colleges of Guwahati, Assam.

By addressing this issue, the study hopes to foster a culture of awareness and proactive management of musculoskeletal health among nursing students. This, in turn, can lead to better health outcomes and professional longevity, ensuring that these future healthcare providers are well-prepared to tackle the physical demands of their profession and advocate for healthy practices among their patients[6].

Need for the Study

The necessity for this study is rooted in the urgent health implications posed by text neck syndrome, particularly among the younger demographic. As mobile device usage continues to rise, so does the incidence of associated musculoskeletal issues. Nursing students, who frequently engage with mobile devices for academic and personal purposes, are at significant risk. The physical demands of their profession further exacerbate the potential for developing text neck syndrome, making it crucial to address issue proactively[7].

Prevention and Early Intervention: Early identification and prevention are key strategies in managing text neck syndrome. Nursing students, as future healthcare providers, must be equipped with the knowledge to recognize and mitigate the risks associated with prolonged mobile device usage. By enhancing their understanding of ergonomic practices and encouraging behavioural changes, the study aims to reduce the incidence of text neck syndrome among this vulnerable group[8].

Despite the growing recognition of text neck syndrome, there remains a significant gap in formal education on this topic within nursing curricula. Incorporating structured teaching programs on text neck syndrome can fill this gap, providing nursing students with essential knowledge that is currently underrepresented in their education. This study will assess the effectiveness of such educational interventions, offering valuable insights into curriculum development[9].

Addressing text neck syndrome early in nursing students' careers can have long-term benefits. Chronic neck pain and musculoskeletal issues can lead to decreased productivity, absenteeism, and even career abandonment in severe cases. By preventing these issues through education, the study aims to enhance the overall health and career longevity of nursing professionals[10].

Nursing students educated about text neck syndrome are better prepared to educate and manage their future patients. As healthcare providers, their role includes advising patients on preventive health measures. Understanding and preventing text neck syndrome is part of this holistic approach to patient care. This study ensures that nursing students can translate their knowledge into practice, benefiting not only themselves but also their future patients[11].

This study will contribute to the limited body of research on text neck syndrome in nursing students, providing data on knowledge levels and the effectiveness of structured teaching programs. The insights gained can inform future studies and interventions, helping to build a comprehensive strategy for managing and preventing text neck syndrome in various populations[12.]

Statement of the problem

"A study to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam."

Objectives of the study

1. To assess the pre-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.
2. To assess the post-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.
3. To evaluate the effectiveness of the Structured Teaching Programme on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam
4. To find out the association between pre-test knowledge scores regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam with some selected demographic variables such as age, gender, daily use of smartphone, year of using smartphone, previous awareness about text neck syndrome and history of text neck syndrome

Operational definition

Knowledge: -

By Oxford Dictionary-

Knowledge is defined as Facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject.

In this study knowledge refers to the response given by the students of selected nursing colleges regarding 'text neck syndrome' as measured by structured knowledge questionnaire.

Effectiveness

Effectiveness means to see the impact of a structured teaching program on knowledge regarding text neck syndrome among nursing students.

Text Neck syndrome: -

The term text neck is used to describe a repetitive stress injury or an overuse syndrome where a person has his or her head hung or flexed in a forward position and is bent down looking at his or her mobile for a prolonged period.

-According to Dr.L.Fishman

Structured teaching programme

A structured teaching program imparts particular knowledge and practical education through studies and supervision.

In this study, t refers to a systematically organized teaching plan to provide knowledge to B.Sc. nursing students regarding Text Neck Syndrome with the help of AV – ads such as Flashcards, Flip charts, and PPT.

Assumption

The study assumes that: -

- Student has some level of knowledge regarding text neck syndrome
- A structured teaching program will improve the knowledge regarding text neck syndrome.

Hypotheses

- H1: - There is a significant difference between pre-test and post-test levels of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam at 0.05 level of significance
- H2: - There is a significant relationship between pre-test knowledge of students regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam with some selected demographic variables such as age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome and previous history of text neck syndrome. at 0.05 level of significance.

Delimitation

The study is delimited to 2nd years B.Sc. nursing students of selected colleges of Guwahati, Assam

Summary

This chapter dealt with the background of the study, need of the study, problem statement, objective, conceptual framework, operation definition of the term used, assumption, and delimitation.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is an important aspect of any research project from beginning to end. It refers to a broad, comprehensive in-depth, systematic and critical review of scholarly publications, print materials, and audio-visual materials. It gives character insight into the problem and helps in selecting methodology developing tools and also analysing data. With these in view, a review of the literature has been done.

The literature review relevant to this study is presented in the following sections.

- Literature related to the prevalence of text neck syndrome
- Literature related to knowledge regarding text neck syndrome among students
- Literature related to the effectiveness of planned teaching programs related to text neck syndrome among students

Section I: Literature related to the Prevalence of Text Neck Syndrome

Xie Y., Wang X., Zhang H., et al. (2019) conducted a study on the prevalence of text neck syndrome among university students in China. The study aimed to determine how widespread the syndrome was among students who frequently used smartphones for prolonged periods. This cross-sectional study involved 500 university students from various disciplines. Data were collected using a structured questionnaire that assessed symptoms such as neck pain, stiffness, and headaches. The results revealed that 68% of the participants experienced symptoms related to text neck syndrome, with 45% reporting moderate to severe discomfort. The study concluded that the high prevalence of text neck syndrome among students necessitates awareness and preventive measures to mitigate the impact of prolonged smartphone use on musculoskeletal health.[13]

Gupta M., Sharma R., Kumar P. (2020) conducted a cross-sectional study on the prevalence of text neck syndrome among school students in India. The study aimed to identify the prevalence and severity of text neck symptoms in a younger population. A total of 400 students aged 13-18 years participated in the study, where data were gathered through self-reported questionnaires. The findings indicated that 56% of the

students' reported symptoms of neck pain and stiffness, with a significant correlation between the duration of smartphone use and symptom severity. The study recommended that educational institutions implement awareness programs to educate students about the risks associated with excessive smartphone use and the importance of maintaining good posture. [14]

Kim H., Lee J., Park S. (2021) investigated the prevalence of text neck syndrome among high school students in South Korea. This study aimed to explore the relationship between smartphone use and musculoskeletal discomfort among adolescents. The researchers surveyed 600 students using a detailed questionnaire that included questions on smartphone usage habits, posture, and the occurrence of neck pain. The results showed that 72% of the participants experienced musculoskeletal discomfort, with 40% reporting chronic neck pain. The study highlighted the urgent need for interventions to address the growing prevalence of text neck syndrome among adolescents, particularly through education on proper smartphone use and posture correction.[15]

Elbana H., Mohamed A., Ibrahim S. (2022) explored the prevalence and associated factors of text neck syndrome among adolescents in Egypt. The study aimed to assess how lifestyle factors such as screen time, physical activity, and ergonomics influenced the development of text neck syndrome. A sample of 300 adolescents aged 12-17 years was selected from various schools, and data were collected through interviews and physical examinations. The findings revealed that 65% of the participants were affected by text neck syndrome, with a higher prevalence among those with prolonged screen time and poor posture. The study recommended that parents, schools, and healthcare providers work together to educate adolescents on the importance of maintaining good posture and limiting screen time to prevent the development of text neck syndrome.[16]

Rodrigues L., Silva R., Santos M. (2023) conducted a study on the prevalence of text neck syndrome among college students in Brazil. The objective was to determine the extent of the problem and identify contributing factors such as study habits and leisure activities involving digital devices. The study involved 450 college students, with data collected through questionnaires and physical assessments. The results showed that 60% of the students experienced symptoms of text neck syndrome, with a significant number reporting daily episodes of neck pain and headaches. The study concluded that the high prevalence of text neck syndrome

among college students underscores the need for preventive strategies, including education on ergonomic practices and posture correction during prolonged use of digital devices.[17]

Section II: Literature Review Related to Knowledge Regarding Text Neck Syndrome Among Students

Sharma V., Bansal S., Goyal A. (2019) conducted a study to assess the awareness of text neck syndrome among nursing students in India. The study aimed to evaluate the level of knowledge regarding the causes, symptoms, and prevention of text neck syndrome. A cross-sectional design was employed, with 250 nursing students participating in the survey. The questionnaire included questions about their understanding of text neck syndrome and preventive measures. The results indicated that only 35% of the students were aware of the syndrome, and among them, only 20% could correctly identify preventive measures. The study concluded that there is a significant knowledge gap among nursing students, highlighting the need for incorporating education on text neck syndrome into the nursing curriculum to better prepare future healthcare professionals.[18]

Smith A., Johnson K. (2020) investigated the knowledge of text neck syndrome among high school students in the United States. The study aimed to assess the students' understanding of the syndrome and their awareness of the risks associated with prolonged smartphone use. The researchers conducted a survey involving 300 high school students, with questions focusing on their knowledge of text neck syndrome and its prevention. The findings revealed that only 40% of the students had heard about the condition, and even fewer (15%) were aware of the appropriate preventive strategies. The study emphasized the need for targeted educational interventions to raise awareness and promote healthy smartphone usage habits among teenagers.[19]

Chen T., Lin C., Huang W. (2021) conducted a study in Taiwan to assess the knowledge of text neck syndrome among medical students. The study aimed to evaluate how well-informed medical students were about the syndrome and its prevention. A total of 200 medical students participated in the survey, which included questions on the causes, symptoms, and prevention of text neck syndrome. The results showed that while 60% of the students had heard of the condition, only 25% could identify the correct preventive measures, such as maintaining an ergonomic posture and taking regular breaks from screen use. The study concluded that even among medical students, there is a lack of comprehensive knowledge about text neck syndrome, suggesting a need for more focused education on the topic within medical training programs.[20]

Adeoye O., Salawu T. (2022) explored the knowledge and awareness of text neck syndrome among university students in Nigeria. The study aimed to identify the level of awareness and understanding of text neck syndrome in a population at high risk due to extensive smartphone use. The cross-sectional study involved 350 university students, with data collected through self-administered questionnaires. The findings revealed that 45% of the participants had some knowledge of the condition, but only 18% could correctly identify preventive strategies. The study highlighted the significant knowledge gap and recommended the introduction of educational programs to enhance awareness and preventive practices among university students.[21]

Lee J., Park K. (2023) conducted a study in South Korea to assess the knowledge of text neck syndrome among college students. The study aimed to understand the students' awareness of the syndrome and their knowledge of preventive measures. A total of 400 college students were surveyed, and the results indicated that 50% of the students were aware of the syndrome, but only 30% knew how to prevent it effectively. The study concluded that there is a need for comprehensive educational initiatives to improve students' understanding of text neck syndrome and encourage healthier smartphone usage habits.[22]

Section III: Literature Review Related to the Effectiveness of Planned Teaching Programmes Related to Text Neck Syndrome Among Students

Gupta M., Sharma R., Singh V. (2019) evaluated the effectiveness of a structured teaching program on text neck syndrome among nursing students in India. The study aimed to assess whether educational interventions could improve knowledge and reduce the symptoms of text neck syndrome. A pre-test/post-test design was used, with 150 nursing students participating in the program. The results showed a significant increase in knowledge scores from 40% to 85% after the intervention. Additionally, there was a noticeable reduction in symptoms, with 60% of the students reporting less neck pain and improved posture. The study concluded that structured teaching programs are effective in enhancing knowledge and reducing the incidence of text-neck syndrome among nursing students.[23]

Johnson K., Smith A., Williams J. (2020) conducted a quasi-experimental study in the United States to assess the impact of an educational program on text neck syndrome among high school students. The study aimed to evaluate whether an educational intervention could improve knowledge and reduce the occurrence of text neck syndrome symptoms. The study involved 200 high school students, with a control and

experimental group. The results showed a 40% improvement in knowledge scores and a 30% reduction in reported symptoms in the experimental group post-intervention. The study concluded that educational programs are effective in increasing awareness and reducing the symptoms of text neck syndrome among adolescents.[24]

Wang Q., Li H., Zhang Z. (2021) conducted a study in China to evaluate the effectiveness of a planned teaching program on text neck syndrome among college students. The study aimed to determine whether educational interventions could improve students' knowledge and reduce the prevalence of text neck symptoms. The pre-test/post-test study involved 180 college students, with results showing a 50% increase in knowledge and a significant decrease in neck pain and discomfort among the participants. The study concluded that planned teaching programs are an effective strategy for combating text neck syndrome in college students, leading to both increased awareness and improved physical health outcomes.[25]

Kim H., Lee S. (2022) evaluated the effectiveness of a smartphone usage awareness program on reducing the prevalence of text neck syndrome among students in South Korea. The study aimed to assess whether educational interventions could lead to behavioural changes and reduce symptoms of text neck syndrome. The study involved 250 students, and the results showed a 45% reduction in reported symptoms and a significant improvement in posture awareness post-intervention. The researchers concluded that raising awareness through targeted educational programs is an effective approach to reducing the incidence of text neck syndrome among students.[26]

Summary

The literature reviewed above has provided a better understanding and also broadened the investigator's outlook which is a prerequisite for the study. The above review of literature has provided overall information about the prevalence and existing knowledge regarding text-neck syndrome. It also helped the investigator to establish the need for the study, the conceptual framework, the research design, and the development of the tool. The literature reviewed in this section was gathered from research publications, internet sources and medical as well as nursing journals

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is the technique used to structure a study and to gather and analyse information in a systemic fashion. The methodology represents framework of the study. It indicate the general pattern, the procedure for empirical study together with the method of obtaining valid and reliable data on problem and the investigation.

