NECK PAIN AMONG THE UNDERGRADUATE STUDENTS IN KISHOREGANJ SADAR

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We the undersigned certify that we have carefully read and recommended to the faculty of medicine, University of Dhaka, for the acceptance of this dissertation entitled

Neck Pain among the undergraduate students in Kishoreganj Sadar.

Submitted by **Islam Uddin,** for the partial fulfillment of the requirement for thedegree of Bachelor of Science in Physiotherapy (B.Sc. PT).

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This study with the title- **‘‘Neck Pain Among the Undergraduate Student in Kishoreganj Sadar** by **Islam Uddin**, Department of physiotherapy, Saic College of Medical Science and Technology, was done in my close supervision and direct guidance. I have gone through the papers. This is up to my full of satisfaction.

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DECLARATION

This work has not previously been accepted in substance for any degree and isn't concurrently submitted in candidature for any degree. This dissertation is being submitted in partial fulfillment of the requirements for the degree of B.Sc. in Physiotherapy. I confirm that if anything identified in my work that I have done any form of cheating that will directly awarded me fail and I am subject to disciplinary actions of authority. I confirm that the electronic copy is identical to the bound copy of the Thesis.

In case of dissemination the finding of this project for future publication, research supervisor will highly concern, it will be acknowledged as graduate thesis and consent will consent taken from the physiotherapy department of Saic College of Medical Science and Technology.

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Acronyms

B. Sc	**:**	Bachelor of Science
DU	**:**	University of Dhaka
US	**:**	Undergraduate students
KG	**:**	Kilogram
PT	**:**	Physiotherapy
SCMST	**:**	Saic College of Medical Science and Technology
SPSS	**:**	Statistical package for the Social Sciences
BMRC	**:**	Bangladesh Medical Research Council
WHO	**:**	World Health Organization
BMI	**:**	Body Mass Index
No	**:**	Number
BDT	**:**	Bangladesh taka
ERB	**:**	Ethical Board Review
MSD		Musculo-Skeletal Disorder
WRMD	**:**	Work Related Musculoskeletal Disorder
SD	**:**	Standard Deviation
<	**:**	Less than
>	**:**	More than
%	**:**	Percentage
BDHS	**:**	Bangladesh Demographic and Health Survey
QOL	**:**	Quality of life
RSI	**:**	Repetitive Strain Injury

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Abstract

Purpose: Aim of the study to Compare the Neck Pain among the undergraduate Students in Kishoreganj Sadar.

Objective: This study's objective was to describe socio demographic of neck pain among the students., association between age group and neck pain among the students. To identify the health-related factors among the students of the participants, to determine the percentage of neck pain among the students.

Methodology: This study was performed in a descriptive type of cross-sectional study design was conducted to determine. This study's sample was collected through a convenience sampling procedure and total sample of 149. The data was collected from Kishoreganj sadar. The data collection process was a questionnaire with a face-to- face interview. Data was analyzed with Microsoft Office, using SPSS 26 version software program and test use of study chi-square test.

Results: This study's participants mean and standard deviation of participants age where are mean±SD= 20.64 ±.2.721 About (n=94) 63.1% were <20 years old, 28.2% were 20-25years old, (n=13) 8.7% were >25 years old. This Study's among total 149 participants, 101 respondents have neck pain whose were 67.8%. and 48 respondents no 61.74%. There is a significant (P = 0.039) Association between smart phone and neck pain among the student's participants.

Conclusion: In conclusion, the prevalence of neck pain among undergraduate students is a concerning issue that warrants attention and proactive measures. This study has highlighted several factors contributing to neck pain

Keywords: *Neck pain, undergraduate student, Prevalence, Kishoreganj.*

CHAPTER: I Introduction

1.1Background:

Neck pain is a prevalent health concern that affects individuals across various age groups and demographics. Among the younger population, undergraduate students, in particular, are increasingly reporting instances of neck pain, highlighting the need for a comprehensive understanding of the factors contributing to this issue. The academic environment and lifestyle of undergraduate students often involve prolonged periods of studying, computer use, and other sedentary activities, potentially contributing to the emergence of neck pain. Understanding the prevalence of neck pain among undergraduate students is a critical first step in grasping the scope of the problem. Studies have indicated that neck pain is not uncommon in this demographic. For example, the Global Burden of Disease study in 2010 estimated a substantial global burden of neck pain, affecting individuals across different age groups and geographic locations (Hoy et al., 2010).

However, specific data related to the prevalence of neck pain among undergraduate students is limited. In a study conducted by the researchers found a notable association between computer use and the prevalence of neck pain among a sample of undergraduate students (Smith et al.,2009). This suggests that the academic demands, often characterized by extensive computer use for research, assignments, and online learning, may contribute to the development of neck pain in this population. The implications of these findings underscore the need for further investigation into the interplay between academic activities and neck pain among undergraduate students. Several risk factors contribute to the onset of neck pain among undergraduate students, ranging from ergonomic issues to lifestyle choices. Ergonomics, encompassing the design of workspaces and study environments, plays a pivotal role in neck pain development. Prolonged periods of sitting, poor desk and chair ergonomics, and inadequate computer screen height have been identified as potential contributors to neck pain among students (Janwantanakul et al.,2012) The prevalence of these factors within the academic setting emphasizes the importance of implementing ergonomic interventions to alleviate and prevent neck pain. Moreover, psychosocial factors such as stress, anxiety, and mental health issues have been implicated in the development and exacerbation of neck pain. The demanding nature of academic life, including tight

deadlines, academic pressures, and the overall transition to university, may contribute to heightened stress levels among undergraduate students, thereby influencing the prevalence and severity of neck pain (Sharan et al.,2015) Recognizing the interconnection between mental health and musculoskeletal issues is essential for developing holistic interventions aimed at addressing neck pain in this demographic.

Neck pain's impact extends beyond the physical realm, significantly influencing academic performance and overall quality of life among undergraduate students. Research has suggested a bidirectional relationship between pain and academic functioning, where pain can impair concentration, focus, and cognitive abilities, consequently affecting academic achievement (Davies et al., 2008) The potential long-term consequences of impaired academic performance, including delayed graduation and decreased career opportunities, underscore the urgency of addressing neck pain among undergraduate students. Furthermore, the subjective experience of neck pain can significantly diminish the overall quality of life for students. Sleep disturbances, reduced social engagement, and limitations in daily activities are commonconsequences of persistent neck pain. Understanding these broader implications is crucial for developing interventions that not only target the physical symptoms but alsoenhance the overall well-being of undergraduate students. Exploring the lifestyle and health habits of undergraduate students provides additional insights into the factors contributing to neck pain. Sedentary behaviors, including prolonged sitting during classes and study sessions, are prevalent among this demographic and have been linkedto musculoskeletal issues (Tremblay et al.,2017).

Encouraging physical activity and promoting breaks during study sessions are potential strategies for mitigating the impact of sedentary behaviors on neck pain. Moreover, awareness of individual health habits, such as posture and exercise routines, is essential in developing personalized interventions. Research has indicated that poor posture, both during study sessions and daily activities, can contribute to the development and exacerbation of neck pain (Kasawara et al., 2015). By fostering an understanding of the importance of posture and promoting exercises that strengthen the neck and upper back muscles, interventions can be tailored to address the specific needs of undergraduate students. Because neck pain is so prevalent worldwide, neck and shoulder diseases are regarded as health issues in the working population, with a prevalence rate of close to 30%. Pain in these two body parts is especially common in younger people. Adults pursuing higher education, wherein neck and shoulder pain due

to their jobs represents agony for the person and is viewed as a financial hardship by society (Hanvold et al.,2013). That prevalence of musculoskeletal pain (MSP) rates was varied from country to country where Korean nurse students showed 73.3%, Japanese nurse students showed 36.9%, Chinese medical students showed 67.6% musculoskeletal pain prevalence rates (Alshagga et al., 2013)

Pain in the neck can be felt anywhere from the base of the skull at the level of the ears to the upper back or shoulder. In certain cases, it can even radiate up to the finger wh en there is involvement of the nerve roots in one or both hands (Sabeen et al.,2013). According to a study, neck pain is prevalent in adults and affects 14–71% of them at some point in their lives. Of those who experience neck pain, 19–37% will experience chronic neck pain. The study also found that Pain in the neck can be felt anywhere from the base of the skull at the level of the ears to the upper back or shoulder. In certain cases, it can even radiate up to the finger when there is involvement of the nerve roots in one or both hands (Kanchanomai et al., 2011).

According to a different study found that neck pain had the highest prevalence rate, w ith 64.3% of respondents reporting problems in the neck region during the previous ye ar. Of those who had neck pain, nearly twothirds (65.4%) said it lasted longer than to days, and more than half (53.1%) said it interfered with their daily activities.

(Hayeset al., 2009) the findings of this study indicated that recurrent neck shoulder pai n (NSP) is common and that high school students in Korea have a higher prevalenceof it than students in Europe (Koh et al.,2012).

This instance, the neck was ranked highly among the areas of persistent pain for thelo ngest periods of time, and it is discovered that those with significantly higher prevalen ce (17–19%) between the ages of thirty and fifty (Nakamura., et al., 2011). Studentsare a highly affected group of people with neck pain from previous decades, and numerous studies have examined the relationship between neck pain and working conditions (Diepenmaat et al., 2006) According to a Finnish survey, roughly 26% of 14to 18-year-olds reported having neck shoulder pain (NSP) at least once a week (Shan etal.,2013)

Korean teenagers sit for extended periods of time, and many of them do so with bad p osture. It is likely that this leads to minor injuries because sitting in an improper static position for an extended length of time to the ligaments and muscles that may be resp onsible for the high incidence of neck shoulder Korean adolescents' non-specific pain (NSP) (Koh et al., 2014).

People around the world are using computers for longer periods of time each day. Computer-based tasks are performed on computers both at work and during leisure activities. The introduction of computers into the workplace has altered work organization and led to new uses for the devices. Of an employee's physical and mental capacity, it is generally acknowledged that the cause of he multifaceted nature of work-related neck disorders is linked to or impacted by a multitude of intricate personal, physiological, and psychological elements, or just one according to this one factor (Diepenmaat et al., 2006).

According to another piece of research, the anatomical regions with the highest rates of musculoskeletal pain among physical therapy students were the lower back (22,37.29%), neck (15,25.42%), and upper back (11, 18.64%) (Bharadva et al., 2014). Physiotherapy plays a broad role in helping patients return to normal activities as soon as possible at all stages of neck pain (Moffett & Mclean, 2006). In conclusion, neck pain among undergraduate students is a complex issue with far-reaching implications for academic performance, mental well-being, and overall quality of life. The interplay of various factors, including ergonomics, psychosocial elements, academic pressures, and individual health habits, necessitates a holistic approach to understanding and addressing this problem. This exploration aims to set the stage for further research and intervention strategies that go beyond mere symptom management, focusing on the root causes and broader impact of neck pain among the undergraduate students. By doing so, educators, healthcare professionals, and policymakers can collaboratively contribute to the development of effective strategies that promote the holistic well- being of undergraduate students in Kishoreganj Sadar. Neck pain among undergraduatestudents is a multifaceted issue with implications for both the health and academic success of this demographic. Investigating the prevalence, causes, and impact of neck pain in undergraduate students is crucial for several reasons, encompassing the uniquelifestyle challenges faced by students, the potential academic consequences, and the need for targeted interventions to enhance overall well-being.

One of the most prevalent medical conditions that students of health professionals dealwith is neck pain. Determining the frequency of neck pain and its likely causes amongstudents studying medicine is crucial. According to contemporary science, the prevalence of neck pain is steadily rising daily. Increased levels of neck pain in students may be detrimental to their academic performance. Students frequently experience neck pain (Kanchanomai et al., 2011).

