Health Related Quality of Life among Young adults with Neck Pain in North Dhaka City

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Health Related Quality of Life among Young adults with Neck Pain in North Dhaka City

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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 plagiarism or 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 duly acknowledged as graduate thesis and consent will consent taken from the physiotherapy department of Saic College of Medical Science and Technology (SCMST).

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ACRONYMS

BMRC: Bangladesh Medical Research Council.

ERB: Ethical Review Board.

IASP: International Association of the study of pain.

NP: Neck Pain.

NPTF: Neck Pain Task Force.

QOL: Quality of life.

SCMST: Saic College of Medical Science and Technology.

SD: Standard Deviation.

SPSS: Statistical package for social science.

WAD: Whiplash associated disorders.

WHO: World Health Organization.

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ABSTRACT

Objectives: To evaluate the effect the neck pain on the Health-Related Quality of life of young and adults subjects. To explore the socio demographic characteristic (age, sex, education) of young and adults with neck pain. Prevalence of health related quality of the participant and neck pain of the participant.

Methodology: Descriptive type of Cross sectional study design was selected. Total 121 neck pain participants were participate by purposive sampling from north area of Dhaka city of Bangladesh. Data was collected by the self developed and structured questionnaire. Descriptive statistic using SPSS software version-26 were used for data analysis and the results were showed in pie chart, and table.

Results: The study revealed that 121, (n=75) (62.0%) participants were (39-48) years of age. It was also found that (n=32) (26.4%) participants were in the age group (29-38). It was also showed that 14 (11.6%) participants were in the age group (18-28). This study showed that 109 (90.1%) participants were able to walk normally and it was also showed that 9 (7.4%) participants were able to walk without difficulty indoors. This study showed that 115 (95.0%) were able to eat normally and it was also found that 6 (5.0%) participants were able to eat by myself with minor difficulty. There was no significant association between age and mobility ($\chi 2 = 9.811^{a}$, P= 0.133).

Conclusion: Around the world and in Bangladesh, neck pain is a common occurrence.

Sometimes neck pain results in physical handicap and has significant financial implications for the community. This study was done to find out the health related quality of life among young and adults with neck pain in north Dhaka city. This study researcher found that most age of the (39-48) participants had most severe condition. 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 121 participants as the sample of this study, in future the sample size would be more. In this study, the investigator took the sample from north city of Dhaka.

Key words: *Neck pain, Health related quality of life.*

Chapter – I INTRODUCTION

In the general population, neck discomfort is a prevalent musculoskeletal issue with a lifetime frequency of 14 -70%. According to the Global Burden of Disease report, the number of years spent living with a handicap is the fourth highest. Researchers are studying the incidence of neck pain and risk factors related to it in the general population because of the direct and indirect economic implications of neck discomfort. While neck pain in acute bouts may go away entirely, chronicity and recurrence are common. It's more common than previously believed for acute neck discomfort patients to not heal well. Usually, the risk factors for neck pain are subtle (Khaired et al. 2022, p. 14).

A complex condition, neck discomfort is a significant issue in contemporary life. Even though it might not be the most prevalent musculoskeletal condition, neck pain is nonetheless a serious concern. The financial toll that neck pain takes has been astounding and includes issues with employment, lower productivity, and treatment expenses. Among the 154 illnesses, low back and neck pain accounted for the largest portion of US health care spending in 2016, estimated at $134.5 billion. An average of 11.4 days of missed work were attributed to neck pain among 25.5 million Americans in 2012. 2017 saw a 3551.1 global age-standardized prevalence and an incidence rate of 806.6 cases per 100,000 people for neck discomfort (Kazeminasab et al. 2022, p.1).