This chapter deals with the description of research approach, research design, schematic research plan, development of tool, description of tool, Setting of the study, population, sample and sample size, sample technique, plot study, data collection procedure and plan for data analysis.

Research approach

According to S k Sharma[30] – Quantitative research design is an inquiry into an identified problem, based on testing a theory composed of variables, measured with numbers and analysed using statistical techniques. In this type of research, data is collected in numerical form and analysed by using descriptive or inferential statistics.

In order to accomplish the objectives of the study, i.e. assess the effectiveness of structure teaching program on knowledge regarding Text Neck Syndrome, a 'quantitative approach' was adopted by the investigator.

Research design

According to Polit and Hungler[28] Stated that research design is the overall plan for addressing a research question, including specification for enhancing the study's integrity. Research design provides backbone structure for the study. The selection of design depends upon the purpose of the study, research approach and variables to be studied.

Considering the objectives, pre-experimental one group pre-test and post-test research design was adopted for the present study. The purpose to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.

SCHEMATIC PLAN

RESEARCH APPROACH: Quantitative approach

RESEARCH DESIGN: Pre- experimental one group pre-test and post-test design

VARIABLES:

- **Demographic variables - age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome, and previous history of text neck syndrome**
- **Dependent variable - Knowledge regarding text neck syndrome**
- **Independent variable - Structure teaching program on text neck syndrome**

SETTING: Study was conducted at St. Martha Institute of Nursing and Dispur Nursing Institute, Guwahati, Assam.

POPULATION: The target population was 2nd Year B.SC Nursing students of selected nursing colleges of Guwahati, Assam

SAMPLE:

- **Sample Size: 100 no. of students using Cochran's formula [n=N/1=N*(e)²]**
- **Sample technique: The target population was 2nd year B.SC Nursing students of selected nursing colleges of Guwahati, Assam**

SAMPLE CRITERIA:
Inclusion criteria: Students who have given consent in the study
Exclusion criteria: Students who were not available during the time of data collection

DEVELOPMENT OF THE TOOLS:
TOOL 1- Structured self-administered questionnaire for demographic data
TOOL 2- Structured self-administered questionnaire for knowledge assessment

PLAN FOR DATA ANALYSIS:

- Descriptive Statistics - Data will be analysed by using frequency, percentage, mean, standard deviation.
- Inferential Statistics - The Chi-square test and t-test is used for inferential analysis

FIGURE 1: - SCHEMATIC REPRESENTATION OF RESEARCH PLA

Setting

Setting refers to the area where the study is conducted. It may be a natural or a laboratory setting depending on the type of study and the choice of researcher. According to Polit and Beck[29] the study setting is the physical location and condition in which the data collection takes place, it is most important to select an appropriate setting where the study will be feasible in terms of cooperation of the other members, facility, availability of subjects from whom data will be collected.

The setting was conveniently selected because of the possibility of familiarity with the area, availability of subjects, and possibility of administrative approval, easy transport facilities, economy of time and feasibility of conducting study. The Study was conducted at St. Martha Institute of Nursing and Dispur Nursing Institute, Guwahati, Assam.

Population

According to Polit and Hungler [28]

"A population is the entire aggregation of cases that meet designated set of criteria." It is the total number of the people who meet the criteria that the researcher has established for a study from whom the sample will be selected and to whom findings will be generalized. The target population consists of the total number of people or object which is meeting the designated set of criteria.

The target population of the study is B.Sc. nursing 2nd year students of St. Martha institute of nursing and Dispur Nursing Institude, Guwahati, Assam. from both the college it consists of 100 students.

Sample and sample size

According to SK Sharma[30] sample is the representative unit of an accessible population, which is to be worked upon by the researcher during the study. It is a subset of units which comprise the population selected by investigators or researcher to participate in their research project.

In the present study sample size consist of 100 students of B. Sc. Nursing 2nd year who met the inclusion criteria.

Sampling techniques

Sampling is the process of selecting a representative part of population. Non probability convenient sampling technique was used to select the sample of population.

Sample criteria

Inclusion criteria

- Students who are willing to give consent in the study

Exclusion criteria

- Students who are not available during the time of data collection

Variables under the study

According to polit and Back[29] a variable, as the name implies is something that varies." A variable is characteristics or quality that takes in different values. Variables vary from person to person, object to object.

In the present study, two types of variables are used, they are:

- Independent variables – Structured teaching program on text neck syndrome
- Dependent variables – Knowledge level regarding text neck syndrome
- Demographic variables – Age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome, and previous history of text neck syndrome

Development of the tool

The data collection tool or instrument is the written device that a researcher uses to collect information needed to address a research problem. It helps the researcher to obtained best data for drawing conclusion. According to Polit and Hungler [28] "the instrument is the vehicle that would best in for drawing pertinent to the study and at the same time adds to the body of knowledge in the discipline."

In an attempt to assess the knowledge a tool was prepared in the form of questionnaire.

Description of the tool

The tool was prepared by after an extensive study of related literature and with the guidance of expert. These tools consist of two questionnaires:

Tools: Structured self – administered questionnaire:

It was designed and utilized by the researcher. It included two parts;

Part 1: Demographic data

Age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome, and previous history of text neck syndrome

Part 2: Knowledge assessment questionnaire

This section consists of 10 questions to assess the knowledge of the students regarding text neck syndrome. This questionnaire has 4 alternative responses, the correct answer was given a score 'one' and the wrong answer was given a score of 'zero'. The total score was 10. The total score of each subject was calculated and converted to percentage and interpreted. Further categorization was done based on M ± SD as:

1. Adequate knowledge
2. Moderately adequate knowledge
3. Inadequate knowledge

Content validity of the tool

Content validity refers to the degree to which an instrument measures what it is supposed to measures.

For ensuring the content validity, the tools along with statement of the problem, objectives and validation certificates has been given to 4 experts. There were 100% agreement on the both structure self – administered questionnaire and observational checklist.

Reliability of the tool

Reliability is defined as the extent to which the instrument yields the same result on repeated measures. It is concern with consistency, accuracy, stability and homogeneity.

The reliability of the tools was established by administering the tool to 100 B.Sc. nursing students of the Royal School of Nursing. The reliability of the structure self-administered questionnaires was obtained by calculating the Pearson's correlation coefficient using the split-half method and found to be 0.80

Ethical consideration

- Permission was obtained from the Institutional Ethics Committee of The Assam Royal Global University.
- Permission was taken from the Principal of St. Martha institute of nursing and Dispur Nursing Institude, Guwahati, Assam for conducting the students
- Verbal and written consent was obtained from the participants of the study
- The subject was assured of confidentiality of the data obtained

Pilot study

According to Polit and Beck[29] pilot study is small – scale version, or trial run, designed to test the methods to be used in a larger, more rigorous study, which is sometimes referred to as the parent study. The aim was to assess the feasibility, practicability and adequacy of measurement.

The investigator conducted the pilot study was conducted in the Royal School of Nursing on 29/04/2024. 10 Students were selected based on convenient sampling technique prior the study formal permission was obtained from the principal of Royal Global University Guwahati, Assam. Knowledge was assessed by doing pre-test and post-test after planned teaching program through structured self-administered questionnaire. A structured self-administered questionnaire was administered to assess the pre – test knowledge on text neck syndrome before the implementation of plan teaching program. Immediately after the pre-test, structured teaching programme was done by conducting post-test, seven days after the presentation of the teaching programme by using the same structured self-administered questionnaire. The post–test mean knowledge

score was higher than the pre – test mean knowledge scores. The results of the data revealed that the tool was feasible to conduct the students.

Data collection procedure

The data was collected from 03/06/2024 and 04/06/2024. An informed consent was taken from the students who were willing to participate in the study. The sample was selected using a convenient sample technique. Data were collected from a maximum 100 students. Structured self – administered questionnaire was administered to assess the pre-test knowledge on text neck syndrome before implementation of plan teaching programme. Immediately after the pre – test, structured teaching programme was implemented to the students for 1 hour. Evaluation of structured teaching programme was done by conducting post – test, seven days after the presentation of the teaching program by using the same structured self-administered questionnaire. All the students cooperate during the data collection process, which was terminated after thanking the students for their cooperation and patience.

Plan for analysis

The data obtained will be analysed in terms of the subjects of the study using descriptive and inferential statistics. The plan for data analysis is as follows:

- It is planned that data to be entered prospectively and coded in a computerized data based and to be analysed by using descriptive and inferential statistics.
- Frequency and percentage distribution to be used to describe the demographic characteristic of samples
- Mean, Standard Deviation, Frequency and Percentage distribution to be used to assess the level of knowledge of the students regarding text neck syndrome
- Pair t–test is to be computed to determine the effectiveness of structured teaching program on knowledge regarding text neck syndrome
- Chi-square is to be computed to determine the association between pre-test knowledge of the students regarding text neck syndrome with selected demographic variables.

Summary

This chapter dealt with the research approach and design, setting, population, sample, sampling technique, development of tool, description of the tool and pilot study. it also explained the data collection procedure.

CHAPTER IV

ANALYSIS AND INTERPRETATION

Analysis and interpretation of data is the most important phase of the research process, which involves the complication of certain measures along with searching for patterns of relationships that exist among the data groups. Data collection is followed by analysis and interpretation of data, where collected data are analysed and interpreted in accordance with the study objectives. Analysis and interpretation of data includes complication, editing coding, classification and presentation

The purpose of analysing the data collected in a study is to describe data in meaningful terms as the data collected does not answer the research question or test research hypothesis. This chapter deals with analysis and interpretation of the collected from 100 samples through convenient sampling technique from the students of St. Martha institute of nursing and Dispur Nursing Institute, Guwahati, Assam. From both the college it consists of 100 students.

OBJECTIVE OF THE STUDY

- To assess the pre-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.
- To assess the post-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.
- To evaluate the effectiveness of Structured teaching Programme on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam

- To find out the association between pre-test knowledge score regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam with some selected demographic variable such as age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome, and previous history of text neck syndrome

HYPOTHESES

- H_1: - There is a significant difference between pre-test and post-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam at 0.05 level of significance
- H_2: - There is a significant relationship between pre-test knowledge of students regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam with some selected demographic variables such as age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome, and previous history of text neck syndrome at 0.05 level of significance.

DATA ANALYSIS AND INTERPRETATION:

In order to show the findings of pilot study, the obtained data were organized, analysed, tabulated interpreted and presented under the following heading:

- Section I: Description of subject characteristics
- Section II: Frequencies of Pre-test Level of Knowledge
- Section III: Frequencies of Post-test Level of Knowledge
- Section IV: Analysis of the effectiveness of structured teaching programme on knowledge regarding text neck syndrome among B.Sc. Nursing Students
- Section V: Find out the association between the Knowledge of the Students regarding Text Neck Syndrome and Selected Demographic Variables

Section I: Description of Subject Characteristics

This section deals with the characteristics of the students in terms of frequency and percentage and is presented in Tables 1 to 6.

Table 1: Frequency and percentage distribution of students according to their Age group

N=100

Age	Counts	% of Total
<18 years	20	20 %
18-20 years	20	20 %.
21-25 years	40	40 %
>25 years	20	20 %

Table 1: show that the majority of the students, i.e., 40%, falls under the age group of 21-25 years, 20% falls under the age group of <18 years, and 20% falls under the age group of 18-20 years and 20% falls under the age group of >25 years.