Neck pain can significantly impact academic performance by influencing cognitive function and concentration during study sessions and lectures. Research has indicated a bidirectional relationship between pain and academic functioning (Daviesn et al.,2008)

investigating the academic consequences of neck pain among undergraduates is crucial for recognizing the potential hindrance to their educational pursuits. Neck pain can be influenced by psychosocial factors such as stress, anxiety, and mental health issues. The demanding nature of academic life, coupled with the transition to university, may contribute to heightened stress levels among students (Sharan et al.,2015) Investigating the relationship between psychosocial factors and neck pain is crucial fora holistic understanding of this health issue Addressing neck pain among undergraduatestudents is not only about immediate discomfort but also about preventing potentiallong-term health consequences. Chronic neck pain during formative years maycontribute to persistent issues that affect future career choices and overall quality of life. Investigating the long-term health implications emphasizes the need for early intervention and preventive measures (Hoy et al.,2014)

Research into neck pain among undergraduate students provides a foundation for the development of targeted intervention strategies and health promotion initiatives. By identifying specific risk factors and effective preventive measures, universities and healthcare professionals can work collaboratively to create an environment that supports the musculoskeletal health of students (Sitthipornvorakul et al.,2012) investigating neck pain among undergraduate students is essential for understanding its prevalence, academic consequences, psychosocial factors, and long-term health implications. This research serves as a foundation for developing targeted interventions and health promotion strategies that contribute to the overall well-being of undergraduate students in Kishanganj Sadar.

1.1 Justification of the study:

The findings out of neck pain among students may give an idea about who are suffer from neck pain. Students do not show their best academic performance with their neck pain but it is necessary for a student. It is possible when neck pain is reducing or minimize. Students are need opportunities to achieve their academic demands with a healthy way of life that will help them appropriately to reduce their neck pain. It is necessary to reduce the neck pain among students may help to increase their proficiency of academic performance at saic college of medical science and technology. this proficiency helps them to skillful their future professional performance. More knowledge about the size and extent of the neck pain would facilitate accurate predictions of the need for medical services and direct resources. The neck pain Are caused due to long period of time in their class room, library, also used laptop, computer or other electrical devices, practical class, this might be led to development of different kinds of musculoskeletal pain including neck pain among them. The proposed research is expected to find out the common causes of neck pain among the undergraduate students. Neck pain is common health problem throughout the world and major cause of disability the students. One of the most complaints is neck pain among the undergraduate students who suffers from it. Normally students are busy on the profession. They cannot maintain their correct posture which can pain in neck during different types of work they done. During several activities of professionals like study, daily working, using computer and sometime they are not aware about their posture. Neck pain could be harmful for them. It can interrupt daily activity and ultimately interrupt their professional and personal life. This study will help to find the among the neck pain of undergraduate students in the selected area.

1.2 Research question:

What is the Neck pain among the undergraduate students in Kishoreganj Sadar?

1.3 Objectives of study:

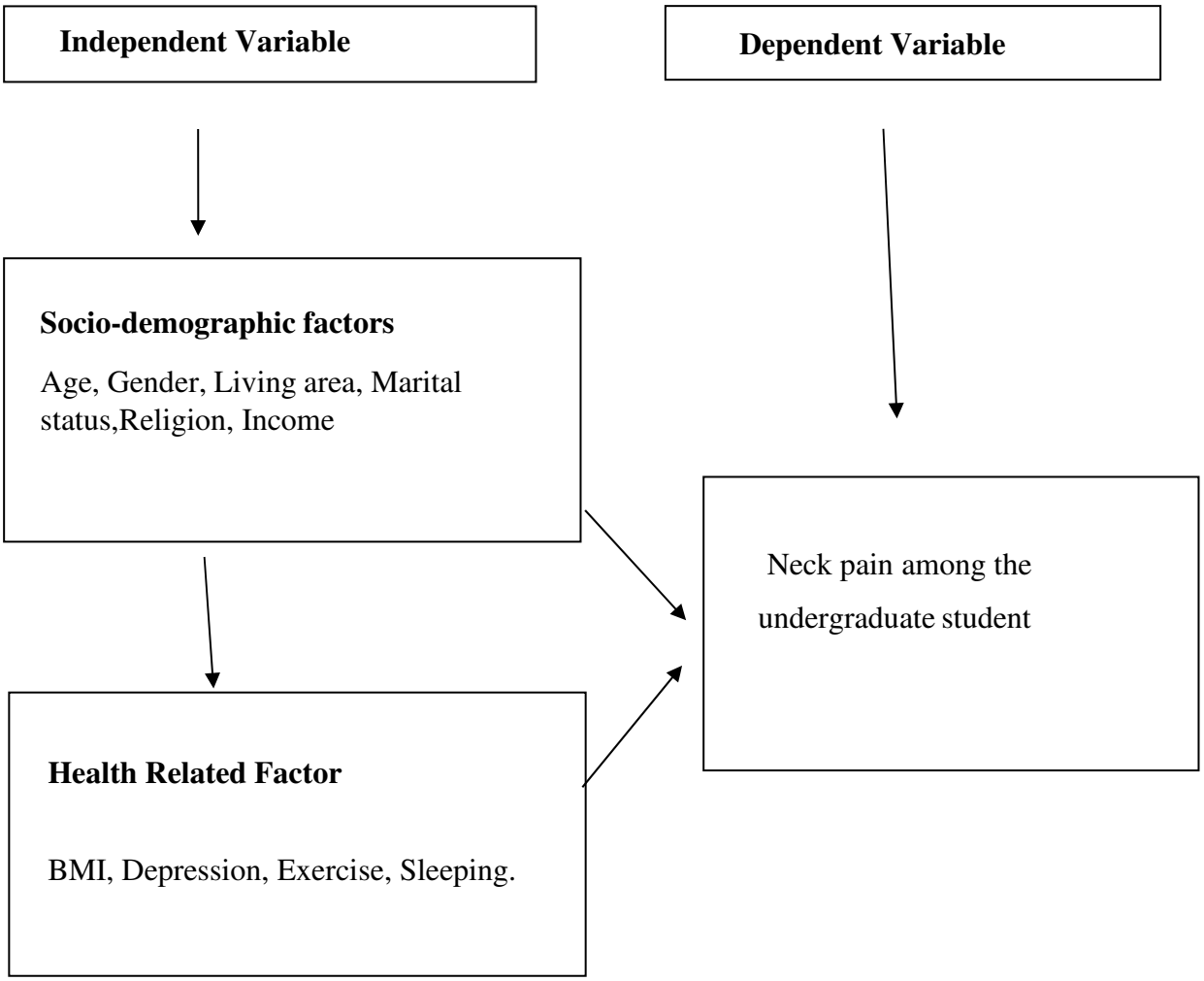
1.5.1 General objective:

To Compare the Neck Pain Among the Undergraduate Student in Kishoreganj Sadar.

1.5.2 Specific objective:

- To find out the factors related to neck pain.
- To determine the percentage of neck pain among the students.
- To describe socio demographic of neck pain among the students.
- To identify the health-related factors among the students.
- To find out association between age group and neck pain among the students.
- To clarify association between smart phone and neck pain among the students.

1.6 Conceptual framework:



1.4 Operational definition:

Neck pain:

Neck pain is the sensation of discomfort in the neck area. Neck pain can result from disorders of any of the structures in the neck, including the cervical vertebrae and inter-vertebral discs, nerves, muscles, blood vessels, esophagus, larynx, trachea, lymphatic organs, thyroid gland, or parathyroid glands. Neck pain arises from numerous different conditions and is sometimes referred to as cervical pain.

Neck Pain in Undergraduate Students:

Neck pain among undergraduate students is a precise and measurable description that clarifies how neck pain will be identified, assessed, and categorized within the context of a specific research study or intervention program. This definition helps ensure consistency and reliability in identifying cases of neck pain among the study participants. Here's an example of an operational definition for neck pain among undergraduate students:

BMI:

Body mass index (BMI) is a measure of weight adjusted for height, calculated as weight in kilograms divided by the square of height in meters (kg/m2). Although BMI is often considered an indicator of body fatness, it is a surrogate measure of body fat because it measures excess weight rather than excess fat.

Undergraduate students: An undergraduate is a college or university student who's not a graduate student.

Prevalence:

Prevalence is a statistical concept referring to the number of cases of a disease that are present in particular population at a given time, whereas incidence refers to the number of new cases that develop in a given period of time.

CHAPTER: II Literature review

Neck pain among undergraduate students has become a noteworthy issue in recent years, given the increasing reliance on technology, sedentary academic activities, and the unique stressors associated with university life. Understanding the various dimensions of this problem is critical for developing targeted interventions and fostering a healthier academic environment. The prevalence of neck pain among undergraduate students is a multifaceted concern that demands attention. Studies such as those have investigated the frequency of neck pain in this demographic, revealing a substantial proportion of students reporting neck pain, with computer use emerging as a significant associative factor (Smith et al., 2009).

Additionally, psychosocial factors such as stress and anxiety, prevalent in the academic setting, have been linked to the development and exacerbation of neck pain (Sharan et al., 2015). Identifying the risk factors associated with neck pain among undergraduate students is crucial for developing targeted interventions. Ergonomic factors, including poor posture and prolonged computer use, have been implicated as significant contributors to neck pain (Janwantanakul et al., 2012). The impact of neck pain on academic performance and the overall quality of life of undergraduate students is substantial. Studies have shown that neck pain is associated with decreased concentration during study sessions and lectures, potentially affecting cognitive function and academic achievement (Davies et al.,2008).

Moreover, the impact of neck pain extends beyond the academic realm, affecting sleep, daily activities, and social engagement (Carter et al.,2017). Addressing neck pain among undergraduate students requires a multifaceted approach. Studies have explored various intervention strategies, including ergonomic modifications, educational programs on posture and stress management, and health promotion initiatives within academic institutions (Johnston et al.,2008)

The International Association of the Study of Pain (IASP) defines pain as: "It is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in term of such damage." Pain is a complex, unpleasant phenomenon made up of sensory experiences and has been described as the perception of noxious stimuli or the distressing sensations that result from tissue damage. (Guez et al., 2006).

The nerve ending, which is the termination of a nerve at the distal end of an axon and sends signals to the brain to feel sensations like heat, cold, and pain, is the first point in the pain pathway (English Dictionary, 2016) Both duration and nature can be used to categorize pain: duration pain can be divided into acute and chronic pain, and nature pain can be divided into nociceptive and non-nociceptive pain. Acute pain, on the other hand, is a protective mechanism that warns the person of an immediate medical emergency and typically lasts less than six months (WebMD., 2016).

According to chronic pain is characterized as intermittent or persistent pain that lasts for at least six months, is linked to a chronic illness, and may be caused by damaged tissue, although nerve damage is most frequently the cause. (WebMD.,2016)

Neck pain is a feeling of discomfort in the neck region that can be caused by diseases of any of the structures in the neck, such as the blood vessels, muscles, nerves, esophagus, larynx, trachea, lymphatic organs, thyroid gland, or parathyroid glands (Barbuto et al., 2008). The top end of the spinal column, or spine, which supports the head and protects the spinal cord, is found in the neck. The cervical vertebrae, which are made up of seven bones, are the bony building blocks of the spinal cord. The spinal nerve passes through each of these vertebrae, and numerous ligaments and muscles attach to the neck, shoulder blade, and spine to provide stability. Other structures found in the neck include the esophagus, larynx, trachea, thyroid, and parathyroid glands (Barbuto et al., 2008).