Undergraduate students use computers quite frequently, and some epidemiological studies have been published regarding the relationship between computer use and the start of neck pain. Upper extremity problems were more commonly reported by undergraduate students who worked on computers for extended periods of time and had a high number of years of computer usage. The relationship between parameters associated to computer use and the onset and persistence of neck pain in undergraduate students is, however, little understood. Additionally, there is scant evidence linking clinical risk factors to neck pain. The majority of earlier research examined the impact of biopsychosocial factors, independent of clinical variables such joint mobility, muscle strength, and endurance, on neck discomfort in undergraduate students (Kanchanomai et al. 2011, p.1).

A very common ailment that causes significant discomfort, incapacity, and financial expense is neck pain. It affects families, the health system, and the economic structure of nations in addition to being a significant personal burden. Despite its importance, the global burden of neck pain has not been fully reported in a form that can be used as the foundation for various epidemiological research and for assessing the various healthcare systems across the globe. For instance, only one study which used information from the worldwide Burden of Disease Study 2010 reported the precise burden of neck discomfort at the regional and worldwide levels. In more recent times, a few studies have estimated the cumulative burden of musculoskeletal disorders on a worldwide or regional scale, but they have not offered precise statistics (Safiri et al. 2017, p. 368).

In primary care, neck discomfort frequently manifests as a symptom, occurring between 10.4% and 21.3% of the time annually. It ranks as the fourth most common cause of disability globally.1 Because of degenerative changes in facet joints and the collapse of intervertebral disks, neck pain is more common in elderly persons.2. Only one in five persons with neck pain are thought to seek medical attention.3. The differential diagnosis is wide and covers less serious illnesses such infections, inflammatory disorders, neoplastic disorders, fractures, spinal cord and nerve injuries, and common ailments like sprains and arthritis (Childress and Stuek et al, 2020, p. 150).

One of the most common musculoskeletal conditions affecting adults worldwide is neck discomfort, which affects 16.7% to 75.1% of people worldwide.2. The origin of this illness is complicated. Comprising several elements, such as the following: individual (age, body mass index, genetics, history of musculoskeletal pain), behavioral (smoking and degree of physical activity), psychosocial (job satisfaction, stress level, anxiety, and depression), and ergonomic (strenuous physical activity, use of force and vibration, inadequate posture, repetitive movement). Studies have demonstrated the connection between related factors and neck pain. It was noted in China that those who used vibrating equipment, conducted manual labor above shoulder level, and stayed seated or standing with their necks bowed were the ones who reported having neck pain5. In the US, neck pain was linked to women, married and divorced individuals who experienced some morbidity (gastrointestinal, cardiovascular, and respiratory disorders, among others) and psychological changes (insomnia, depression, and difficulty falling asleep).

Conversely, a high level of education and regular physical activity were thought to be protective factors (Genebra et al. 2017, p. 274).
As "an unpleasant sensory and emotional experience associated with actual or potential tissue damage," neck pain is defined as radiating from the superior nuchal line to the level of the scapular spine in the neck area. Whiplash-associated disease, cervicogenic headache, and cervical radicular syndrome are among the conditions causing neck discomfort. The Neck Pain Task Force (NPTF) 6 has classified neck pain into four classes. Grades I through III of neck discomfort are covered by the guidelines. The two distinct subgroups that comprise Grades I and II are trauma-related neck pain (formerly referred to as whiplash or whiplash-associated disease) and work-related neck pain (defined by the patient's statement regarding the origin or beginning of pain) (Bier et al. 2018, p. 162).

One of the most common and expensive musculoskeletal disorders in Western society is neck pain. Up to 67% of adults are predicted to have neck pain at some point in their lives. 15% to 19% of cases in European populations progress to a chronic state. Up to 20% of people worldwide report having persistent neck difficulties at any given time. Compared to the general population, those who experience chronic pain are twice as likely to seek medical attention. State budgets for compensation, health care services, and lost productivity from sick days total substantial sums of money every year (O'Riordan et al. 2014, p.770).