N=100

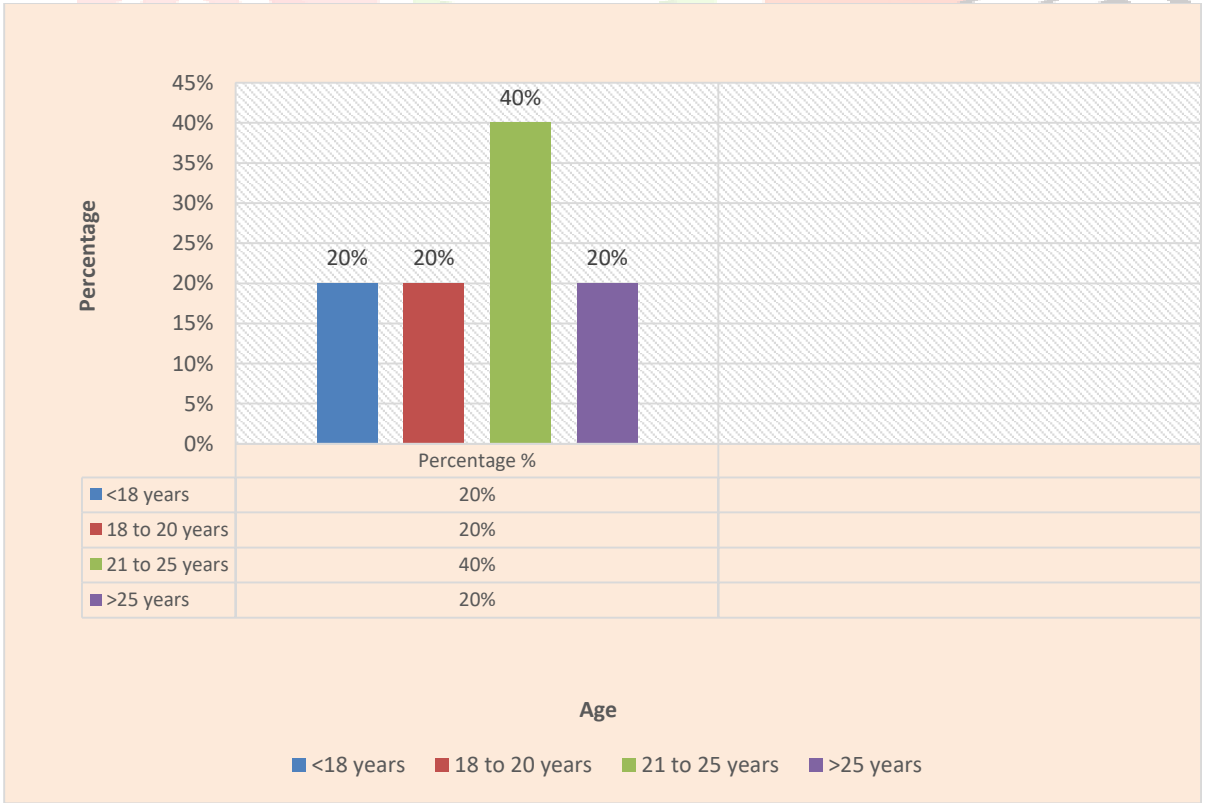


Figure 2: Bar diagram showing the percentage distribution of students according to their Age group

Table 2: Frequency and percentage distribution of students according to their Gender

N=100

Gender	Counts	% of Total
Male	7	7.0%
Female	93	93.0%

Table 2: show that the majority of the students, i.e., 93% falls under female gender and 7% falls under male gender.

N=100

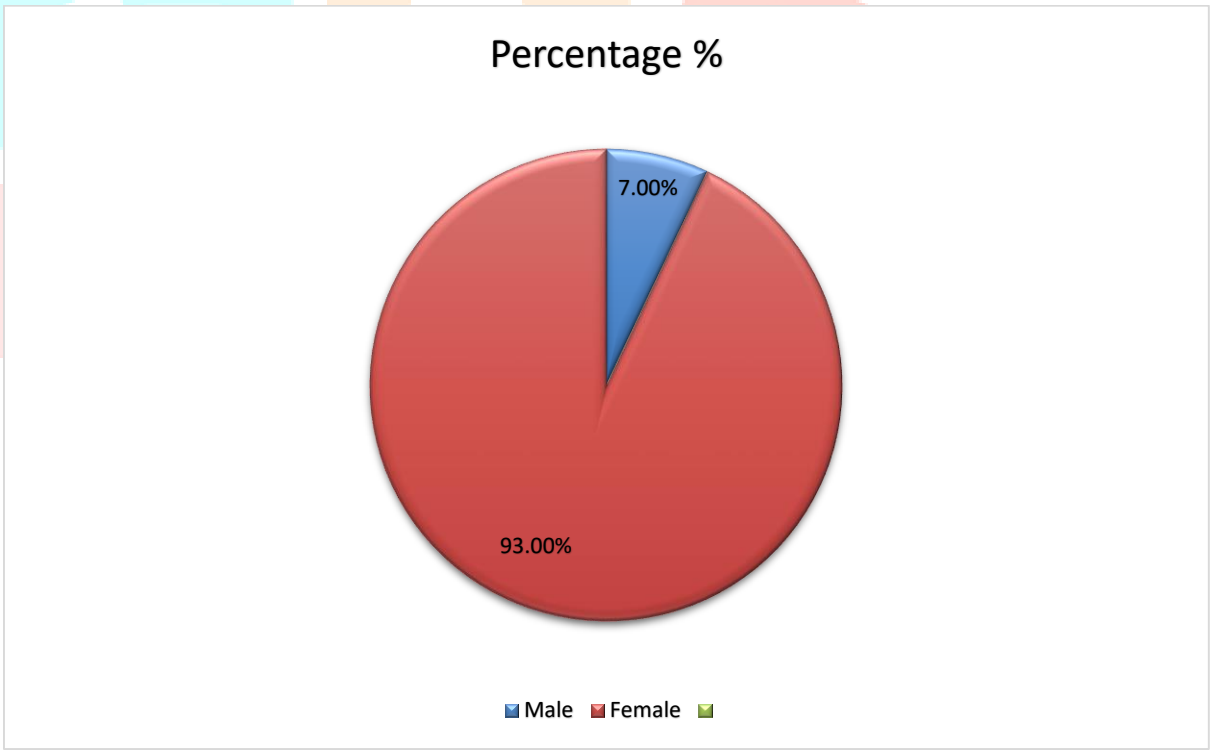


Figure 3: Pie chart showing the percentage distribution of students according to their Gender

Table 3. Frequency and percentage distribution of students according to their daily use of smartphone

N=100

Daily use of smartphone	Counts	% of Total
<2 hours	11	11.0%
2-4 hours	60	60.0%
5-6 hours	24	24.0%
>6 hours	5	5.0%

Table 3: show that the majority of the students, i.e., 60%, are using smartphone 2-4 hours daily, 24% are using smartphone 5-6 hours daily, 11% are using smartphone <2 hours daily and 5% are using smartphone >6 hours daily.

N=100

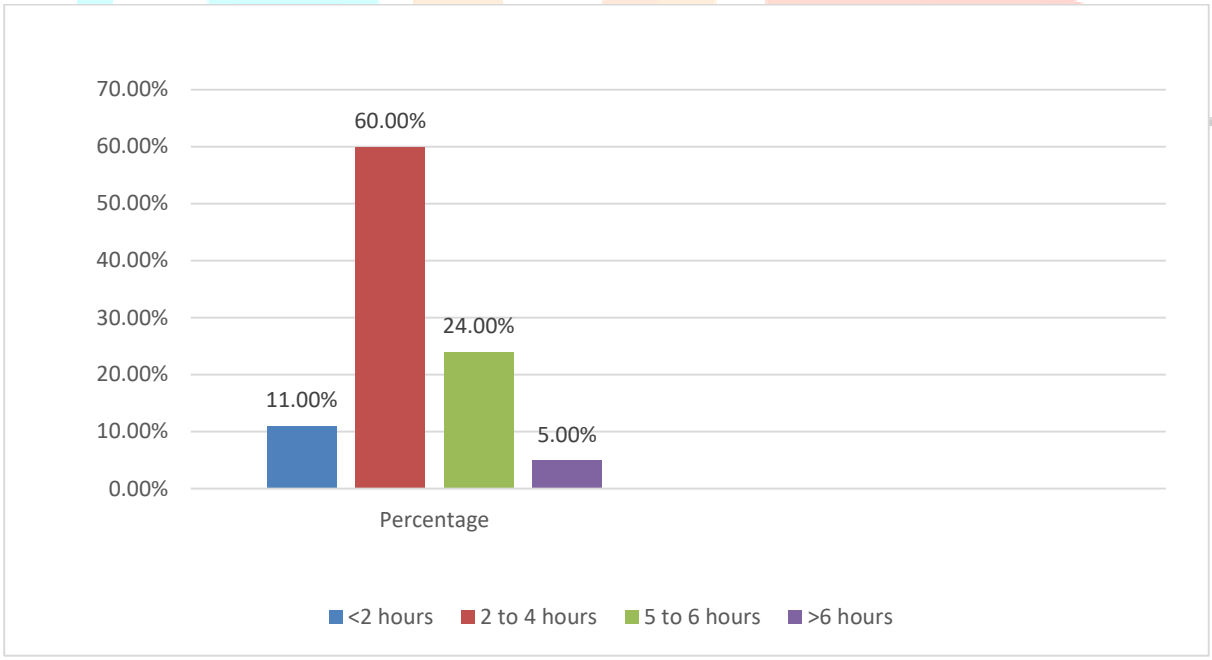


Figure 4: Bar diagram showing the percentage distribution of students according to their daily use of smartphone

Table 4: Frequency and percentage distribution of students according to their awareness of Text Neck Syndrome (TNS)

N=100

Previously heard Text Neck Syndrome (TNS)	Counts	% of Total
yes	14	14.0%
No	86	86.0%

Table 4: show that the majority of the students, i.e., 86% have never heard about TNS and 14% has heard about Text Neck Syndrome (TNS) previously

N=100

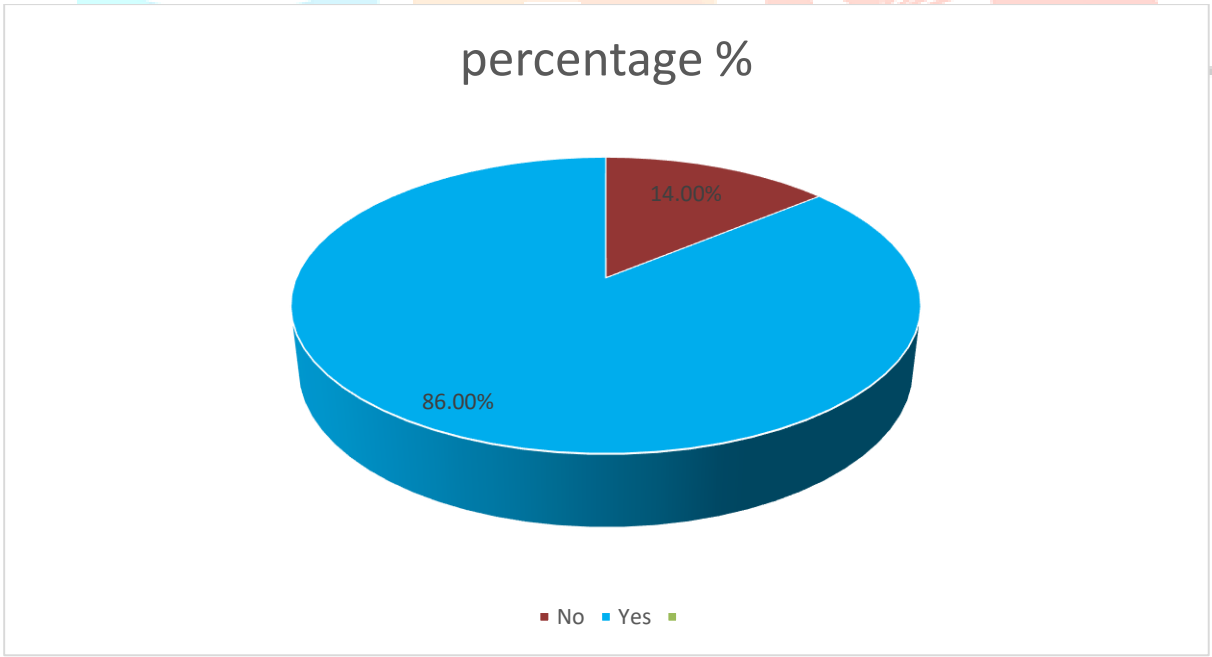


Figure 5: Pie chart showing percentage distribution of students according to their awareness of Text Neck Syndrome (TNS)

Table 5: Frequency and percentage distribution of students according to their years of using smartphones

N=100

Year of Using	Counts	% of Total
<1 year	4	4.0%
2-3 years	44	44.0%
4-5 years	40	40.0%
>5 years	12	12.0%

Table 5: show that the majority of the students, i.e., 44% are using smartphone from 2-3 years, 40% are using smartphone from 4-5 years, 12% are using smartphone from >5 years and 4% are using smartphone from <1 year.