The World Health Organization (2013) reports that the prevalence of neck pain is 4.8%, and that the annual loss of life from neck pain is 33.64 million. Individuals with chronic and mild neck pain, those who have constant neck pain, and those who have trouble raising their arms, lifting objects, all have trouble tuning their heads. Although it originates in the neck, neck pain can be caused by a variety of other spinal issues. Most often, it is brought on by tightness in the muscles of the upper back and neck, pinching of the nerves that extend from the cervical vertebrae, and joint disruption in the neck, which can also cause pain in the upper back or cervical region of the spine (Hanvold et al., 2013) Common complaints include neck and shoulder girdle pain. Occupational medicine terms such as occupational cervical-brachial disorder (OCD), cumulative trauma disorder (CTD), repetitive strain injury (RSI), or work-related musculoskeletal disorder (WMSD) are used to describe this type of pain. Research has shown a strong correlation between neck and shoulder pain and a lower quality of life in terms of health (Sabeen et al., 2013) Growing self-reports of pain and pressure

tenderness in the muscles were associated with a decline in health-related quality of life. Neck shoulder pain (NSP) with pressure tenderness was independently correlated with work-related physical and psychosocial factors, prior experience of neck shoulder injury, female gender, low pain pressure threshold, and high intrinsic effort (Cunha et al., 2008).

The most common cause of neck pain is degenerative disc degeneration and herniation, arthritic joints, stenosis (narrowing of the spinal canal), and instability. Other common forms of neck pain include general pain and stiffness in the neck region, which can include the neck, shoulders, arms, hands, or head; sore and tense muscles; and patients frequently report mild to severe headaches (Lacerda et al., 2005).

There are three categories or types of neck pain: axial neck pain, which is a type of musculoskeletal pain that is limited to soft tissue pain in the neck, such as whiplash or muscle strain. Second, radiculopathy: Arm pain, numbness, or weakness are symptoms of cervical radiculopathy, which is pain in the neck and arms brought on by compression of the nerve roots. Thirdly, myelopathy: also known as spinal cord compression, myelopathy is the result of pressure on the spinal cord. Symptoms may include numbness, walking difficulties, or neck pain accompanied by weakness in the arm or leg (Morken et al., 2007) There are two types of neck pain: acute and chronic. Acute pain can result from an injury or stress and usually goes away in 7 to 10 days with rest, ice, and over-the-counter pain relievers. Chronic pain means that the pain lasts longer than two weeks and

necessitates a comprehensive evaluation by a primary care physician, who will typically order x-rays and MRIs as well as prescribe conservative therapy (Cote et al., 2008) In addition, according to 1 in 4 people in developed and developing countries report having chronic musculoskeletal pain. Musculoskeletal disorders were highly prevalent among students pursuing careers in health care. The most common musculoskeletal problems were on the neck, shoulder, hand, and back regions of the bod (Lorusso et al..2010) Physical workload factors like repetitive motion, static posture, awkward posture, and neck flexion or rotation are significantly linked to neck pain. It is also linked to poor posture, neck strain, sports injuries, and occupational injuries. Adolescents who use computers for four to five hours a day are thought to be at risk for developing neck pain (Sabeen et al., 2013) Many conditions can cause neck pain, from whiplash and overuse injuries to diseases like rheumatoid arthritis and meningitis. These conditions are characterized by muscle strains and overuse, such as

spending too much time hunched over a steering wheel. When you overuse your neck muscles, especially the back muscles, your neck muscles become tired and eventually strained, which can lead to chronic pain. Even seemingly trivial activities like reading in bed can cause neck strains (Garra et al., 2010).

The most frequent cause of neck shoulder pain (NSP) is cervical strains and sprains, which can be brought on by bad posture, bad sleeping habits, chronic muscle fatigue, and trauma. In this survey, students reported spending an average of ten hours a day sitting, and many of them also reported maintaining poor sitting positions during class. Furthermore, only a small percentage of students reported using an assisting device while reading or stretching on a regular basis, and the majority of students had cell phones, which they used for up to 40 minutes continuously, most of them in not very ergonomic positions. As a result, found that repetitive and prolonged staticpostures can cause or exacerbate neck shoulder pain. (Koh et al.,2012).

Therefore, understanding the variables that can predict the onset and persistence of neck pain in younger populations is crucial to lowering the prevalence of neck pain in adults There is growing evidence that undergraduate students have a high prevalence of musculoskeletal symptoms in the neck and upper extremities, with rates ranging from 48 to 78% (Hanvold et al.,2010).

In this study, neck pain was common among undergraduate students (46%) with persistent neck pain reported by 33% of them. (Grimby et al.,2009).
revealed that among recently hired computer workers, elbow angles between 137° and 148° while using the mouse were associated with a decreased risk of developing neck and shoulder pain. The current study did not measure the precise elbow angle when using a mouse, but it is possible that self-reported mouse positions that are too low will correlate with elbow angles greater than 90°. Additional research is necessary to validate this hypothesis. Students in their second year of study, using a computer for entertainment less than 70% of the time spent on it, and having the keyboard positioned too high were all factors that predicted the persistence of neck pain. Compared to first year students, second year students had a 1.9-fold increased risk of chronic neck pain (Ndetan et al.,2009). A Myrin goniometer was used to measure the active range of motion for neck flexion, extension, rotation, and lateral rotation as part of the neck range of motion assessment (Clarkson et al.,2000) These alterations are probably goingto cause an increase in muscle tightness and a decrease in neck nerve mobility, neck muscle endurance, and neck mobility (Norris et at., 2008).

A strong correlation was discovered between sitting posture and neck pain. Previous research indicated that workers who spent more than 95% of their working hours sitting had a twice-higher risk of neck pain than those who worked hardly ever in a sitting position. Additionally, the risk of neck pain increased with the amount of time spent working in a sitting position (Gross et al., 2010).

A study found that sitting for longer periods of time, which is typically accompanied by the curvature of the spine, puts more pressure on the neck and that sitting for longer periods of time is associated with self-reported neck pain. muscles, ligaments, and vertebral discs (Gross et al., 2010) Because communication technologies are readily available and have developed quickly, the general public uses them extensively. It's been discovered that neck pain is more common overall and among students in particular when there is a greater use of electronic devices such as laptops, smartphones, tablets, and other wearable tech. It's been suggested that these devices force the user to hold their neck in one particular position for extended periods of time, straining the neck muscles and causing pain and discomfort in that area (Woo EHC et al.,2016).

According to neck pain was found to have the highest prevalence rate of any health condition. Of the respondents, 64.3% reported having experienced neck pain in the previous year. Students are particularly susceptible to neck pain because of their awkward posture, which causes them to spend a lot of time in their classrooms, libraries, and practical rooms without maintaining proper posture and movement. Almost two-thirds of those who reported having neck pain said that it had lasted longer than two days, and over 50% (53.1%) said that it had impacted their daily lives. Finally, 30.9% of respondents said they needed medical attention (Hayes et al.,2009) By all measures, pain is a major global health issue. It has been estimated that 1 in 5 adults worldwide experience some form of pain, which can manifest as acute, chronic, intermittent, or a combination of the three. In addition, pain is a complex, dynamic, and ambiguous phenomenon that is notoriously challenging to measure (Goldberg&Mcgee., 2011).Students' perceptions of what causes their neck pain include things like not having back supports when they sit through lectures, reading for extended periods of time, using computers, having a history of neck pain, posture assumed during lectures, long sitting sessions, prolonged standing, kind of pillow used while sleeping, prolonged writing, excessive physical activity, stress, prolonged driving, and menstruation (Ayanniyi et al., 2010).

A rise in the widespread use of computer-based technology has led to a rise in the prevalence of work-related musculoskeletal disorders (WRMSDs), which affect the tendons, tendon sheaths, muscle, nerves, bursae, and upper extremities such as the hand, wrist, shoulder, and neck (Eatough et al., 2012) said that third-year students had not felt as much pain as final-year students had. According to research, there are both short- and long-term risk factors for musculoskeletal neck pain, including perceived stress, high work/study demands, and computer use patterns (Ekman et al., 2009)

The second leading cause of disability and the fourth leading cause of adverse health effects is musculoskeletal disorders. Globally, musculoskeletal disorders are a significant issue (Vos et al., 2010).

Additionally, studies have linked workplace mechanical elements and psychosocial factors to neck pain (Luime et al., 2005).

Students with neck pain are more likely to experience it, especially those between the ages of 22 and 28. Their mean age is 23 (Silva et al., 2016).

The majority of musculoskeletal pain was reported in the neck (25.42%), back (37.29%), and upper back (18.64%), as per (Bharadva et al.,2014).

Students with musculoskeletal pain were found to be more likely to experience it in Korea (73.3%), Japan (approximately 36.9%), and China (67.6%). Compared to Korea and Japan, students in China have a greater incidence of musculoskeletal pain (Alshagga et al., 2013) One of the biggest developing nations, China is home to 1.3 billion people who suffer from neck pain. Both society and those who experience neck pain now find it to be a burden. Numerous studies revealed that adolescents havea high incidence of neck pain (Hakala et al., 2006).

A study on musculoskeletal disorders of the neck and shoulder in dental hygienists and dental hygiene students was conducted, and the findings indicated that risk factors and the frequency of self-reported and physician-diagnosed neck and shoulder symptoms increase from student to experienced hygienist, with students having a higher prevalence if they are also dental assistants (Morse et al., 2007).

During the course of the study, 96% of participants reported having musculoskeletal symptoms of any severity at least once, and 81% reported having moderate or greater symptoms at least once. One study found that the average daily computer usage for the first, second, and third observational periods during the semester was 2.2 (SD 1.8) hours, 3.1 (SD 2.8) hours, and 1.8 (SD 1.5) hours, respectively. According to 48% of

the participants reported having moderate or higher neck symptoms, making the neck the most symptomatic body part (Chang et al.,2007).

There are several pharmacological methods for treating neck pain, including the use of NSAIDs, opioids, paracetamol (acetaminophen), local anesthetics, cannabinoids, antidepressants, and muscle relaxants (Guidon et al., 2007)
Also discovered that ergonomics reduces physical and mental stress, prevents occupational diseases, musculoskeletal disorders, and offers comfortable working conditions, all of which enhance productivity and better work quality and increased patient and professional comfort (Munaga et al.,2013).

Moffett & Mclean (2006) state that physiotherapy management for neck pain consists of both specialized exercise programs (like the McKenzie approach) and general exercise programs (like mobilization and manipulation, stretching, massage, and physical modalities). These claims are based on evidence-based guidelines and systematic reviews. For neck pain, massage is the second most popular complementary and alternative medicine (CAM) treatment (Goode et al., 2010) One significant factor linked to neck pain in students is the extensive use of electronic devices. found a positive correlation between the duration of daily screen time and the prevalence of neck pain among university students. This underscores the impact of modern technology on musculoskeletal health. (Smith et al.,2018) the ergonomic design of study spaces is another crucial aspect. According to a study by inadequate ergonomics in classrooms and study areas can contribute to the development of neck pain. Proper desk and chair height, along with regular breaks, play a pivotal role in preventing musculoskeletal discomfort. (Chen and Wang.,2019),

Academic stress has been identified as a psychosocial factor associated with neck pain among students The pressure to excel in studies, meet deadlines, and perform well in exams can lead to increased muscle tension and subsequent neck pain. (Jones et al., 2020). the sedentary lifestyle commonly associated with academic pursuits exacerbates the problem. A study by demonstrated a clear link between a sedentary lifestyle and neck pain among college students. Incorporating physical activity into the daily routine has been suggested as a preventive measure. (Brown and Clark., 2017) The relationship between neck pain and sleep quality among students is explored by Their findings indicate that poor sleep quality is a significant predictor of neck pain. Addressing sleep hygiene and promoting healthy sleep patterns may, therefore, be crucial in managing and preventing neck pain (Garcia et al.,2021).

This literature review provides a comprehensive overview of the challenges and strategies employed by shopkeepers in the retail landscape. By addressing economic, technological, customer relations, regulatory, community, and sustainability dimensions, this review offers valuable insights for policymakers, business support organizations, and shopkeepers themselves as they navigate the complexities of the retail environment. neck pain among students is a multifaceted issue influenced by factors such as screen time, poor ergonomics, academic stress, sedentary lifestyle, and sleep quality. It is imperative for educational institutions to implement strategies that promote musculoskeletal health, including ergonomic design, awareness programs, and support services to mitigate the impact of these factors on students' well-being (Brown.,2019)

CHAPTER: III Methodology

3.1 Study design:

Cross sectional study design was selected for this study.