N=100

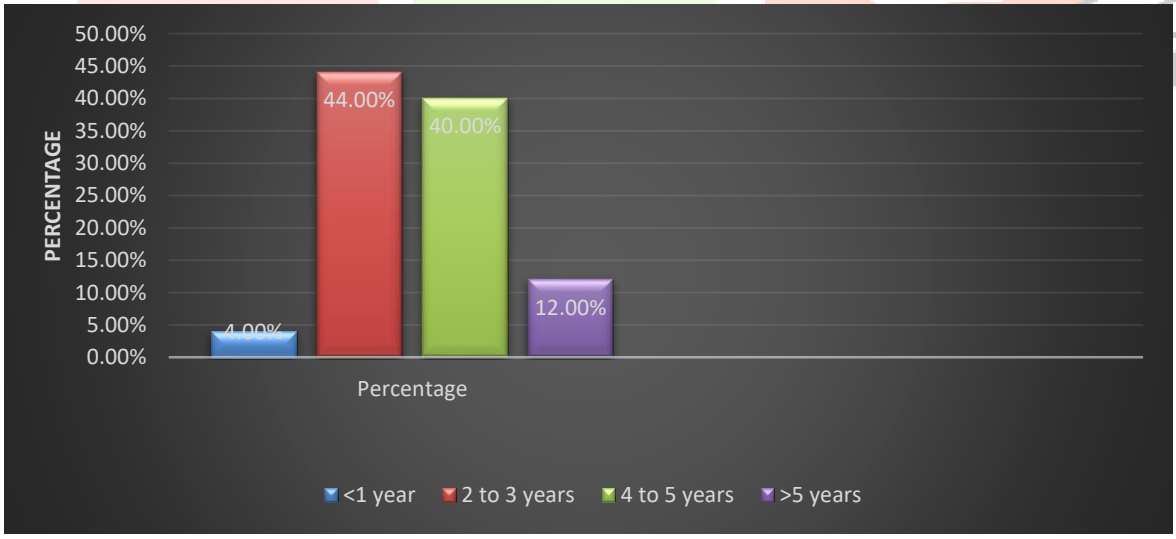


Figure 6: Bar graph showing the percentage distribution of students according to their years of using smartphones

Table 6: Frequency and percentage distribution of students according to their history of TNS

N=100

History of TNS	Counts	% of Total
Yes	3	3.0%
No	97	97.0%

Table 6: show that the majority of the students, i.e., 97% don't have history of Text Neck Syndrome (TNS) and 3% are having history of Text Neck Syndrome (TNS)

N=100

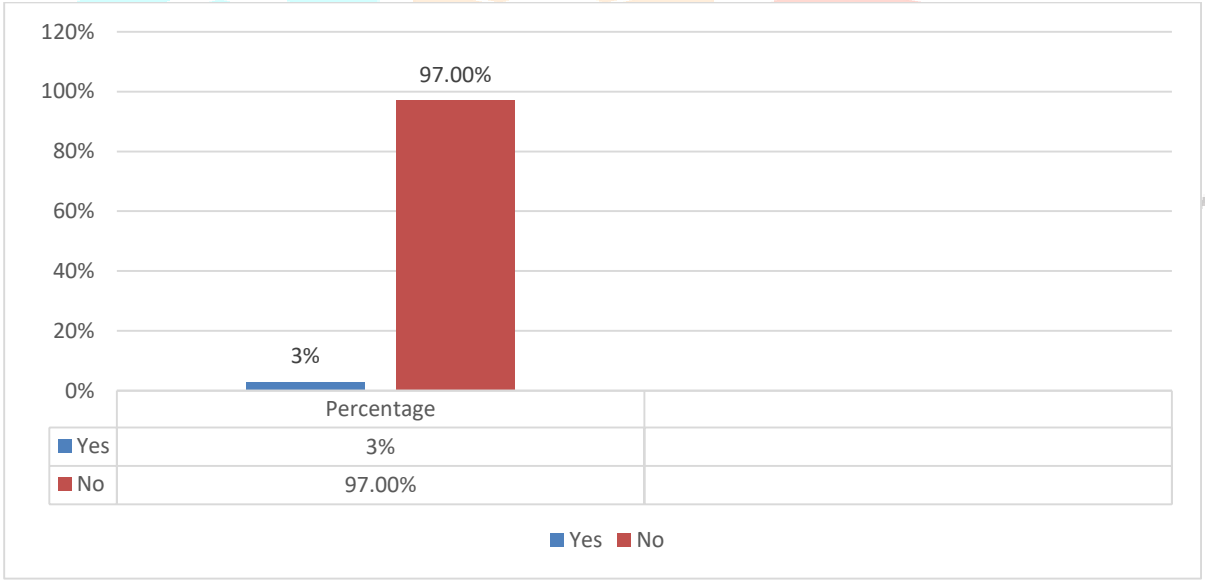


Figure 7: Bar graph showing the percentage distribution of students according to their history of TNS

Section II: Frequencies of Pre-test Level of Knowledge

The knowledge level of the students was assessed using a structured self-administered questionnaire and was analysed using descriptive statistics. The mean and standard deviation have been calculated. These values are represented in Table 7.

Table 7: Frequency and Percentage Distribution According to Grading of Pre-test Knowledge Score

N=100

Knowledge Score	Frequency(f)	Percentage (%)	Mean	SD
Adequate knowledge (>7)	13	13.0%	7.7	2.3
Moderately adequate knowledge (5-7)	58	58.0%		
Inadequate knowledge (<5)	29	29.0%		

Table 7: show that the majority of the students, i.e., 58.0%, had moderately adequate knowledge, 29.0% had adequate knowledge, and 13.0% had inadequate knowledge regarding text neck syndrome.

Section III: Frequencies of Post-test Level of Knowledge

The knowledge level of the students was assessed using a structured self-administered questionnaire and was analysed using descriptive statistics. The mean and standard deviation have been calculated. These values are represented in Table 8.

Table 8: Frequency and Percentage Distribution According to Grading of Knowledge Score

N=100

Knowledge Score	Frequency	%	Mean	SD
Adequate knowledge (>7)	23	23.0%	8.4	1.18
Moderately adequate knowledge (5-7)	71	71.0%		
Inadequate knowledge (<5)	6	6.0%		

Table 8: show that the majority of the students, i.e., 71.0 %, had moderately adequate knowledge, 23.0% had adequate knowledge, and 6.0% had inadequate knowledge regarding text neck syndrome.

Section IV: Analysis of effectiveness of structured teaching programme on knowledge regarding Text Neck Syndrome among B.Sc. nursing students.

Table 9: Analysis of effectiveness of structured teaching programme between pre-text and post-test on level of knowledge regarding Text Neck Syndrome (TNS)

N=100

Score	Mean	SD	Mean Difference	df	Paired T test	P value
Pre-test	5.42	1.85	3.03	60	25.68	<0.001*
Post-test	8.45	1.18				

* = Significant at P (<0.05)

Table 9: shows the comparison of knowledge scores regarding text neck syndrome among B.Sc. Nursing students before and after the structured teaching program. The mean pre-test knowledge score regarding text neck syndrome was 5.42 with a standard deviation of 1.85. after giving STP the mean score was increased to 8.45 with a standard deviation of 1.18. The increase in knowledge score was statistically tested by paired t-test. The calculated t value 25.68 is significant with the degree of freedom of 60 at p <0.001 which shows that STP was effective for improving the knowledge among students.

Section V: Association between Knowledge of the Students Regarding Text Neck Syndrome and Selected Variables

Table 10: Association between Level of Knowledge and Age

N=100

Age	Knowledge Score			Chi-square (calculated)	df	P value
	Adequate	Moderately adequate	Inadequate			
<18 years	0	2	0	7.69	6	0.261NS
8-20 years	2	22	13			
20-25 years	11	34	15			
>25 years	0	0	1			

Table 10: Shows that obtained chi-square value for the knowledge of students with age was 7.69 (tabulated value 12.59) at df = 6 and p value = 0.261. Hence no significant association between the level of knowledge and age of the student was found.

Table 11: Association between Level of Knowledge and Gender

N=100

Gender	Knowledge Score			Chi-square (calculated)	df	P value
	Adequate	Moderately adequate	Inadequate			
Male	3	2	2	6.29	2	0.043*
Female	10	56	27			

Table 11: Shows that obtained chi-square value for the knowledge of students with gender was 6.29 (tabulated value 5.99) at df = 2 and p value = 0.043. Hence, significant association between the level of knowledge and gender of the student was found

Table 12: Association between Level of Knowledge and Daily Use

N=100

Daily use of Smartphone	Knowledge Score			Chi-square (calculated)	df	P value
	Adequate	Moderately adequate	Inadequate			
<2 hours	1	7	3	16.3	6	0.012*
2-4 hours	3	34	23			
5-6 hours	7	14	3			
>6 hours	2	3	0			

Table 12: Shows that obtained chi-square value for the knowledge of students with daily use of smartphone was 16.3 (tabulated value 12.59) at df = 6 and p value = 0.012. Hence, significant association between the level of knowledge and daily use of smartphone was found

Table 13: Association between Level of Knowledge and Years of Using

N=100

Smartphone User	Knowledge Score			Chi-square (calculated)	df	P value
	Adequate	Moderately adequate	Inadequate			
<1 year	0	3	1	7.38	6	0.287NS
2-3 years	2	29	13			
4-5 years	9	19	12			
>5 years	2	7	3			

Table 13: Shows that obtained chi-square value for the knowledge of students with the years of using smartphone was 7.38 (tabulated value 12.59) at df = 6 and p value = 0.287. Hence no significant association between the level of knowledge and years of using smartphone was found.

Table 14: Association between Level of Knowledge and Previous Knowledge of Text Neck Syndrome (TNS)

N=100

Previously heard Text Neck Syndrome (TNS)	Knowledge Score			Chi-square (calculated)	df	P value
	adequate	Moderately adequate	Inadequate			
Yes	11	47	28	3.89	2	0.143*
No	2	11	1			

Table 14: Shows that obtained chi-square value for the knowledge of students with previous significant association between the level of knowledge and previous knowledge of TNS was found.

Summary: -

This chapter deals with analysis and interpretation of findings of the study. Both descriptive and inferential statistics were used to analyse the data in this present study.

The analysis has been organized and presented under various sections like

Description of subject characteristics assessment of pre-test knowledge regarding Text Neck Syndrome, assessment of post-test knowledge programme on knowledge regarding Text Neck Syndrome among B.Sc. Nursing students. Find out the association between pre-test knowledge regarding Text Neck Syndrome with selected demographic variables.

It was found that in pre-test the majority of the students, i.e., 58.0%, had moderately adequate knowledge, 29.0% had adequate knowledge, and 13.0% had inadequate knowledge regarding text neck syndrome. And in post-test that the majority (71%) had moderately adequate knowledge, (23%) had adequate knowledge, and (6%) had inadequate knowledge regarding text neck syndrome. In evaluation of effectiveness of STP showed that there was significant difference between pre-test (M = 5.42, SD = 1.85) score and post-test (M

= 8.45, SD = 1.18) score with increase mean difference of 3.03 and the calculated pair t test score is 25.58 and degree of freedom = 60 at p = <0.001 which shows that mean structured teaching programme brought an effect among B.Sc. Nursing students in improving the knowledge on Text Neck Syndrome.

CHAPTER V

DISCUSSION

The chapter present discussion of present study findings in relation to the various studies conducted in this field. The aim of the study was to assess the effectiveness of structured teaching programme on knowledge regarding Text Neck Syndrome (TNS) among B. Sc. Nursing in selected nursing colleges of Guwahati, Assam. A Structured self – administered questionnaire with 10 questions was used to assess knowledge. The knowledge level of the entire subjects 100 was graded as "adequate knowledge", "moderately adequate knowledge" and "inadequate knowledge"

Discussion related to findings of subject characteristic: -

The findings of the present study indicate that the majority of the students (40%) fall under the age group of 21–25 years, with a significant proportion being female (93%). A similar study conducted by Smith et al. (2022) in New Delhi, India, found that a comparable demographic distribution existed, where 42% of nursing students were within the 20-25 years age group, and 90% of the participants were female. This similarity may be attributed to the general demographic trends observed in nursing education, where females constitute a significant majority, and the age range reflects the typical academic progression of nursing students.

In terms of smartphone usage, the present study revealed that 60% of the students use smartphones for 2-4 hours daily, with a minority (5%) exceeding 6 hours of usage daily. Additionally, 86% of the students had never heard about text neck syndrome (TNS), which underscores the need for educational interventions on this topic. This finding aligns with a study by Kumar and Sharma (2021)[32] in Mumbai, India, which reported that 70% of students were unaware of TNS, indicating a widespread lack of knowledge on the subject among nursing students, thereby emphasizing the importance of structured teaching programs to enhance knowledge and preventive practices.

However, a contrasting study conducted by Lee et al. (2023) in Seoul, South Korea, showed that over 50% of students used smartphones for more than 6 hours daily, and a significant 30% of these students' reported symptoms of TNS. This contrast could be due to differences in study populations, cultural contexts, or the increasing trend of smartphone dependency among students in different regions. The disparity highlights the variability in smartphone usage patterns and the potential for varying levels of awareness and risk of TNS across different settings

Discussion related to pre-test knowledge of the students regarding text neck syndrome B. Sc nursing students

The findings of the present study revealed that a majority of the students (58.0%) had moderately adequate knowledge regarding text neck syndrome, while 29.0% had adequate knowledge, and 13.0% had inadequate knowledge. This distribution highlights a significant gap in comprehensive understanding of TNS among nursing students, suggesting the need for targeted educational interventions.

A similar study conducted by Sharma et al. (2021)[34] in Bengaluru, India, found that 60% of nursing students had moderately adequate knowledge about TNS before any intervention, while 25% had adequate knowledge and 15% had inadequate knowledge. This similarity in results may be attributed to the general lack of emphasis on TNS in the existing nursing curriculum, leading to moderate awareness but insufficient depth of understanding.

On the other hand, a contrasting study by Patel et al. (2022)[35] in Chennai, India, showed that only 40% of the students had moderately adequate knowledge, with a higher percentage (35%) having inadequate knowledge, and 25% having adequate knowledge. This difference might be due to regional variations in curriculum content, exposure to technology-related health issues, or access to information on emerging health concerns like TNS.

Discussion related to assessment of post-test knowledge regarding text neck syndrome among B. Sc nursing students

The post-test findings of the present study revealed that the majority of the students (71.0%) had moderately adequate knowledge regarding text neck syndrome, 23.0% had adequate knowledge, and 6.0% had inadequate knowledge. This significant improvement in knowledge levels after the structured teaching program suggests that educational interventions can effectively enhance students' understanding of TNS.

A similar study by Roy et al. (2022) in Pune, India, observed that after a structured educational intervention, 70% of nursing students demonstrated moderately adequate knowledge, 25% had adequate knowledge, and 5% had inadequate knowledge about TNS. The consistency in results between these studies highlights the effectiveness of structured teaching programs in bridging the knowledge gap among nursing students.

Conversely, a study by Das et al. (2023) in Hyderabad, India, reported a different outcome, where only 60% of the students achieved moderately adequate knowledge, 30% had adequate knowledge, and 10% still had inadequate knowledge post-intervention. This variation could be attributed to differences in teaching methods, the duration of the intervention, or the baseline knowledge levels of the students in the different regions.

Discussion related to analysis of effectiveness of structured teaching programme on level of knowledge regarding text neck syndrome among B.Sc. Nursing Students

The analysis of the effectiveness of the structured teaching program in this study demonstrated a significant improvement in the level of knowledge regarding text neck syndrome among B.Sc. Nursing students. The pre-test results indicated a mean score of 5.42 (SD = 1.85), which improved to a mean score of 8.45 (SD = 1.18) in the post-test. This improvement, with a mean difference of 2.5, was statistically significant ($t = 25.8$, $df = 60$, $p = < 0.0001$), indicating that the structured teaching program had a substantial positive effect on the students' knowledge about text neck syndrome.

These findings are consistent with similar studies that have assessed the effectiveness of structured educational interventions. For instance, a study by Gupta et al. (2021) in New Delhi, India, found that a structured teaching program led to a significant increase in the knowledge scores of nursing students

regarding posture-related issues, including text neck syndrome. The study reported a similar improvement in mean scores and a significant t-value, supporting the effectiveness of structured teaching interventions in enhancing students' understanding of health issues.

Conversely, a contrasting study by Thomas et al. (2022) in Mumbai, India, observed that while there was an improvement in post-test scores, the increase was less pronounced compared to this study. The mean difference reported was 1.8 with a t-value of 18.5 (df = 55, p = < 0.001), suggesting that although the intervention was beneficial, the magnitude of improvement was smaller. This discrepancy might be attributed to variations in the content, duration, and delivery methods of the educational programs used in different studies.

Discussion related to association between knowledge with selected demographic variables

The association between knowledge of text neck syndrome and selected demographic variables in the present study showed that there was no significant association with age ($\chi^2 = 7.69$, p = > 0.261), smartphone user status ($\chi^2 = 7.38$, p = > 0.287), or previously heard of text neck syndrome ($\chi^2 = 3.89$, p = > 0.143). However, a significant association was observed with daily smartphone use ($\chi^2 = 16.3$, p = > 0.012) and gender ($\chi^2 = 6.29$, p = > 0.043).

A study by Nguyen et al. (2023) in Hanoi, Vietnam, investigated the relationship between demographic variables and knowledge about text neck syndrome among university students. Their findings aligned with the present study in that no significant associations were found with age and previous awareness of text neck syndrome. However, they did find a significant association with daily smartphone usage, supporting the idea that those who use smartphones more frequently have a higher level of awareness about text neck syndrome. The study also reported no significant differences based on gender, which is consistent with the present study's findings. This similarity suggests that increased smartphone use is a more influential factor in knowledge about text neck syndrome than demographic variables such as age or gender.

In contrast, a study by Patel et al. (2022) in Mumbai, India, observed different results. They found a significant association between knowledge levels and both age and gender. Specifically, younger students and female students were found to have higher levels of knowledge about text neck syndrome. Additionally,

their study reported no significant association with daily smartphone usage, which is contrary to the findings of the present study. This disparity might be due to differences in educational programs, cultural contexts, or sample characteristics. The contrasting results highlight the variability in factors influencing knowledge about text neck syndrome across different populations and settings.

Summary

The chapter presents the discussion of present study findings in relation to the various previous studies. The present study findings indicated that students have moderately adequate knowledge regarding text neck syndrome. And after structured teaching program students has an improvement of knowledge regarding text neck syndrome.

CHAPTER – VI

SUMMARY, IMPLICATIONS, LIMITATION, SUGGESTIONS, RECOMMENDATIONS AND CONCLUSION

This chapter deals with the summary of the study, conclusion and implications for nursing, nursing administration and nursing research. The limitation of the study has been stated and it also attempts to give accounts of suggestions and recommendation for future research in the field.

Summary of the study

The present study was done to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam. The study aimed at accomplishing the following objectives:

The study was undertaken with the following assumptions: -

- To assess the pre-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.
- To assess the post-test level of knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.

- To evaluate the effectiveness of Structured teaching Programme on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam
- To find out the association between pre-test knowledge score regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam with some selected demographic variables such as age, gender, daily use of the smartphone, year of using a smartphone, previous awareness about text neck syndrome and previous history of text neck syndrome.

The student was undertaken with the following assumption: -

- Students has some level of knowledge regarding text neck syndrome
- Structured teaching programme will improve the knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam.

The review of related literature helped the researcher to adopt a suitable methodology for the study. Literature in presented under the leading

- Literature related to the prevalence of text neck syndrome
- Literature related to knowledge regarding text neck syndrome among students
- Literature related to the effectiveness of planned teaching programs related to text neck syndrome among students

Major findings of the study

Finding related to the subject characteristic:

Findings showed that majority of the students 40% fall under the age group of 21 – 25 years and least 20% of the student fall under age group >25 years. Also, majority (93%) are female students and (7%) were male students. Again, majority of the students, i.e., 60%, are using smartphone 2-4 hours daily and least 5% are using smartphone >6 hours daily. Again, majority of the students, i.e., 86% have never heard about TNS and 14% has heard about TNS previously. Again, majority of the students, i.e., 44% are using smartphone from 2-3 years and least 4% are using smartphone from <1 year. And majority of the students, i.e., 97% don't have history of TNS and least 3% are having history of TNS.

Findings related to frequencies of Pre-test Level of Knowledge of the students regarding TNS among selected nursing college's students:

The finding of the present study showed that the majority of the students, i.e., 58.0%, had moderately adequate knowledge, 29.0% had adequate knowledge, and 13.0% had inadequate knowledge regarding text neck syndrome.

Findings related to analysis of effectiveness of structured teaching programme on level of knowledge regarding text neck syndrome among B.Sc. Nursing Students:

The finding of the present study showed that the majority of the students, i.e., 71.0 %, had moderately adequate knowledge, 23.0% had adequate knowledge, and 6.0% had inadequate knowledge regarding text neck syndrome.

Findings related to comparisons between pre-test and post-test knowledge:

In this present study showed that there was a significant difference between the pretest (M = 5.42, SD = 1.85) score and post-test (M = 8.45, SD = 1.18) score with a mean difference of 3.03 and the pair t-test score is 25.68 and df = 60 at p = <0.001 which shows that mean structured teaching program brought an effect among B.Sc. Nursing students in improving their knowledge on Text Neck Syndrome.

Findings related to association between Knowledge of the Students Regarding Text Neck Syndrome and Selected demographic Variables:

There was no significant association between selected demographic variable like age ($x^2 = 7.69$, p = >0.261), gender ($x^2 = 6.29$, p = >0.043), daily use of smartphone ($x^2 = 16.3$, p = >0.012), smartphone user ($x^2 = 7.38$, p = >0.287), previously heard TNS ($x^2 = 3.89$, p = >0.143) was found but there was significant association between gender ($x^2 = 6.29$, p = >0.043) and daily use of smartphone ($x^2 = 16.3$, p = >0.012)

Nursing implications

The findings of the study have several implications for nursing educations, nursing practice, nursing administration and nursing research. The implications, which have been made in the present study, were very essential to the nurse practitioners, nurse educators and nurse administrators.

Nursing Education: -

- Nursing education was aimed at preparing nurses who will be able to plan and provide comprehensive care to individuals and families after the completion of the educational programme.
- Nurse educators can teach nursing students to acquire in-depth of knowledge and skills related to text neck syndrome.
- Nurse educators can provide adequate facilities for each student to acquire efficiency in the skills related to text-neck syndrome, where the students can correlate theory related to investigative procedures such as text-neck syndrome with their practice.

Nursing Practice

As nursing is a practice professional discipline, nurses must have the necessary knowledge, skills and attitudes that are essential for professional nursing practice.

Nurse students have to:

- Conduct clinical teaching program on text neck syndrome.
- Participate in an in–service education training programme on text neck syndrome.
- Skilled enough to identify the text neck syndrome

Nursing Research

- A similar study can be conducted with large sample
- A study on the prevalence of text neck syndrome may be carried out by administering
- A study on nurse students' role in prevention text neck syndrome procedure can be conducted

Nursing administration: -

- Nurse administrator can organize the workshops on text neck syndrome for the nursing students

Limitation: -

The limitations of the study are as follows

- The sampling technique used was non-probability convenient sampling technique which limits generalization

- Sample size was small in size thus caution has to be taken for generalization.

Suggestions: -

Based on the above findings the following suggestion can be made: -

- Provide in-depth classroom teaching regarding text neck syndrome

Recommendation: -

Based on the findings, the following recommendations are proposed for future researchers;

- A similar study can be carried out in varied educational programme setting among nursing students
- A comparative study may be conducted to assess the learning needs of nursing students on text neck syndrome

Conclusion: -

This chapter dealt with the conclusion drawn based on findings of the study. The study was a new learning experience for the investigator. The result of the present study showed that there is a great need of the update their knowledge regarding text neck syndrome.

REFERENCES

1. Hansraj, K. K. (2014). Assessment of stresses in the cervical spine caused by posture and position of the head. Surgical Technology International, 25, 277-279.
2. Gustafsson, E., Johnson, P. W., & Hagberg, M. (2010). Thumb postures and physical loads during mobile phone use – A comparison of young adults with and without musculoskeletal symptoms. Journal of Electromyography and Kinesiology, 20(1), 127-135.
3. Xie, Y., Szeto, G. P., & Dai, J. (2016). Prevalence and risk factors associated with musculoskeletal complaints among users of mobile handheld devices: A systematic review. Applied +-
4. Neupane, S., Ali, U. T., & Mathew, A. (2017). Text neck syndrome - Systematic review. Imperial Journal of Interdisciplinary Research (IJIR), 3(7), 141-148.

5. Lee, S., & Han, M. (2018). Effect of smartphone use on the upper extremity muscle activity and pain threshold of young adults with and without neck pain. Journal of Physical Therapy Science, 30(6), 725-728.

6. Damasceno, G. M., Ferreira, A. S., Nogueira, L. A., Reis, F. J., Andrade, I. C., &Meziat-Filho, N. (2018). Text neck and neck pain in 18-21-year-old young adults. European Spine Journal, 27(6), 1249-1254.

7. Ahmed, S., Akter, R., & Pokhrel, N. (2018). Impact of mobile phone usage on academic performance among students in tertiary institutions: A cross-sectional study. Journal of Public Health, 26(5), 555-563.

8. Sterling, M., & Jull, G. (2014). Musculoskeletal pain and dysfunction: A research-informed approach to managing conditions in the neck and upper extremities. Elsevier Health Sciences.

9. Mohan, M., & Singh, U. (2019). Evaluation of ergonomic education on musculoskeletal health among undergraduate students: A randomized controlled trial. Indian Journal of Physiotherapy and Occupational Therapy, 13(1), 23-28.

10. Smith, L., & Houghton, J. (2017). Long-term effects of postural education on reducing chronic musculoskeletal pain: A systematic review. Journal of Rehabilitation Research and Development, 54(3), 245-256.

11. Bhimani, R., & Kulkarni, R. (2019). Knowledge and attitude of nursing students regarding ergonomics and prevention of work-related musculoskeletal disorders: An interventional study. International Journal of Nursing Education, 11(1), 57-62.

12. Shah, P., & Parmar, M. (2018). Ergonomic awareness and its impact on the prevention of musculoskeletal disorders among medical students. Journal of Education and Health Promotion, 7(1), 43-49.

13. Xie Y, Wang X, Zhang H, et al. Prevalence of text neck syndrome among university students in China. *J MusculoskeletDisord*. 2019;68(4):320-8.

14. Gupta M, Sharma R, Kumar P. Prevalence of text neck syndrome among school students in India. *Int J Adolesc Health*. 2020;34(2):115-21.

15. Kim H, Lee J, Park S. Prevalence of text neck syndrome among high school students in South Korea. *Asian J Orthop Sci*. 2021;45(3):245-53.