3.2 Study area:

Data was collected from Kishoreganj Sadar.

3.3 Study period:

July 2022 to June 2023

3.4 Study of population:

Both male and female population.

3.6 Sample size:

The equation of sample size calculation is given Below:

$n=z^2pq\div d^2$

$n=(1.96)^2\times0.80\times0.20\div(0.05)^2$

$n=3.84\times0.16\div0.0025$

$n=0.6144\div0.0025$

$n=245$

Here,

n = Required sample size.

z = (Standard value of 1.96)

p = 80% or .80 (kamrujjaman et al., 2017)

q = 1-p = 1-.80 = 0.20

d = 0.05

So, the researcher aim was to focus the study by 245 samples following the calculation above initially. But as the study was done as a part of fourth professional academic research project and there were some limitations, so the researcher had to limit with 149 students as sample.

3.7 Sampling technique:

Convenience the simplest technique was applied for this study.

3.8 Eligibility criteria

3.8.1 Inclusion criteria:

- Undergraduate students.
- Both male and female students.

3.8.2 Exclusion criteria:

- Unwillingness
- Mentally unstable person.

3.9 Method of data collection:

Face to face interview.

It was a data collection method when the interviewer directly communicates with the respondent in accordance with the prepared questionnaire.

3.10 Instrument and tools of data collection

- Questionnaire
- Weight machine
- Measuring tape

3.11 Data entry:

Statistical packages for social sciences (SPSS-26 version).

3.12 Data analysis:

Data was analysis by using statistical packages for social sciences (SPSS-26 version) Chi square test.

3.13 Ethical consideration:

Before data collection, permission for the ethical review board of Saic College of Medical Science and Technology (SCMST). Prior to data collection, the objective of the study explained in understandable language to the study participant and their written informed consent were taken. The prospective participants gave free opportunity to receive summary information of the study in writing before giving consent and take part in the interview of the study. The participant's right to refuse and withdraw from the study was accepted.

3.14 Budget:

This study was conducted by using my own fund. I didn't receive any funds from others or was not try to collect funds from any 2nd person.

CHAPTER: IV Results

The aim of the study was identified Prevalence of urinary incontinence among elderly male people in Bangladesh. The data was collected by the researcher himself. Structured question was used with both open ended close ended questions in the questionnaire. The data was analyzed with Microsoft office Excel 2007 with SPSS 26 version software program. In this study researcher use bar, column, figure, pie chat, line, area diagram to show the result of the study. Because it is easier to make sense of a set of data.

4.1 Distribution of the socio demographic factors of the participants:

4.1.1Distribution of age of the participants:

This study's participants mean and standard deviation of participants age where are mean±SD = 20.64±.2.721 About (n=94) 63.1% were <20 years old, (n=42) 28.2% were 20-25 years old, (n=13) 8.7% were >25 years old.

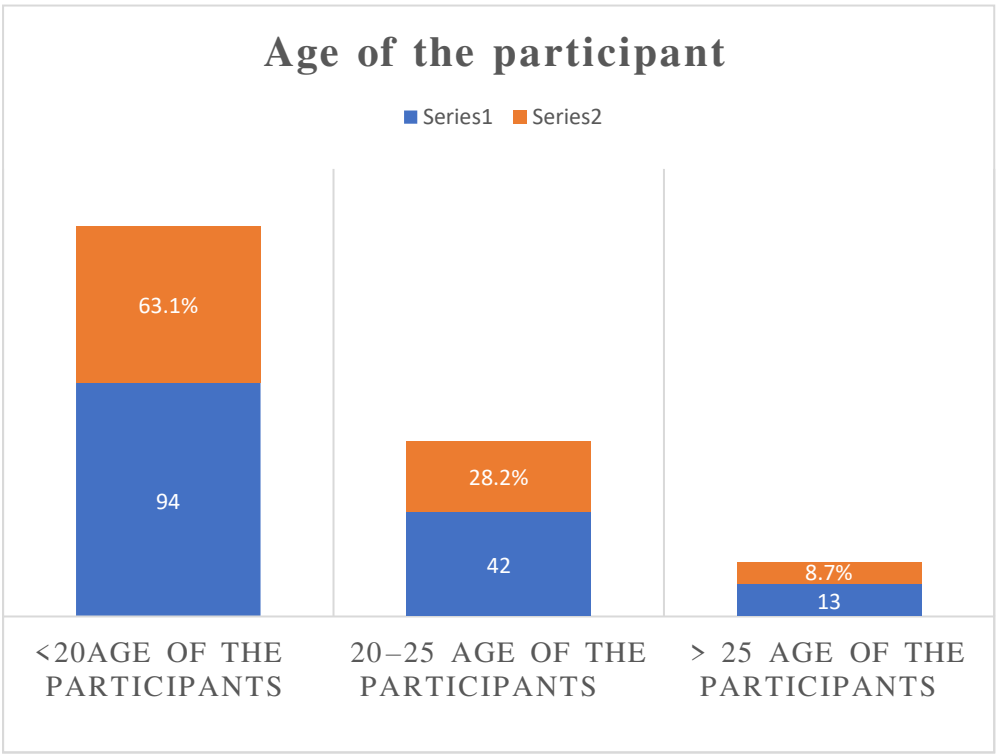


Figure 1: Age of the participants.

4.1.2Gender of the of the participants:

In this study Gender of the participants (n= 91) 61.1% were female and (n= 58) 38.9% were male participants.

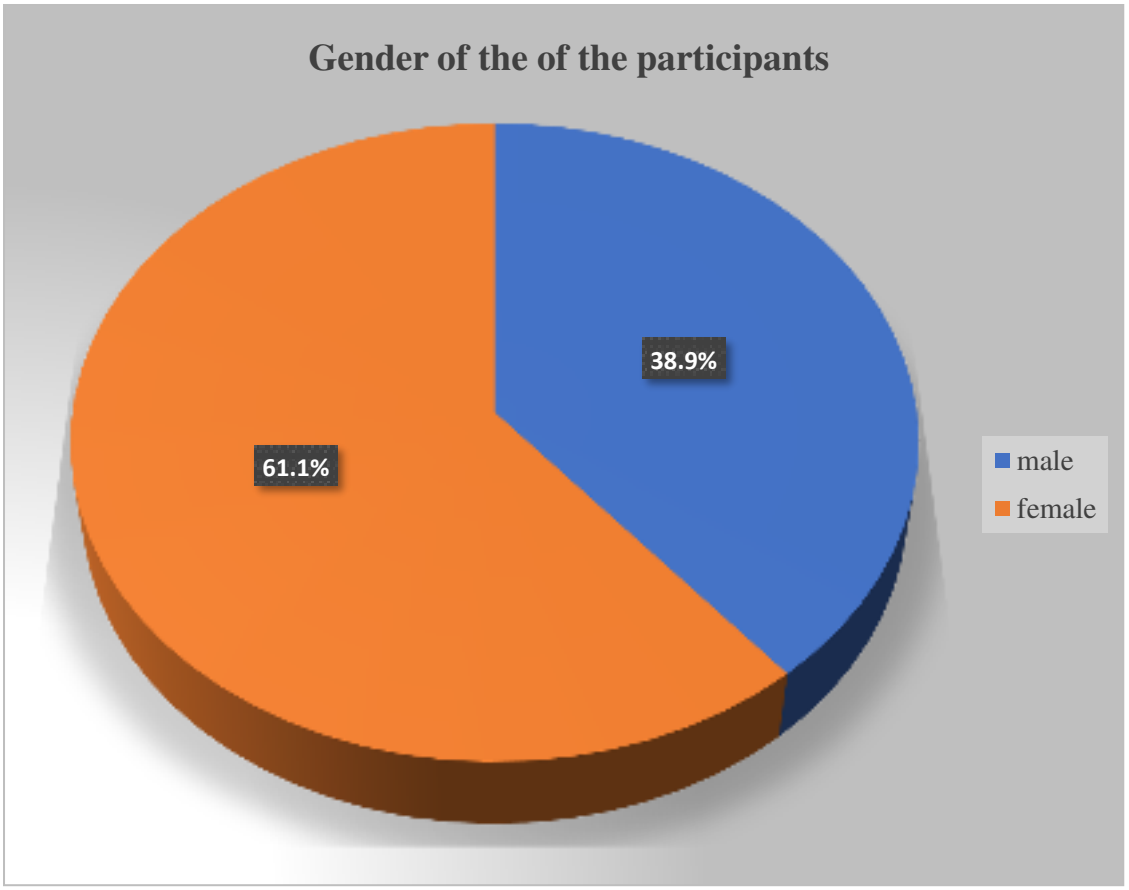


Figure 2: Gender of the participants.

4.1.3Living area of the participants.

In this study living area of the participants (n=28) 18.8% were Rural area and (n=92) 61.7% were Urban area and (n=28) 91.5% were Semi urban area (n=1) others.

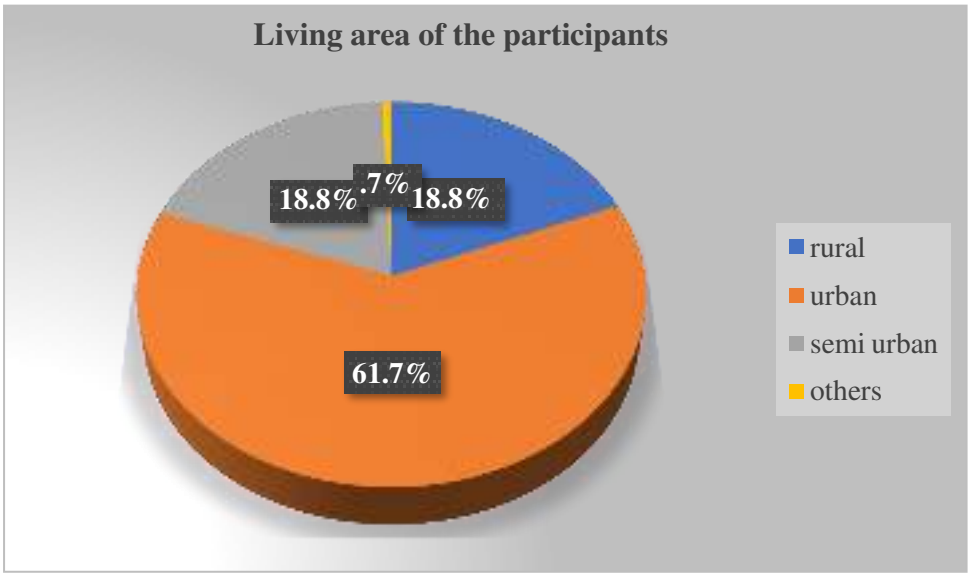


Figure 3: Living area of the participants.

4.1.4Family types of the participants

Family type of the participants(n=93) 62.4% people from nuclear families and (n= 56) 37.6% from extended family.