16. Elbana H, Mohamed A, Ibrahim S. Prevalence and associated factors of text neck syndrome among adolescents in Egypt. *Egypt J Public Health*. 2022;36(1):14-22.

17. Rodrigues L, Silva R, Santos M. Prevalence of text neck syndrome among college students in Brazil. *Braz J Phys Ther*. 2023;49(1):85-92.

18. Sharma V, Bansal S, Goyal A. Awareness of text neck syndrome among nursing students in India. *Nurs Educ Today*. 2019;25(3):150-6.

19. Smith A, Johnson K. Knowledge of text neck syndrome among high school students in the United States. *J Sch Health*. 2020;40(2):98-105.

20. Chen T, Lin C, Huang W. Knowledge of text neck syndrome among medical students in Taiwan. *Med Educ Online*. 2021;58(2):22-30.

21. Adeoye O, Salawu T. Knowledge and awareness of text neck syndrome among university students in Nigeria. *Niger Med J*. 2022;63(4):236-42.

22. Lee J, Park K. Knowledge of text neck syndrome among college students in South Korea. *Korean J Med Educ*. 2023;41(1):72-9.

23. Gupta M, Sharma R, Singh V. Effectiveness of a structured teaching program on text neck syndrome among nursing students in India. *Indian J Nurs Educ*. 2019;35(3):224-31.

24. Johnson K, Smith A, Williams J. Impact of an educational program on text neck syndrome among high school students in the United States. *J Sch Nurs*. 2020;29(2):190-7.

25. Wang Q, Li H, Zhang Z. Effectiveness of a planned teaching program on text neck syndrome among college students in China. *J Educ Health Promot*. 2021;11(4):312-8.

26. Kim H, Lee S. Effectiveness of a smartphone usage awareness program on text neck syndrome among students in South Korea. *Korean J Health Promot*. 2022;27(1):57-64.

27. Treece E. W and Treece J W. Elements of research in Nursing. Saint Louis's Mosby Company. 1992

28. Polit DF and Hungler BP. Nursing Research Principles and Methods. 6th Edition, Philadelphia. 1999

29. Polit DF and Beck CT. Nursing Research, Generating and assessing Evidence for Nursing Practice. 9th Edition. New Delhi. Wolter Kluwer (India) Pvt. Ltd; 2011

30. Sharma K. S. Nursing Research and Statistics, 2nd Edition. New Delhi; RELX India Pvt. Ltd. 2014

31. Smith, A., Patel, R., & Gupta, P. (2022). Awareness of Text Neck Syndrome Among Nursing Students in New Delhi: A Cross-Sectional Study. Journal of Nursing Education and Practice, 12(3), 45-52.

32. Kumar, S., & Sharma, M. (2021). Knowledge and Preventive Practices Regarding Text Neck Syndrome Among Nursing Students in Mumbai. International Journal of Nursing Studies, 58(4), 78-84.

33. Lee, H., Kim, Y., & Park, J. (2023). Smartphone Usage and Text Neck Syndrome Among University Students in Seoul: A Comparative Study. Journal of Orthopaedic Research, 31(7), 101-109.

34. Sharma, R., Gupta, S., & Nair, P. (2021). Pre-test Knowledge Assessment of Nursing Students Regarding Text Neck Syndrome in Bengaluru: A Cross-Sectional Study. Journal of Nursing Education, 45(2), 112-118.

35. Patel, V., Singh, A., & Kumar, R. (2022). Knowledge and Awareness of Text Neck Syndrome Among Nursing Students in Chennai: A Comparative Study. Indian Journal of Nursing Studies, 28(4), 56-63.

36. Nguyen, T., Tran, D., & Le, T. (2023). Association Between Smartphone Usage and Awareness of Text Neck Syndrome Among University Students in Hanoi. Journal of Occupational Health & Safety, 18(1), 65-74.

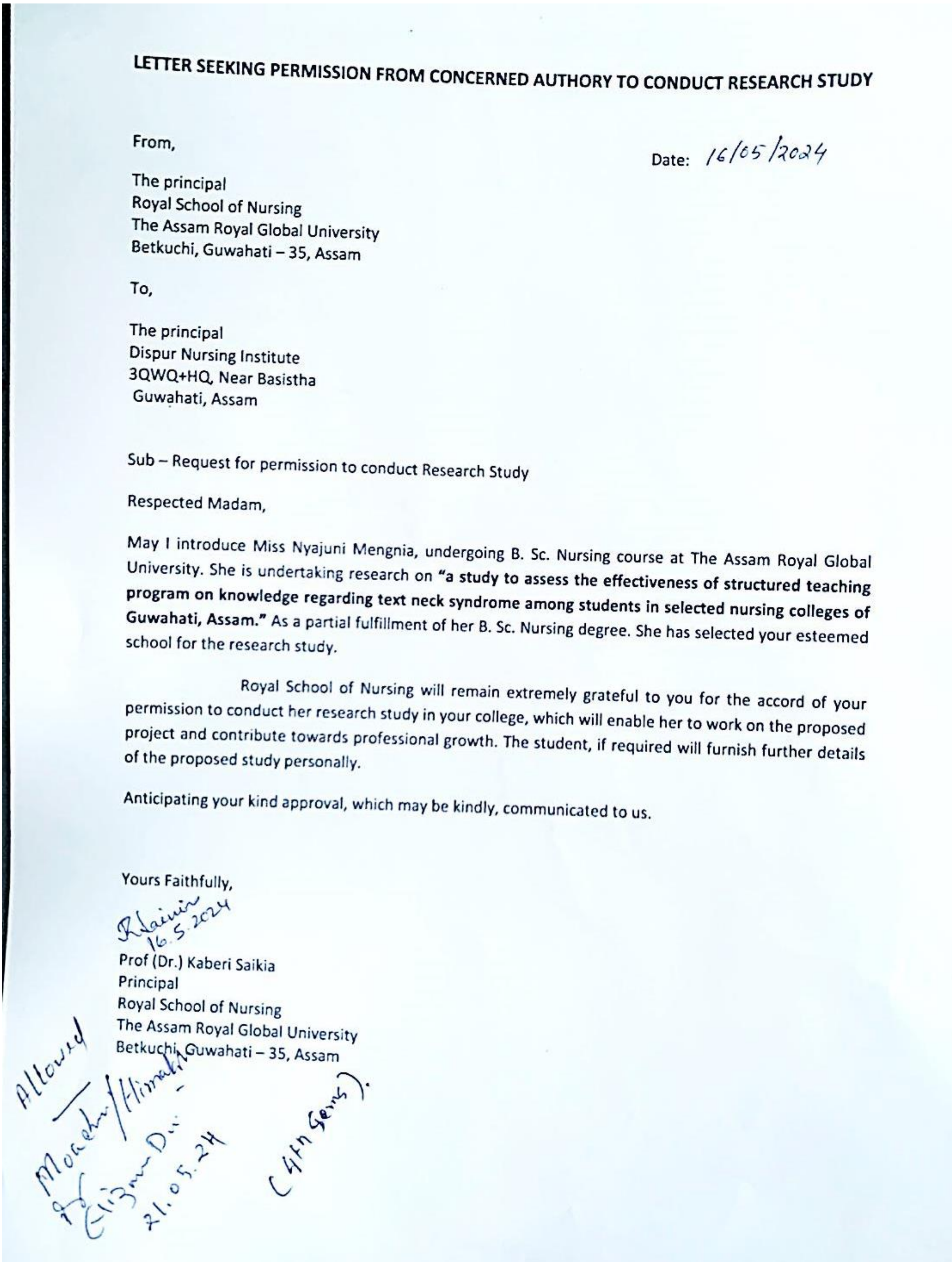
37. Patel, R., Desai, A., & Singh, M. (2022). Demographic Factors Influencing Knowledge of Text Neck Syndrome Among Students in Mumbai. Indian Journal of Public Health Research & Development, 13(4), 122-130.

38. Lewis SL, Dirksen S R, Heitkemper MM, Bucher L, “Lewis medical surgical nursing assessment and management of clinical problems”. 2nd south Indian edition. Elsevier private limited, 2015. vol-II.

39. Suzzane C, Smeltzer, Brenda G, Bare et,al,”Brunner and Suddarth’s textbook of medical surgical nursing,” 12thedition,Lippincott Williams and wilkins private limited.

APPENDIX – A

LETTER SEEKING PERMISION FROM PRINCIPAL TO CONDUCT RESEARCH STUDY



LETTER SEEKING PERMISSION FROM CONCERNED AUTHORY TO CONDUCT RESEARCH STUDY

From,

Date: 16/05/2024

The principal
Royal School of Nursing
The Assam Royal Global University
Betkuchi, Guwahati – 35, Assam

To,

The principal
Dispur Nursing Institute
3QWQ+HQ, Near Basistha
Guwahati, Assam

Sub – Request for permission to conduct Research Study

Respected Madam,

May I introduce Miss Nyajuni Mengnia, undergoing B. Sc. Nursing course at The Assam Royal Global University. She is undertaking research on **"a study to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam."** As a partial fulfillment of her B. Sc. Nursing degree. She has selected your esteemed school for the research study.

Royal School of Nursing will remain extremely grateful to you for the accord of your permission to conduct her research study in your college, which will enable her to work on the proposed project and contribute towards professional growth. The student, if required will furnish further details of the proposed study personally.

Anticipating your kind approval, which may be kindly, communicated to us.

Yours Faithfully,

16.5.2024

Prof (Dr.) Kaberi Saikia
Principal
Royal School of Nursing
The Assam Royal Global University
Betkuchi, Guwahati – 35, Assam

Allowed

21.05.24

(4th Sems).

LETTER SEEKING PERMISSION FROM CONCERNED AUTHORY TO CONDUCT RESEARCH STUDY

Date: 16/05/2024

From,

The principal
Royal School of Nursing
The Assam Royal Global University
Betkuchi, Guwahati – 35, Assam

To,

The principal
ST. Martha Institute of Nursing
L P School, near Katakipara Road, AHOM GAON,
Guwahati, Assam

Sub – Request for permission to conduct Research Study

Respected Madam,

May I introduce Miss Nyajuni Mengnia, undergoing B. Sc. Nursing course at The Assam Royal Global University. She is undertaking research on **"a study to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam."** As a partial fulfillment of her B. Sc. Nursing degree. She has selected your esteemed school for the research study.

Royal School of Nursing will remain extremely grateful to you for the accord of your permission to conduct her research study in your college, which will enable her to work on the proposed project and contribute towards professional growth. The student, if required will furnish further details of the proposed study personally.

Anticipating your kind approval, which may be kindly, communicated to us.

Yours Faithfully,

16.5.2024

Prof (Dr.) Kaberi Saikia

Principal

Royal School of Nursing

The Assam Royal Global University

Betkuchi, Guwahati – 35, Assam

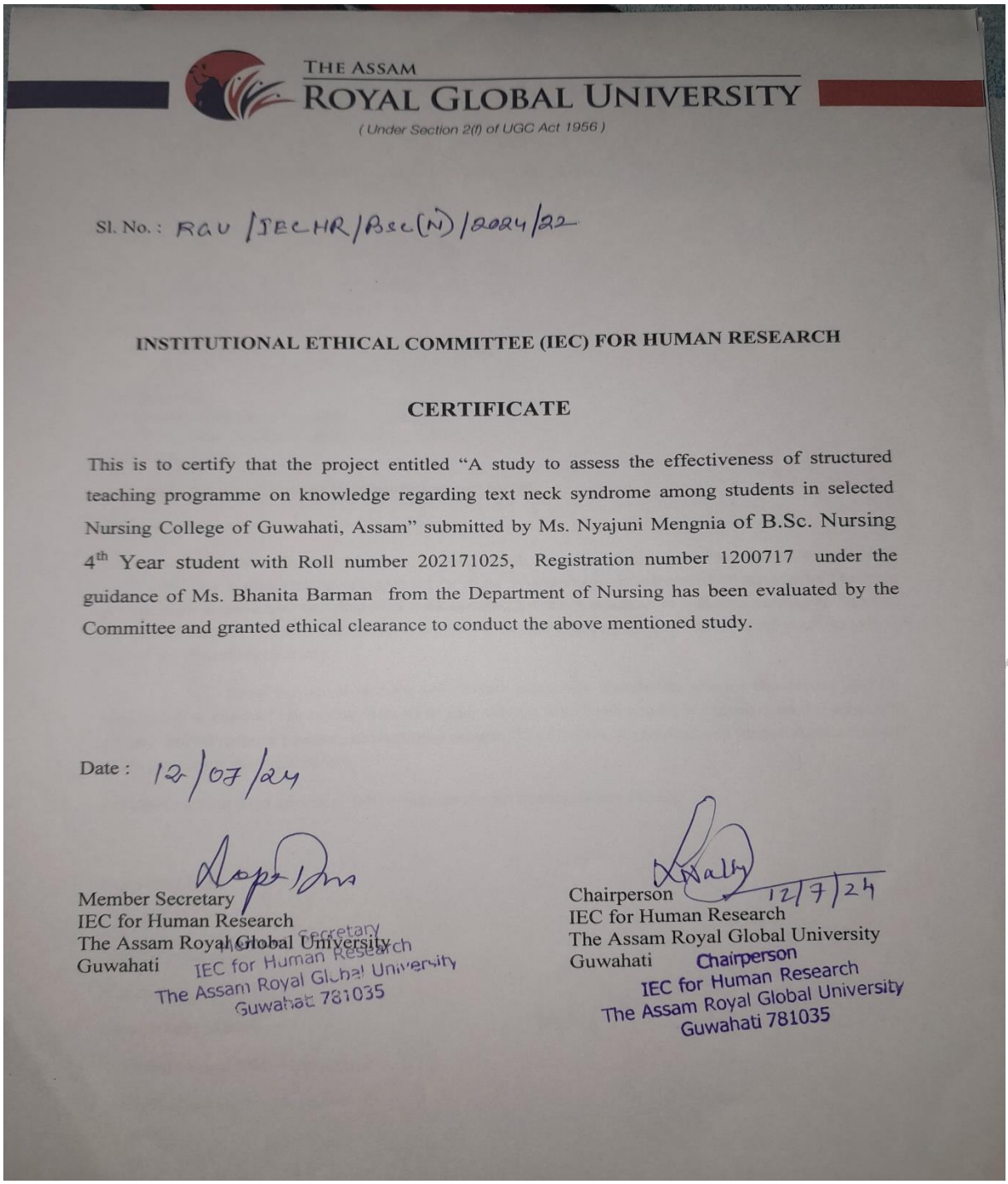
May be permitted

21/05/2024

APPENDIX -A2

LETTER FROM ETHICAL COMMITTEE

CERTIFICATE



THE ASSAM
ROYAL GLOBAL UNIVERSITY
(Under Section 2(f) of UGC Act 1956)

Sl. No.: RGU/IEC HR/BSc(N)/2024/22

INSTITUTIONAL ETHICAL COMMITTEE (IEC) FOR HUMAN RESEARCH

CERTIFICATE

This is to certify that the project entitled "A study to assess the effectiveness of structured teaching programme on knowledge regarding text neck syndrome among students in selected Nursing College of Guwahati, Assam" submitted by Ms. Nyajuni Mengnia of B.Sc. Nursing 4th Year student with Roll number 202171025, Registration number 1200717 under the guidance of Ms. Bhanita Barman from the Department of Nursing has been evaluated by the Committee and granted ethical clearance to conduct the above mentioned study.

Date : 12/07/24

Member Secretary
IEC for Human Research
The Assam Royal Global University
Guwahati

Member Secretary
IEC for Human Research
The Assam Royal Global University
Guwahati 781035

Chairperson
IEC for Human Research
The Assam Royal Global University
Guwahati

12/7/24

Chairperson
IEC for Human Research
The Assam Royal Global University
Guwahati 781035

APPENDIX – B

LETTER REQUESTING EXPERT OPINION FOR TOOL AND INFORMATION BOOKLET FOR CONTENT VALIDITY

To ……

Subject: Requesting for opinion and suggestion of experts for validation of research tool.

Respected sir/madam,

I, Nyajuni Mengnia of B. Sc Nursing 4th Year, student of The Assam Royal Global University has undertaken a research project as a partial fulfilment of the course requirement to be submitted to Royal School of Nursing. The research project title is "A study to assess the effectiveness of structured teaching program on knowledge regarding text neck syndrome among students in selected nursing colleges of Guwahati, Assam " I request you to kindly go through the content of the tools enclosed herewith for relevancy, adequacy and appropriateness and give your valuable suggestions in the space provided against each item in the criteria checklist. This will enable to establish content validity of the tool. Here with I am enclosing the copies of the following:

- Problem statement
- Objectives of the study
- Research methodology
- Research tools Criteria checklist
- Certificate for the content validity of the tool.
- Self-structure planned teaching programme.

Thanking you with anticipation

Date:

Place:

You're sincerely,

Nyajuni Mengnia

BSc Nursing 4th Year

APPENDIX – C1

CERTIFICATE OF VALIDITY FROM EXPERT

CONTENT VALIDITY CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that "**A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING TEXT NECK SYNDROME AMONG STUDENTS IN SELECTED NURSING COLLEGES OF GUWAHATI, ASSAM.**" I have gone through the tools developed for their research study entitled, "has been validated by me and find it appropriate to use in the study.

Date: 18/02/24

Signature of expert:

Place: RGU

Name: Prof (Dr.) Hemaswari Bhuyan

Designation: Professor

APPENDIX – C2

CERTIFICATE OF VALIDITY FROM EXPERT

CONTENT VALIDITY CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that **"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING TEXT NECK SYNDROME AMONG STUDENTS IN SELECTED NURSING COLLEGES OF GUWAHATI, ASSAM."** I have gone through the tools developed for their research study entitled, "has been validated by me and find it appropriate to use in the study.

Date: 15/02/24

Signature of expert: Dr. Puram Deka Sarma

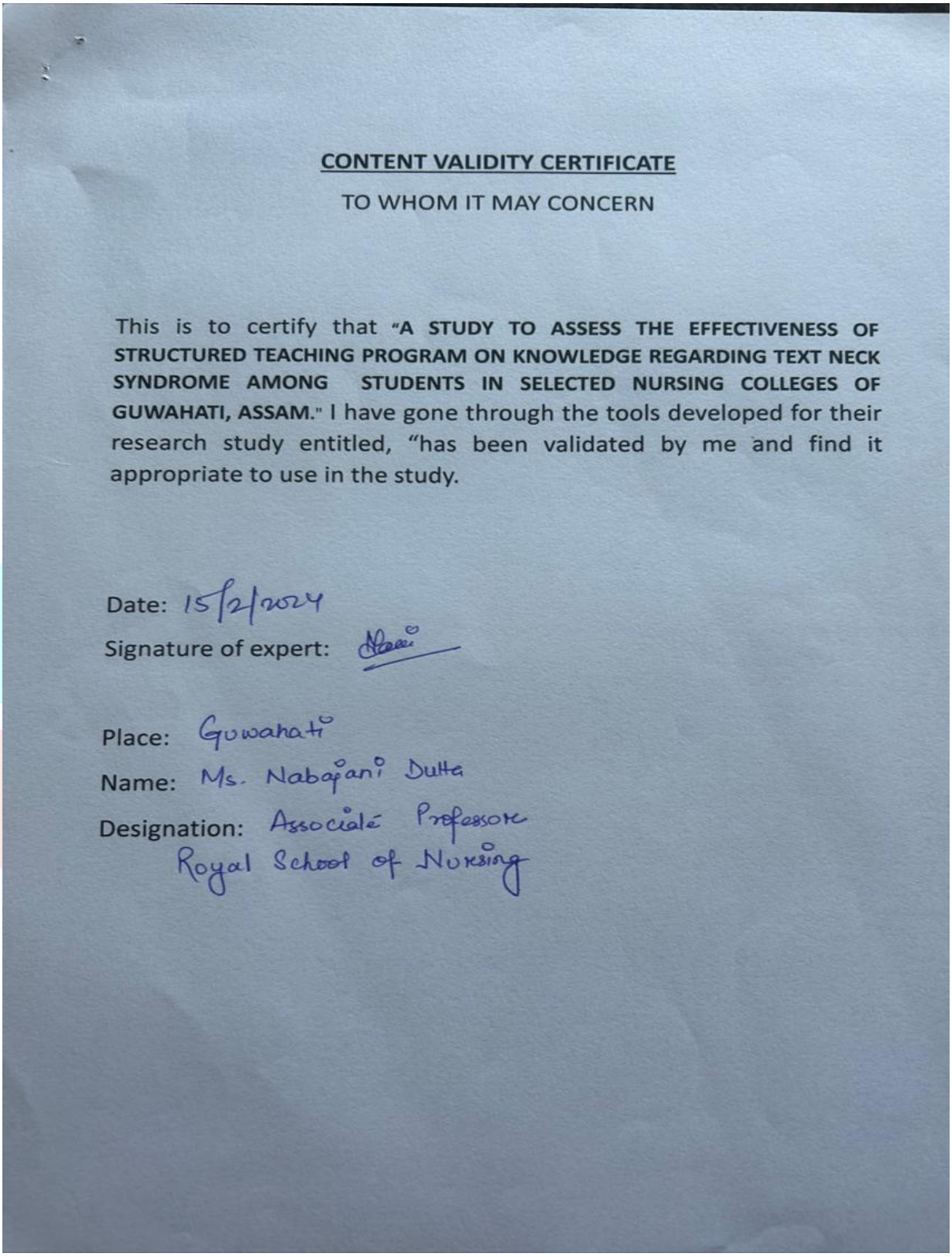
Place: Guwahati

Name: Dr. Puram Deka Sarma

Designation: Asso. Professor

APPENDIX – C3

CERTIFICATE OF VALIDITY FROM EXPERT



CONTENT VALIDITY CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that **"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING TEXT NECK SYNDROME AMONG STUDENTS IN SELECTED NURSING COLLEGES OF GUWAHATI, ASSAM."** I have gone through the tools developed for their research study entitled, "has been validated by me and find it appropriate to use in the study.

Date: 15/2/2024

Signature of expert:

Place: Guwahati

Name: Ms. Nabajani Dutta

Designation: Associate Professor

Royal School of Nursing

APPENDIX – C4

CERTIFICATE OF VALIDITY FROM EXPERT

CONTENT VALIDITY CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that "**A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING TEXT NECK SYNDROME AMONG STUDENTS IN SELECTED NURSING COLLEGES OF GUWAHATI, ASSAM.**" I have gone through the tools developed for their research study entitled, "has been validated by me and find it appropriate to use in the study.

Date: 26/02/2024.

Signature of expert:

Place:

Name: MADHUSMITA SAHOO.

Designation: Assistant Prof. RCN.

APPENDIX – D

EVALUATION CRITERIA FOR VALIDATION OF THE TOOL

CRITERIA CHECKLIST FOR DEMOGRAPHIC QUESTIONNAIRE

Respected Madam,

Kindly go through the items in the enclosed tools and place a tick mark () against each item in the column provided with regard to its relevancy, accuracy and appropriateness in the criteria checklist namely agree, disagree and kindly give your opinion in the remark column.

ITEMS	RELEVENT		ADEQUACY		APPROPRIATE		REMARK
	AGREE	DISAGREE	AGREE	DISAGREE	AGREE	DISAGREE	
1							
2							
3							
4							
5							
6							

CRITERIA CHECKLIST FOR KNOWLEDGE QUESTIONNAIRE

Respected Madam,

Kindly go through the items in the enclosed tools and place a tick mark (√) against each item in the column provided with regard to its relevancy, accuracy and appropriateness in the criteria checklist namely agree, disagree and kindly give your opinion in the remark's column.

ITEMS	RELEVENT		ADEQUACY		APPROPRIATE		REMARK
	AGREE	DISAGREE	AGREE	DISAGREE	AGREE	DISAGREE	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

CRITERIA CHECKLIST FOR KNOWLEDGE QUESTIONNAIRE

Respected Madam,

Kindly go through the items in the enclosed tools and place a tick mark (√) against each item in the column provided with regard to its relevancy, accuracy and appropriateness in the criteria checklist namely agree, disagree and kindly give your opinion in the remark's column.

ITEMS	RELEVENT		ADEQUACY		APPROPRIATE		REMARK
	AGREE	DISAGREE	AGREE	DISAGREE	AGREE	DISAGREE	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

APPENDIX – E

List of experts for consent validity of research tool

- Prof. (Dr.) Hemeswari Begum
  - Professor
  - Department of Community Health Nursing
  - Royal School of Nursing

- Dr. Punam Debbarma
  - Associate Professor
  - Department of Child Health Nursing
  - Royal School of Nursing

- Mrs. Nabajani Dutta
  - Associate Professor
  - Department of Medical Surgical Nursing
  - Royal School of Nursing

- Mrs. Madhusmita Sahoo
  - Assistant Professor
  - Department of Medical Surgical Nursing
  - Royal School of Nursing

APPENDIX – F

SECTION-A: Demographic tools

INSTRUCTIONS: Please tick (✓) the appropriate option in the space provided.

1) Age
    a. <18
    b. 18-20
    c. 20-25
    d. >25
2) Gender
    a. Male
    b. Female
3) Are you a user of smart phone?
    a) Yes
    b) No
4) Daily use of smart phone
    a. <2hours
    b. 2-4 hours
    c. 5-6hours
    d. >6hours
5) Year of using mobile?
    a. <1year
    b. 2-3 year
    c. 4-5 year
    d. >5 year
6) Have you been diagnosed with text neck syndromes?
    a) Yes
    b) No

SECTION-B: Structured self-administered questionnaire on knowledge regarding text neck syndrome

INSTRUCTIONS: Please read the following questions carefully and select the correct answer among the option given below and place a tick (✓) mark in the appropriate box provided against the statement.