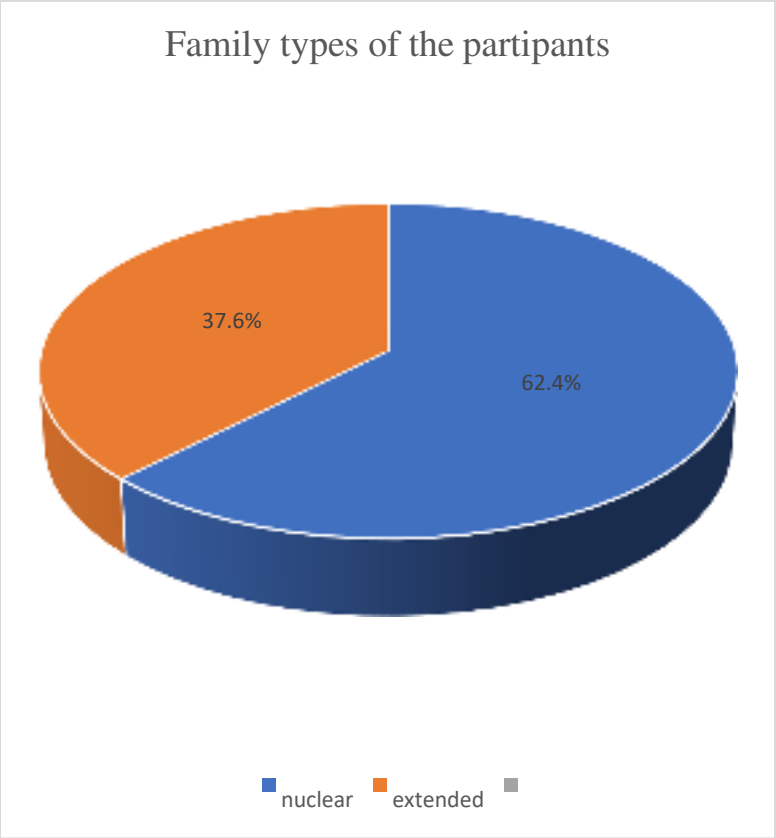


Figure 4: Family types of the participants

4.1.5Religion of the participants.

About (n=138) 92.6% of the participants were Muslim and followed by Hindu (n=11) 7.4%.

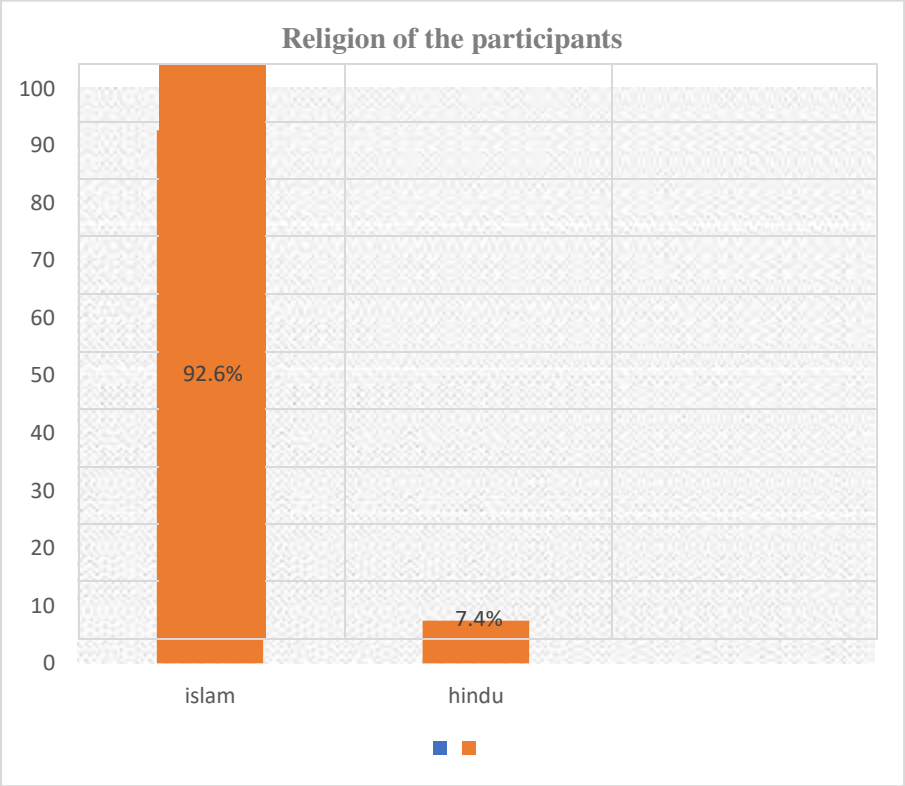


Figure 5: Religion of the participants.

4.1.6Marital status of the participants

Among total 149 participant, 17 respondents married whose were 11.4%, and 132 respondents unmarried whose were .88.6%.

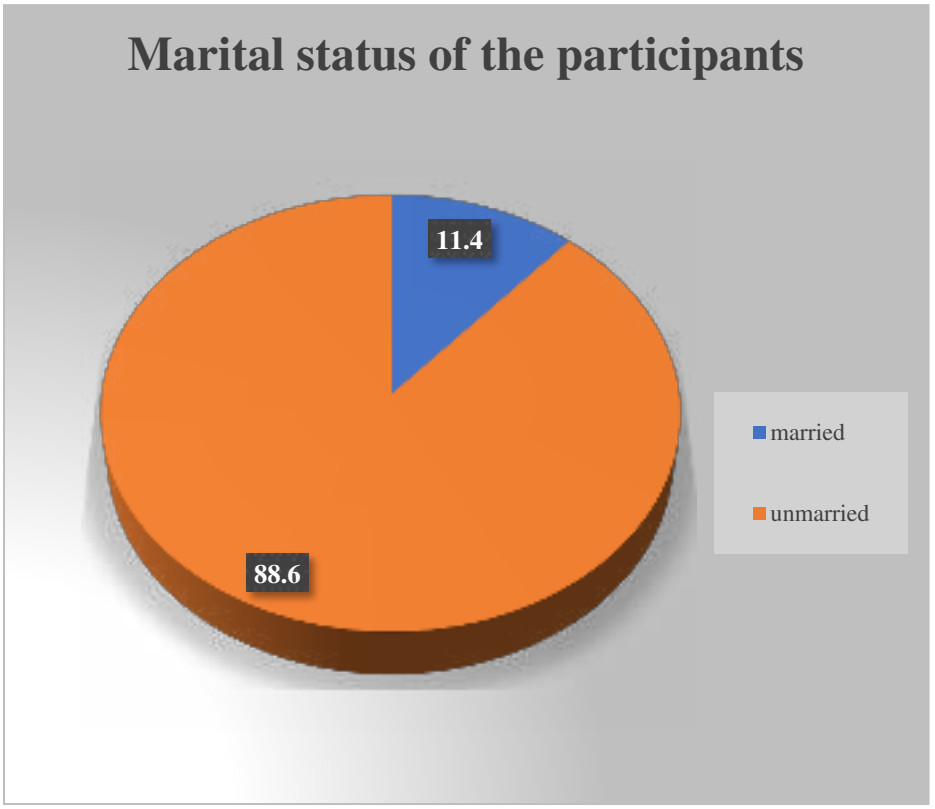


Figure 6: Marital status of the participants.

4.1.7Monthly income of the participants

Table 01: Monthly income of the participants

Monthly Income of the participants	Percent	Frequency
<15000 Taka	73.8%	110
15000-30000 Taka	22.1%	33
31000-45000 Taka	1.3%	2
>45000 Taka	2.7%	4
Total	100.0%	149

In his survey the mean and standard deviation of monthly income were Mean ±SD= 14984.56±14001.799; in this study (73.8%) monthly income was less than 15,000 taka; (22.1%) monthly income 15000-30000 taka; (1.3%) monthly income More than 45,000 taka (2.7%)

4.1.8 Education level of the participants:

Table 02: Education level of the participants

Education level of the participants	Percent	Frequency
1st year	42.3%	63
2nd year	26.2%	39
3rd year	21.5%	32
4th year	10.1%	15
Total	100.0	149

Among total 149 participant, 63respondents 1st year whose were 42.3%, and 39respondents 2nd year whose were 26.2%, and respondents 32 3rd year whose were 21.5% and 15 respondents whose were 10.1%.

4.2 Distribution of the Health-related factors of the participants:

4.2.1BMI of the participants

In this survey the mean and standard deviation of monthly income were Mean ±SD= 20.58±.3.078 in this study (26.2%) of Participants BMI were below 18.5, (61.7%) of Participants BMI 18.5-24.9, (12.1%) of Participants BMI 25.0-29.9.

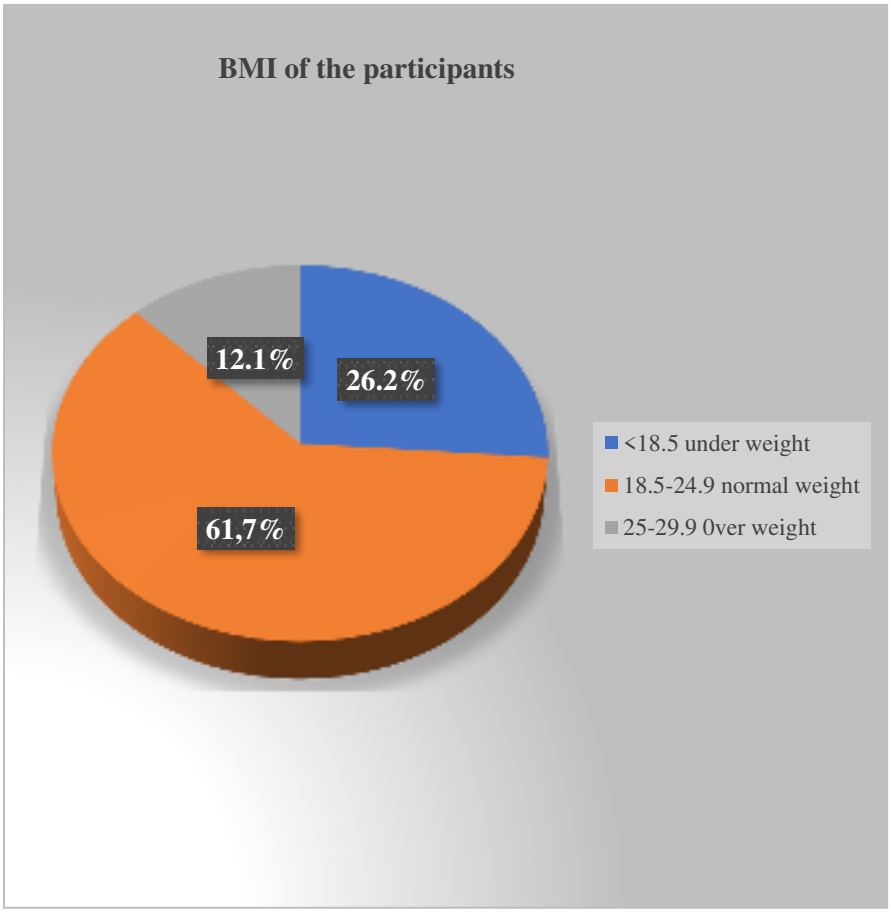


Figure 7: BMI of the participants

4.2.2Feeling depression of the participants.

Among total 149 participant, 46respondents depression whose were 30.9%, and 103respondents no depression whose were .69.1%.

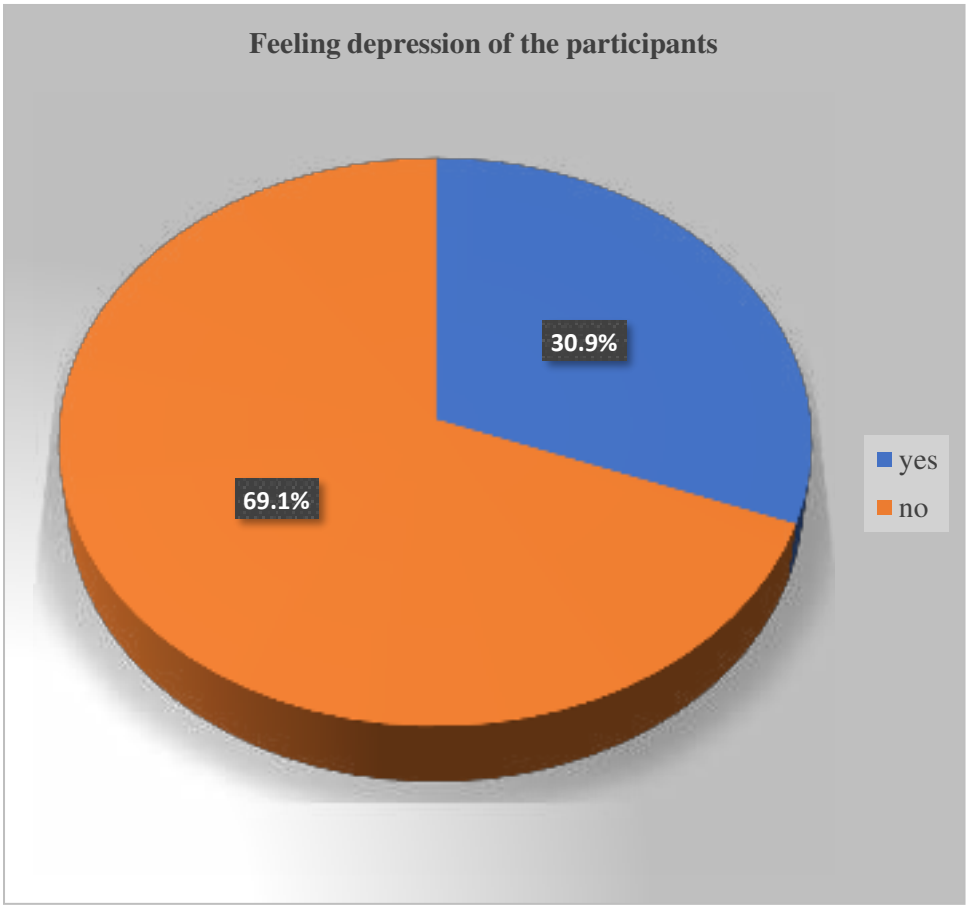


Figure 8: Feeling depression of the participants.