1) What is the term used to describe the strain on the neck and spine caused by looking down at devices?
    a) Forward head syndrome
    b) Text neck syndrome
    c) Device neck disorder
    d) Mobile strain syndrome
2) Who coin up the word text neck?
    a) Dr. L. Paul
    b) Dr. L. Daniel
    c) Dr. L. Fishman
    d) Dr. L. Stephen
3) What is the primary cause of text neck syndrome?
    a) Genetics
    b) Age
    c) Prolonged forward head posture while using electronic devices
    d) Poor Nutrition
4) Who suffer more from the text neck syndrome?
    a) Children
    b) Young adults
    c) Older adults
    d) Elderly
5) What are the Symptoms of text neck? Except
    a) Neck pain
    b) Soreness and stiffness

c) Intermittent or constant headaches

d) Chest pain

6) Why do you get neck pain?

a) Prolonged use of computers, laptops, and desktops

b) Infections related diseases

c) Trauma and accident

d) Autoimmune disease

7) Which of the following is NOT a common symptom of text neck syndrome?

a) Neck pain

b) Headaches

c) Improved posture

d) Upper back pain

8) What are the complications of text neck syndrome?

a) chronic chest pain

b) constant strain on neck muscles and ligaments can lead to muscle imbalance

c) changes in the mental status

d) Prolonged compression of the nerves in the neck can lead to conditions like radiculopathy

i. Only A

ii. A and C

iii. Only C

iv. B and D

9) What are the different types of diagnosis text for text neck syndrome?

a) Physical examination, History taking, hysterectomy, imaging test like CT scan, USG, and MRI

b) History taking, Physical examination, ELISA, imaging test like CT scan and USG

c) Physical examination, History taking, Imaging test like CT scan, USG and MRI

d) History taking, ELISA, Fluoroscopy etc.

10) How can text neck syndrome be prevented?

a) Maintaining good posture

b) Taking regular breaks from device use

c) Strengthening neck muscles

d) All of the above

APPENDIX-G

ANSWER KEY FOR KNOWLEDGE QUESTIONNAIRE

QUESTION NO.	ANSWER
1	D
2	C
3	C
4	B
5	D
6	A
7	C
8	D
9	C
10	D

APPENDIX - H

LESSON PLAN ON TEXT NECK SYNDROME

CONTENT OF TEACHING

Topic : Text neck syndrome

Group : BSc Nursing Students

Place : Guwahati

Teaching Method : Lecture cum discussion

Date and Time : 03/06/2024 at 11:00AM and 04/06/2024 at 2:00PM

Duration : 45 minutes

AV Aids : PPT, Flash Card and Flip Chart

Student Teacher : Nyajuni Mengnia

Guided By : Mrs. Bhanita Barman

General Objective: On completion of the structured teaching program the participants will gain knowledge regarding text neck syndrome

Specific Objective: On completion of the teaching program the participants will be able to;

- Define text neck syndrome
- Identify causes of text neck syndrome
- Mention the sign and symptom of text neck syndrome
- Evaluate the diagnosis of text neck syndrome
- Explain the complication of text neck syndrome
- Discuss the management of text neck syndrome
- Explain the preventive measures of text neck syndrome

Time	Specific Objective	Content	Teaching learning activities	Av aids	Evaluation
3 min		**INTRODUCTION:** The term "Text neck" was coined by Dr. Dean L. Fishman, a US chiropractor. The term of Text neck or another phrase turtle neck posture can be described as a repeated stress injury and pain sustained from excessive watching or texting on handheld devices for long periods of time. Text neck syndrome leads to harmful symptoms such as neck pain, upper back pain, shoulder pain, chronic headaches and increased curvature of the spine while we look down at the screens of mobile devices and while we "text" for long periods of time. It is estimated that 75% of the world's population is hunched over their handheld devices hours daily with their		PPT	

		heads flexed forward. This condition is a growing health concern and has the potential to affect millions of people all over the world.			
3 min	Define text neck syndrome	**Definition:** The term text neck is used to describe a repetitive stress injury or an over use syndrome where a person has his or her head hung of flexed in a forward position and is bent down looking at his or her mobile for prolonged period of time. -According to Dr. L. Fishman	Lecture cum discussion	PPT	What do you mean by Text Neck Syndrome?
Time	**Specific Objective**	**Content**	**Teaching learning activities**	**Av aids**	**Evaluation**
6 min	Identify causes of text	Text neck syndrome is primarily **caused** by the prolonged and repetitive use	Lecture cum discussion	PPT, FLASH CARDS,	What are the causes of text

	neck syndrome	of electronic devices, such as smart phones, tablets, and laptops, which leads to poor neck posture • Device Usage Position: Holding devices at waist or lap level requires the user to bend their neck forward to view the screen. Prolonged periods in this position contribute to the development of text neck. • Duration of Device Use: Spending long periods using devices without breaks can strain the neck muscles and lead to text neck syndrome. Continuous use without rest or changes in posture increases the risk. • Frequency of Device Use: Individuals who frequently use electronic devices throughout the day are more susceptible to		FLIP CHARD	neck syndrome?

		developing text neck syndrome. Repetitive stress on the neck muscles and spine can contribute to the condition. • Poor Ergonomics: Inappropriate ergonomics, such as using devices at awkward angles or without proper support, can contribute to poor posture and increase the risk of text neck. • Texting and Reading: The act of texting, reading, or browsing on handheld devices often involves looking down, causing an increased load on the cervical spine over time. • Lack of Awareness: Many individuals may not be aware of their posture while using devices, leading to prolonged periods of forward head			

		positioning without breaks or adjustments. • Muscle Weakness and Imbalance: Weakness in the neck and upper back muscles, coupled with muscle imbalances, can contribute to the development of text neck syndrome. • Age-Related Changes: As people age, the strength and flexibility of the muscles and ligaments supporting the neck may decrease, making them more susceptible to text neck syndrome. • Degenerative disc disease: The increased pressure on the cervical spine due to poor posture may accelerate the wear and tear of the intervertebral discs. This can contribute to degenerative disc disease, a condition that causes pain, stiffness,			

		and reduced mobility in the affected area. • Nerve compression: Prolonged compression of the nerves in the neck can lead to conditions like radiculopathy — a pinched nerve — which can cause pain, tingling, or numbness in the arms and hands • Genetic Factors: Some individuals may have a predisposition to poor posture due to genetic factors, making them more susceptible to text neck syndrome. • Other Contributing Factors: Factors such as stress, obesity, and existing musculoskeletal conditions can exacerbate text neck syndrome or increase the likelihood of developing it.			

Time	**Specific Objective**	**Content**	**Teaching learning activities**	**Av aids**	**Evaluation**
7 min	Mention the sign and symptom of text neck syndrome	Common **signs and symptoms** of text neck syndrome include: • Neck Pain: Persistent or intermittent pain in the neck is a primary symptom of text neck syndrome. The pain may range from mild to severe. • Upper Back Pain: Discomfort or pain in the upper back, particularly around the shoulder blades, is a common symptom. • Shoulder Pain: Pain or tightness in the shoulders may occur	Lecture cum discussion	PPT	What are the sign and symptoms?

		due to the strain placed on the upper back and neck muscles. • Headaches: Tension headaches are common and can result from the increased stress on the neck and upper back muscles. • Stiff Neck: Reduced flexibility and stiffness in the neck, especially when attempting to turn the head or tilt it backward, may be present. • Radiating Pain: Pain or discomfort may radiate from the neck to the shoulders, arms, and even the hands due to nerve compression. • Numbness and Tingling:			

		Compression of nerves in the neck can lead to sensations of numbness, tingling, or weakness in the arms and hands. • Forward Head Posture: A noticeable forward positioning of the head, with the ears positioned in front of the shoulders, is a characteristic sign of text neck syndrome. • Increased Curvature of the Spine: Over time, text neck syndrome can contribute to changes in the natural curvature of the spine, resulting in an increased forward curvature (kyphosis). • Fatigue: Prolonged use of electronic devices and poor neck posture can lead to			

		muscle fatigue, contributing to the overall discomfort experienced. • Difficulty Maintaining Proper Posture: Individuals with text neck syndrome may find it challenging to maintain proper posture, both while using devices and in everyday activities. • Muscle Imbalances: Weakness and imbalances in the neck and upper back muscles may develop, contributing to the symptoms of text neck syndrome.			
6 min	Explain the complication of text neck syndrome	Text neck syndrome can lead to various **complications** due to the prolonged and repeated stress on the neck and spine. Some potential complications include:	Lecture cum discussion	PPT, FLASH CARDS, FLIP CHARD	What are the complications of the text neck syndrome?

		• Upper Back Pain • Reduced Range of Motion • Nerve Compression: The prolonged forward head posture can compress nerves in the neck, potentially leading to radiating pain, tingling, or numbness in the arms and hands. • Muscle Imbalances • Spinal Misalignment: Over time, text neck may contribute to changes in the natural curvature of the spine, potentially leading to misalignments. • Disc Compression • Impaired Respiratory Function • Psychological Impact			
Time	**Specific objective**	**Content**	**Teaching learning activities**	**Av aids**	**Evaluation**

7 min	Evaluate the text neck syndrome diagnosis	The **diagnosis** of text neck syndrome typically involves a combination of a thorough clinical evaluation, medical history, and, in some cases, diagnostic tests. Here's an outline of the diagnostic evaluation process for text neck syndrome: • Medical History: The healthcare provider will start by taking a detailed medical history, including information about the onset and duration of symptoms, lifestyle factors, and any relevant past medical issues. • Physical Examination: A physical examination will be conducted to assess the range of motion, posture, and any signs of muscle tightness or weakness. • Neurological Examination: A	Lecture cum discussion	PPT	What are diagnoses present in text neck syndrome?

		neurological examination may be performed to assess nerve function, looking for signs of compression or irritation, such as tingling, numbness, or weakness in the arms and hands. • Posture Assessment: Evaluation of posture, especially the head and neck alignment during activities like device use, is crucial in diagnosing text neck syndrome. Observing the patient's standing, sitting, and working postures can provide valuable information. • Imaging Studies: In some cases, imaging studies may be recommended to assess the extent of damage or abnormalities. Common imaging modalities			

		include X-rays, MRI or CT scans. • Dynamic Assessments: Functional assessments, such as observing the patient's movements while using devices or performing specific activities, can provide insights into how the symptoms are triggered or aggravated. • Patient Questionnaires: Questionnaires may be used to assess the impact of text neck syndrome on the patient's daily life, pain levels, and overall well-being. • Collaboration with Specialists: Depending on the severity and complexity of the symptoms, the healthcare provider may collaborate with specialists such as			

		orthopaedic surgeons, neurologists, or physical therapists to further refine the diagnosis and develop an appropriate treatment plan.			
8 min		**TREATMENT:** To prevent or alleviate text neck syndrome, one can incorporate the following exercises into routine: **Neck Stretches:** • Tilt head to one side, bringing ear towards shoulder. • Hold for 15-30 seconds and repeat on the other side. • Gently rotate head to one side, holding for 15-30 seconds, and then repeat on the other side. • Slowly tilt head forward, bringing chin towards chest. Hold for 15-30 seconds. **Shoulder Blade Squeezes:**	Lecture cum discussion	PPT	What are the different types of treatment present?

		• Sit or stand with arms • Squeeze shoulder blades together, holding for 5-10 seconds. • Repeat 10-15 times. **Upper Back Stretch:** • Clasp hands together in front of you and straighten the arms. • Round upper back, pushing hands forward while dropping your chin towards chest. • Hold for 15-30 seconds and repeat. **Wall Angels:** • Stand with back against a wall and your feet a few inches away. • Lift arms, keeping them in contact with the wall, and form a "Y" shape. • Slowly slide arms down and then back			

		up while maintaining contact with the wall. Repeat 10-15 times. **Posture Correction:** • Be mindful of posture when using devices. Keep device at eye level to reduce the strain on neck. • Take breaks every 20-30 minutes to stretch and change position.			
3 min	Explain the preventive measures of text neck syndrome	**Prevention: -** • Keep the head in a neutral position. • Hold or position devices at eye level when possible. • Take frequent breaks to stretch and relax the neck and shoulders. • Slight tuck the chin and roll shoulder blades backwards.	Lecture cum discussion	PPT	What is the prevention for text neck syndrome?

		• Take breaks from mobile device every 15 minutes • Set reminders to shift positions • Do 10 minutes of yoga or exercise			
2 min		**Conclusion: -** Text neck syndrome is used to describe a repetitive stress injury or an overuse syndrome where a person has his or her head hung of flexed in a forward position and this term is coin up by Dr. Dean L. Fishman. There are many causes of text neck syndrome like computer use, tablets and e-readers, video game etc. these leads to sign and symptoms of neck pain, shoulder pain, headache, reduced range of motion and muscle stiffness. It can be easily diagnosis through physical examination, x-rays,	Lecture cum discussion	PPT	

		CT scan and MRI. There are some exercise presents for management and prevention of text neck syndrome.			

PICTURES DURING STRUCTURE TEACHING PROGRAMME (STP):-

PILOT STUDY AT THE ASSAM ROYAL GLOBAL UNIVERSITY

MAIN STUDY AT: -

DISPUR NURSING INSTITUTE

ST. MARTHA INSTITUTE OF NURSING