4.2.3Timely exercise of the participants:

Among total 149 participant, 37 respondents exercise of the participants whose were24.8%, and 112 respondents no exercise of the participants whose were 75.2%.

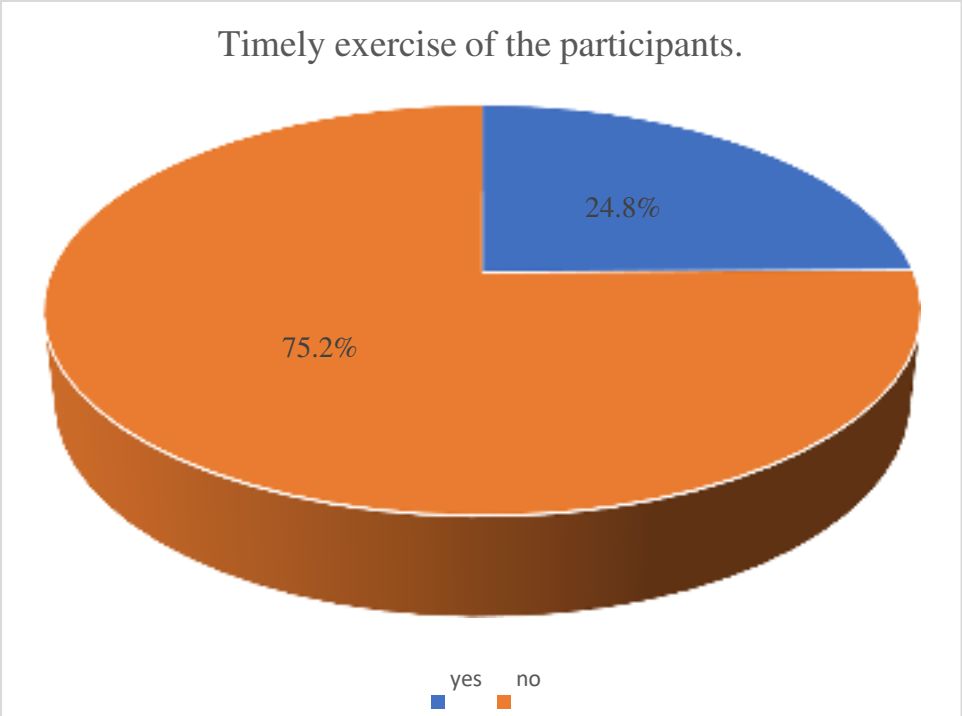


Figure 9: Timely exercise of the participants.

4.2.4 Sleeping hour per day of the participants:

Among total 149 participant, 7 respondents <4 hours whose were 4.7%, and 130 respondents 4-8 hours whose were 87.2% and 12 respondent above 8hours whosewere 8.1%.

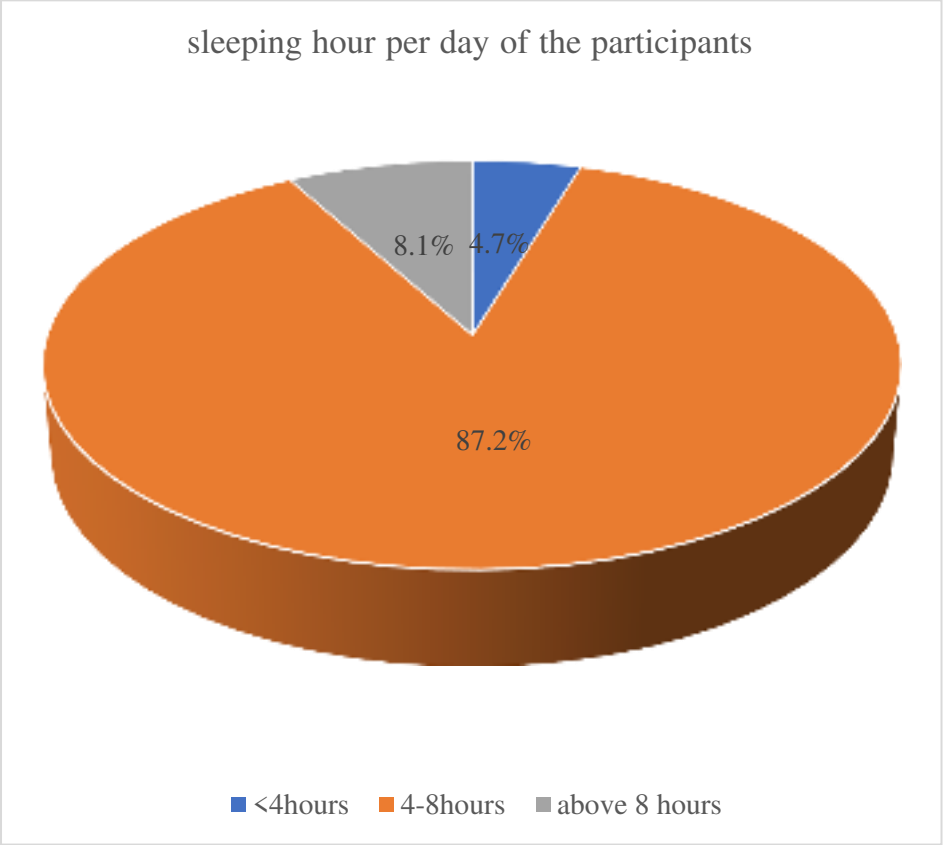


Figure 10: Sleeping hour per day of the participants.

4.3 Percentage of Neck Pain among the students' participants:

Among total 149 participant, 101 respondents have Neck pain whose were 67.8%, and 48 respondents no neck pain whose were 32.2%.

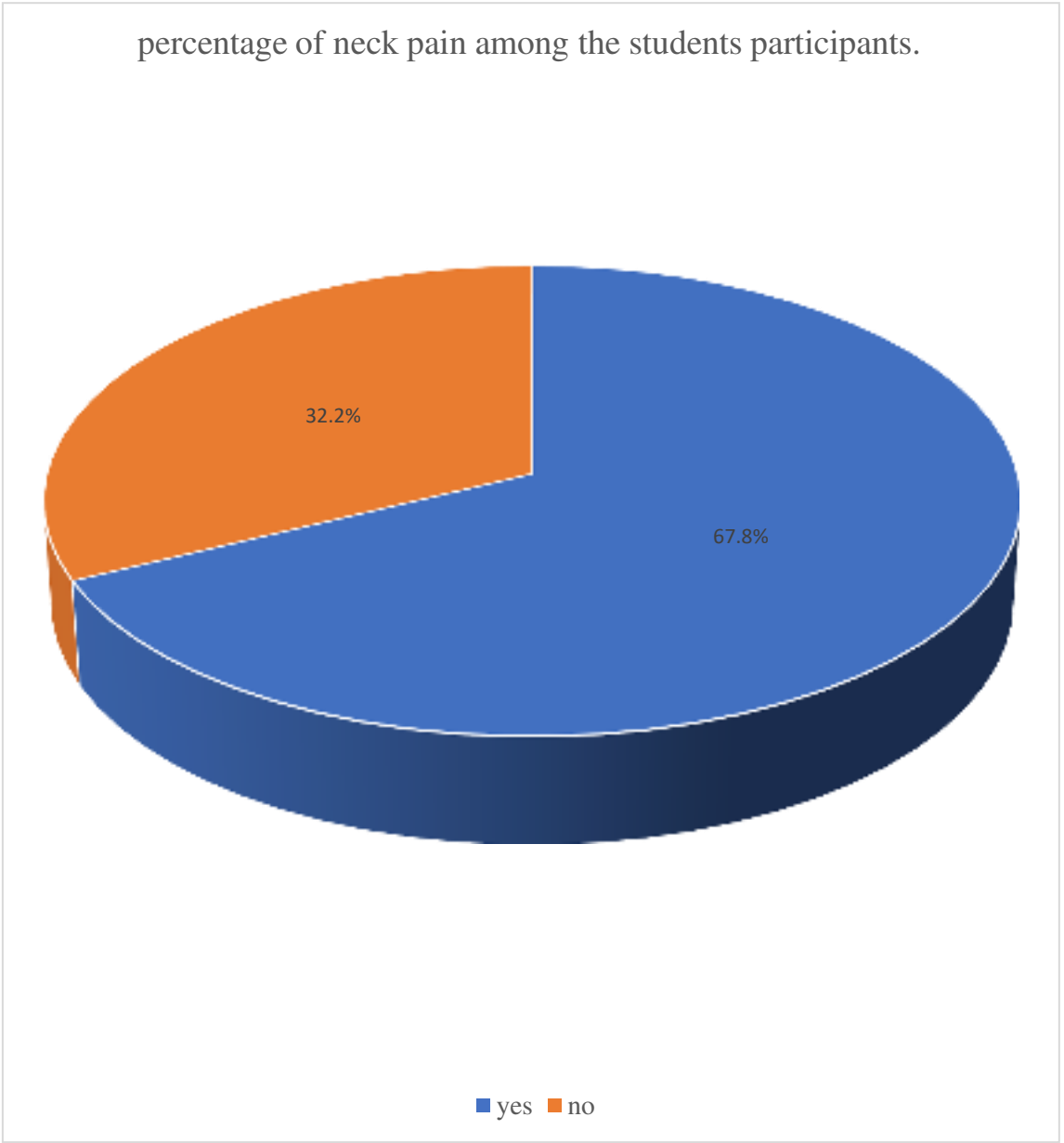


Figure 11: Percentage of Neck Pain among the student's participants.

4.3 Are you using smart phone participants among student.

Among total 149 participant, 129 respondents using smart phone whose were 86.6%,and 13 respondents no using smart phone whose were 13.4%.

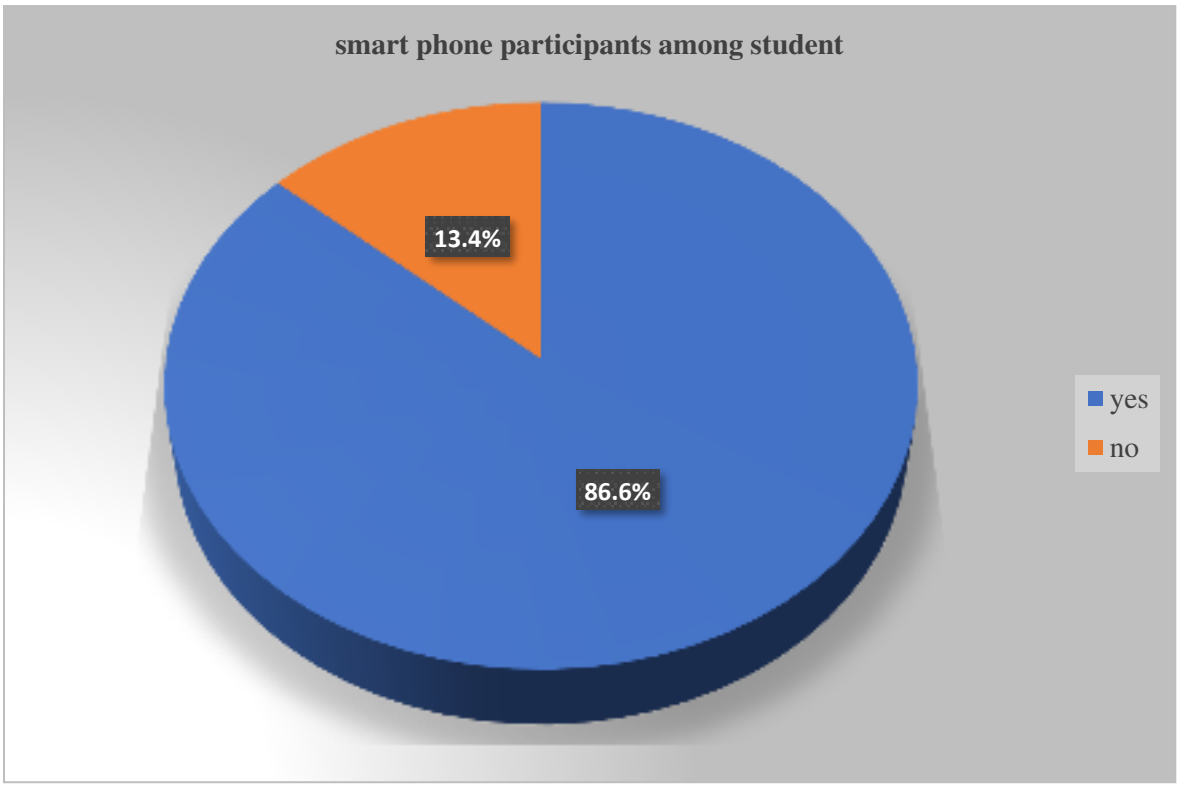


Figure12: Are you using smart phone participants among student.

4.4: Association:

4.4.1 Association between age group and neck pain among the student's participants:

Table 03: Association between age group and neck pain among the students' participants

			Have you neck pain				
			Yes	No	Total	Chi value	P-value
Age of the participants	<20 Age	n	61	33	94	2.007	0.354
		%	40.94%	22.16%	63.4%		
	20-25 Age	n	29	13	42		
		%	19.46%	8.72%	28.2%		
	>25Aage	n	11	2	13		
		%	7.38%	1.34%	8.7%		
Total		n	101	48	149		
		%	67.78%	32.22%	100%		

This table shows that the chi value was 2.007 and the p-value 0.354 So there is nosignificant association between Age group and neck pain among the students.

4.4.2 Association between smart phone and neck pain among the students participants.

Table 04: Association between smart phone and neck pain among the students participants.

Association between smart phone and neck pain among the student's participants.				Chi-value	P-value
		Smart phone of the participants			
		Yes	No	Total	
Neck pain of the participants	Yes	92	9	101	6.468
	No	37	11	48	.039
Total		129	20	149	

This table shows that the chi value was 6.468 and the p-value 0.039 So there issignificant association between smart phone and neck pain among the students.

Chapter: V Discussion

The study result shows that neck pain among the undergraduate students and it is 67.8%. One study found that the overall prevalence of neck shoulder pain (NSP) among the students was 79.1% (Koh et al., 2012). One year prevalence of neck pain among Dutch adolescents was found to be 11.5% (Diepenmaat et al., 2006). Another literature revealed that highest prevalence of musculoskeletal pain among physical therapy student, were in the following anatomical areas: lower back 22(37.29%), neck15(25.42%) and upper back 11(18.64%) (Bharadva et al., 2014). There was a highprevalence of musculoskeletal disorders among health care professional students and the most frequent musculoskeletal problems were on neck shoulder, hand and back region of the body, in addition chronic musculoskeletal pain is reported by 1 in every 4 people in developed and underdeveloped countries according to (Lorusso et al., 2010). Age is the important factor; the mean age of this study is 22.86. Silva et al., 2016) showed that neck pain between the age of the students from 22 to 28 years (mean age23 years). According to (Alshagga et al.,2013) mentioned that of neck

pain among the undergraduate's students was this studys participants mean and standard mean± SD = 20.64 ± 2.721. about (n=94) 63.1% 63.1% were <20 years old,(n=42) 28.2% were 20-25 years old, (n=13) 8.7% were >25 years old. among 149 of participants. Most of the participants. In this study Gender of the participants (n= 91) 61.1% were female and (n= 58) 38.9% were male participants. One study revealed that statistically significant differences in musculoskeletal pain prevalent rate between males and females students where the females students having the highest prevalent rate (Alshagga et al., 2013).his gender pattern is seen in most types of body pain and several sociological, cultural and physical differences have been proposed as explanations, smaller stature and lower strength of the shoulder muscles have been suggested to partly explain the sex difference concerning computer work in particular,gender differences have been found, for example, in the use of a computer mouse (Garraet al., 2010)In this Study Family type of the participants(n=93) 62.4% people from nuclear families and (n= 56) 37.6% from extended family. In his survey the mean and standard deviation of monthly income were Mean ±SD= 1.33±0.641; in this study (73.8%) monthly income was less than 15,000 taka; (22.1%) monthly income 15000-

30000 taka (1.3%) monthly income; More than 45,000 taka; (2.7%) One study revealed that statistically significant differences in musculoskeletal pain prevalent rate between males and females students where the females students having the highest prevalent rate (Alshagga et al., 2013) In this study survey the mean and standard deviation of monthly income were Mean ±SD=1.8591±.60427. in this study (26.2%) of ParticipantsBMI were below 18.5, (61.7%) of Participants BMI 18.5-24.9, (12.1%) of ParticipantsBMI 25.0-29.9. This gender pattern is seen in most types of body pain and several sociological, cultural and physical differences have been proposed as explanations, smaller stature and lower strength of the shoulder muscles have been suggested to partlyexplain the sex difference concerning computer work in particular, gender differences have been found, for example, in the use of a computer mouse (Garra et al., 2010).

In this study among total 149 participant, 129 respondents using smart phone whose were 86.6%, and 13 respondents no using smart phone whose were 13.4%. Due to working in same posture musculoskeletal symptoms (MSS) developed in their body part. According to Pinho et al. (2013) This Study's among total 149 participants, 101 respondents have neck pain whose were 67.8%. and 48 respondents no 61.74%. There is a significant (P = 0.039) Association between smart phone and neck pain among the student's participants. neck pain among 149 students, 101 (67.8%) participants said that prolonged reading & writing activities during classes, study and examination time are responsible for their neck pain, 37 (32.2%) participants had suffered neck pain due to use mobile neck pain due to posture assumed during lecture and 20 (17%) participants had no cause of pain. Study showed that some of the perceived causes of neck pain among students are seats without back supports in lectures, long hours of reading, computer use, history of neck pain, posture assumed during lectures, long sitting hours, prolonged standing, type of pillow used when sleeping, prolonged writing, excessive physical activity, stress, prolonged driving and menstruation (Ayanniyi et al., 2010) in study among total 149 participant, 7 respondents <4 hours whose were4.7%, and 130 respondents 4-8 hours whose were 87.2% and 12 respondent above8hours whose were 8.1%.and among total 149 participant, 129 respondents using smartphone whose were 86.6%, and 13 respondents no using smart phone whose were13.4%.The neck pain was high among health undergraduate students and higher amongthe final year students and not only resulted in discomfort but also had an impact on thestudents' general physical activities. Correct poor posture, need to take rest if feel pain or discomfort and modify the work station will bring to healthy life and will improv

performance level of the students in their study life. First of all, time of the study was very short which had a great deal of impact on the study. If enough time was available knowledge on the thesis could be extended. the sample correct from Kishiroeganj Sadar, total number of Sample 149, according to sample size calculation actual sampleis 245, but researcher collected 149 samples. This may affect the study. The research project was done by an undergraduate student and it was first research project for him. Therefore, the researcher had limited experience with techniques and strategies in terms of the practical aspects of research. As it was, the first survey of the researcher so might be there were some mistakes.

CHAPTER: VI Limitation of the study

This cross-sectional study has some limitations Author have ask the contributors about any previous medical surgical history that could cause neck pain. A very few research have done on a few risks factor of neck pain so there was little evidence to support the result of the project study in the context of Bangladesh

If the study employs a cross-sectional design, it can only capture a snapshot of the participants' experiences at a specific point in time. This design limitation prevents the exploration of causality and the ability to establish temporal relationships between variables. The choice of measurement tools for assessing neck pain, such as self-report questionnaires, may have inherent limitations. These tools might not capture the full spectrum of pain experiences or consider individual variations in pain perception.

The academic environment is dynamic, and changes in curricula, teaching methods, or campus facilities could influence students' experiences of neck pain. Failure to account for these temporal changes may limit the study's relevance over time experiences of neck pain. Failure to account for these temporal changes may limit the study's relevance over time It's important to recognize these limitations not as shortcomings but as considerations that inform the scope and interpretation of the study Researchers can address some of these limitations through careful study design, transparent reporting, and recommendations for future research to build upon and extend the findings.

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CHAPTER: VII Conclusion and Recommendation

7.2 Conclusion:

In conclusion, the prevalence of neck pain among undergraduate students is a concerning issue that warrants attention and proactive measures. This study has highlighted several factors contributing to neck pain, including poor ergonomics, prolonged screen time, and stress. Understanding these factors allows for the development of targeted interventions to improve the overall well-being of students.
Understanding these factors allows for the development of targeted interventions to improve the overall well-being of students. The findings underscore the need for a holistic approach that combines ergonomic adjustments, education, and support services. While the study provides valuable insights, it is essential to acknowledge its limitations and encourage further research to refine and expand upon these recommendations. By implementing these recommendations, universities can create a supportive environment that prioritizes the physical well-being of undergraduate students, reducing the prevalence and impact of neck pain. Additionally, ongoing evaluation and adaptation of these strategies will contribute to a more comprehensive and sustainable approach to managing neck pain on campus.

Encourage regular physical activity by integrating movement breaks into academic schedules and promoting accessible fitness resources on campus. Establish a system for ongoing evaluation of the effectiveness of interventions and gather feedback from students to inform continuous improvement. Develop and disseminate clear guidelines for responsible and ergonomic use of electronic devices, emphasizing the significance of mindful screen time

In addressing neck pain among undergraduate students, universities can foster an environment that prioritizes student well-being and enhances the overall academic experience. By implementing these recommendations, institutions can take significant strides toward creating a campus culture that values and supports the physical health of their student body.

7.2 Recommendation:

It is important to develop research-based evidence of physiotherapy practice in this area. Physiotherapists practice which is evidence based in all aspect of health care. There are few studies on students. These cannot cover all aspect of the vast area so the next generation of physiotherapy members should continue study regarding this area, this may involve-use of large sample size and participants form different area of Bangladesh. Conduct research on other musculoskeletal problems among the students/young adult, where physiotherapist can work. so it is very important to conduct such type research in this area Neck pain is a musculoskeletal disorder and according to modern science the rate of neck pain is gradually increasing day by day in Bangladesh as in the whole world and physiotherapy plays a vital role in the management of neck pain and neck related disability. The result of this study showed that the participants of neck is 67.8% among then Student of Saic College of Medical Science and Technology. Further studies of longitudinal nature using large diverse sample of students are warranted to further elucidate this association. In this study the duration of the study was too short, so in future wider time would be taken for conducting the study. Here, investigator use only 149 participants as the sample of this study, in future the sample size would be more. In this study, the investigator took the sample from Kishoreganj Sadar area to take available sample.so for further study investigator strongly recommended to include the student from the community or all over the Bangladesh to ensure the generalize of this stud

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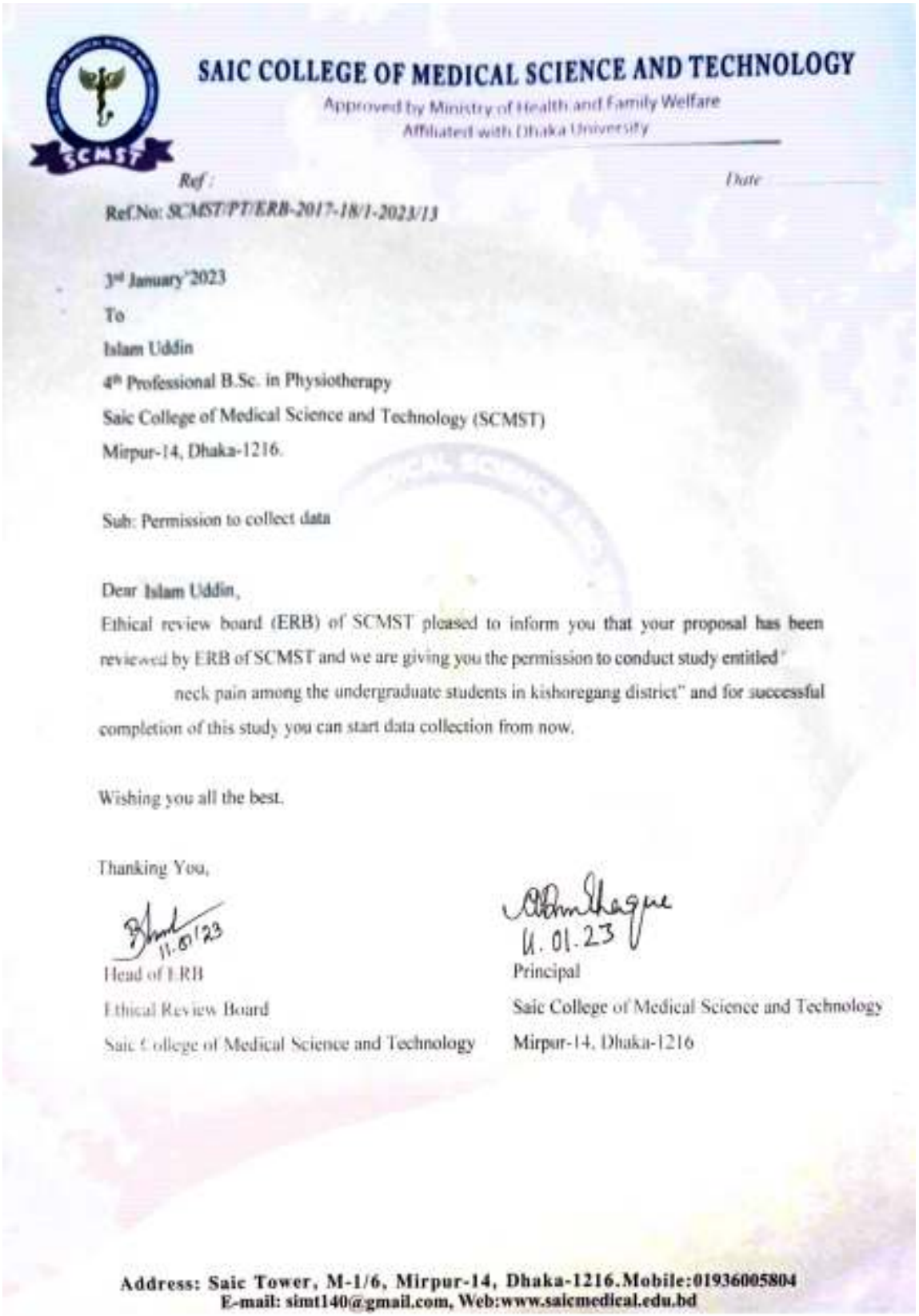
Appendix: A **Permission Letter**



SAIC COLLEGE OF MEDICAL SCIENCE AND TECHNOLOGY

Approved by Ministry of Health and Family Welfare
Affiliated with Dhaka University

Ref : *Date*

Ref.No: *SCMST/PT/ERB-2017-18/1-2023/13*

3rd January'2023

To

Islam Uddin

4th Professional B.Sc. in Physiotherapy

Saic College of Medical Science and Technology (SCMST)

Mirpur-14, Dhaka-1216.

Sub: Permission to collect data

Dear Islam Uddin,

Ethical review board (ERB) of SCMST pleased to inform you that your proposal has been reviewed by ERB of SCMST and we are giving you the permission to conduct study entitled "

neck pain among the undergraduate students in kishoregang district" and for successful completion of this study you can start data collection from now.

Wishing you all the best.

Thanking You,

11.01.23

Head of ERB

Ethical Review Board

Saic College of Medical Science and Technology

11.01.23

Principal

Saic College of Medical Science and Technology

Mirpur-14, Dhaka-1216

Address: Saic Tower, M-1/6, Mirpur-14, Dhaka-1216.Mobile:01936005804
E-mail: simt140@gmail.com, Web:www.saicmedical.edu.bd

Appendix: B Consent form (English)

Consent form (English)

Respected participant,

I am **Islam Uddin,** student of B.Sc. in physiotherapy program of Saic College of Medical Science & Technology (SCMST) which is affiliated by University of Dhaka. I am conducting the study entitled **"Neck Pain Among the Undergraduate Student in Kishoreganj Sadar.''** as a part of my thesis work for the partial fulfillment of B.Sc. in Physiotherapy degree. There are the lists of question you need to fill- up which is include socio-demographic, information related, disease related and treatment related question. For spending your time to participate in this self-administered interview which will take around 10-15 minutes. There is list of questionnaires and you need to fill up each answer. The information gained from this questionnaire will be used to academic purposes and will be kept confidential. Your participation in this study is totally voluntarily and you have the right to withdraw from the interview without any clarification at any moment. You can ask any question to the researcher regarding the study to meet up your quarry. Looking forward your kind cooperation.

Do you agree to provide information subject to permission?

- Yes
- No

Respondent name: ..... Researcher name: .....

Signature and date: ..... Signature and date: .....

Mobile number: ..... Mobile number: .....

Witness name: .....

Signature and date: .....

Mobile number: .....

Appendix: C **Questionnaire (English)**

Neck pain among the undergraduate student in Kishoreganj Sadar

Date: ……/…../…….

Respondent ID: | | | |

Name of respondent…….

Address ……

College Name: .....

Mobile number …….

Section 01: Socio-Demographic Related Question:

Q.No.	Questions	Responses	Code
1	How old are you?	……...Years	
2	What is your gender?	1= Male 2= Female	
3	What is your religious?	1= Islam 2= Hindu 3= Buddhist 4= Cristian 5= Others	
4	What is your marital status?	1= married 2= unmarried	
5	What is your types of family?	1= nuclear 2= extended	
6	What area do you live in?	1 =Rural 2 =Urban 3 =Semi Urban 4 =Others	
7	What Is your level of education?	1= 1st Year 2= 2nd Year 3= 3rd Year	

		4= 4th Year	
8	Please tell your monthly income (BDT).	Taka……	

Section 02: health related information:

9	What is BMI (kg/m2) Weight in kg……. Height in Meter…….	BMI……	
10	feeling Depression	1=Yes 2= no	
11	Do you exercise timely?	1= yes 2= no	
12	Sleeping hour per day	1= <4 hours 2= 4-8 hours 3 =Above 8 hours	

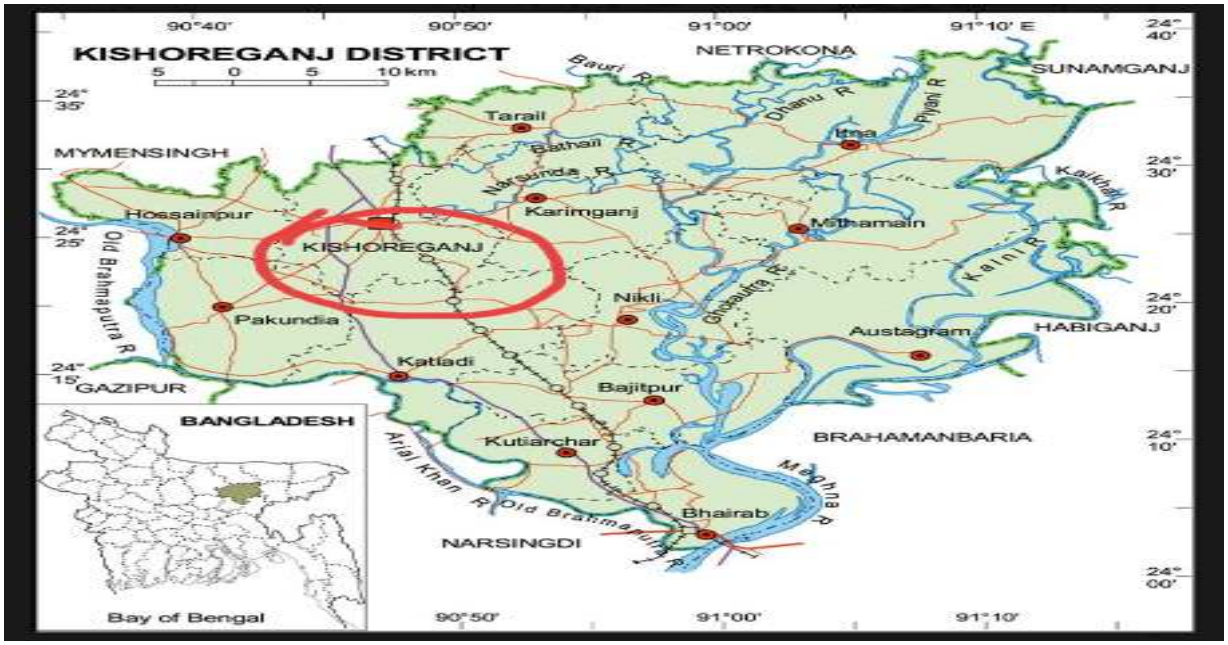
Section 03: Pain related Information:

13	Have you neck pain?	1= Yes 2= No *** If your answer is yes, then answer the next questions.	
14	Do you have any past history of trauma at the neck?	1= Yes 2= No	
15	When do you notice the pain?	1= study time 2= working time 3= others time	

16	Which posture do you study most of the time?	1= sitting 2=Banding 3=squatting 4= standing 5=walking	
17	Is your chair is adjustable and comfortable	1= Yes 2= No	
18	Do you feel pain at neck when over stress?	1= Yes 2=No	
19	How many times you reading and writing in a day?	1= 0 to 1 hours 2=1 to 2 hours 3= 2 to 4 hours 4= more than 4 hours	
20	How long time required to onset of pain after studying?	..... Min/Hour	
21	Duration of neck pain?	1= < 1 hour 2= 1 hour 3= >1hour	
22	When your pain increase?	1=day 2=Night 3=Similar	
23	If there is pain in the neck when long time watching TV?	1= Yes 2=No	
24	In which position is the pain of watching TV	1= sitting 2= squatting 3= Lie down	
25	Are you using smart phone?	1= yes 2= no	
26	How long you using smart phone?	1= 0 to 1 hours 2=1 to 2 hours	

		3=3 to 4 hours 4= more than 4 hours	
27	When you using smart phone then you feel neck pain?	1= Yes 2= No	
28	how long time required to onset of pain after using smart phone	.....min/hour	

Appendix: D	Study area Map



Appendix: E **Picture**

Appendix: F **Gantt chart**

Activities/ Month	July 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	App 23	May 23	Jun 23
Proposal Presentation												
Introduction												
Literature Review												
Methodology												
Data collection												
Data Analysis												
Result												
1st progress presentation												
Discussion												
Conclusion and Recommendation												
2nd progress presentation												
Communication with supervision												
Final Submission												