Around the world, neck pain is a serious public health issue. It has long been believed that cervical intervertebral discs are a prevalent cause of neck pain. Despite its constant presence, disc pain has never been precisely defined, and opinions on its diagnosis and management are strongly divided. The primary causes of this uncertainty may be a lack of knowledge about its pathophysiology and a failure to carefully observe and thoughtfully consider certain clinical investigations (Peng and DePalma et al. 2018, p.2853).
According to the 2018 Global Burden of Disease study, neck discomfort is one of the most often reported musculoskeletal ailments, placing a significant financial strain on healthcare systems. It is also one of the main causes of long-term dysfunction. Neck pain is particularly common in college students (48% - 78%) and has an average prevalence of 23.1% in the general population.

With an annual growth rate double that of the 50 year old cohort, the incidence of cervical spondylosis is rising quickly among college student (Gao et al. 2023, p. 1502).

There is mounting evidence that undergraduate students have a high prevalence of musculoskeletal problems in the neck and upper extremities, ranging from 48 to 78%. 15% of a Swedish university student cohort experienced upper back or neck pain at the one-year follow-up. It is believed that neck discomfort has a multifactorial origin, meaning that personal, environmental, and psychological factors may play a role in its development and persistence. McLean et al. conducted a comprehensive evaluation of 14 prospective cohort studies in the general population and found that the beginning of neck discomfort was associated with female sex, older age, high job demands, inadequate social work support, ex-smoker, and history of low back and neck diseases (Kanchanomai et al. 2011, p. 1).

Neck discomfort affects 16.7% to 75.1% of adults globally, making it one of the most prevalent musculoskeletal diseases. There is a convoluted history to this sickness. including a number of factors, including the following: behavioral (smoking and level of physical activity), psychosocial (job satisfaction, stress level, anxiety, and depression), ergonomic (strenuous physical activity, use of force and vibration, inadequate posture, repetitive movement), and psychosocial (age, body mass index, genetics, history of musculoskeletal pain). Research has indicated a link between relevant variables and cervical pain (Genebra et al. 2017, p. 247).
Students' musculoskeletal health was negatively impacted by the switch from offline to online learning approaches as studying at home became commonplace during the COVID-19 epidemic. It is believed that a variety of factors, including psychological, physiological, and individual ones, might exacerbate the onset and persistence of neck discomfort. Numerous risk factors, including bad posture, obesity, a history of trauma, sex, age, and an unhealthy lifestyle, can lead to the onset and progression of neck pain. However, because of the unclear methodological quality, it is challenging to confirm the risk factors for neck discomfort in college studies. The purpose of this meta-analysis was to investigate the risk factors for neck pain in college students in order to establish a foundation for developing preventative education and implementing therapeutic and preventive interventions (Gao et al. 2023, p. 1502).

One of the most common and expensive musculoskeletal disorders in Western civilization is neck discomfort. Up to 67% of adults are said to have had neck pain at some point in their lives. 15% to 19% of cases in European populations progress to chronic diseases. Twenty percent of people worldwide claim to be suffering from neck pain at any given time. Individuals experiencing persistent pain are twice as likely as the general population to seek medical attention. State costs for medical care, compensation, and lost productivity from sick days total large sums of money each year (O'Riordan et al. 2014, p. 770).

Extremely common neck pain can cause significant discomfort, impairment, and financial burden.1 Families, the healthcare system, and the national economy are all impacted in addition to being a significant personal hardship. Notwithstanding the significance of neck pain, the worldwide burden of this condition has not been thoroughly documented in a manner that can be used as the foundation for various epidemiological investigations and for assessing the various healthcare systems across society. Using information from the worldwide Burden of Disease Study 2010, for instance, only one study has documented the precise burden of neck discomfort on a worldwide and regional scale (Safiri et al. 2017, p. 368).

Adults frequently have neck pain; 14 -71% of adults will experience it at some point in their lives. Adults with it have a 1-year frequency of 16 -75%. A significant 19–37% of people with neck pain will experience persistent neck pain. Due to pain, incapacity, and a decreased quality of life, neck pain significantly impairs one's ability to function at work. Treating incapacitating neck discomfort has major financial ramifications. According to a recent estimate, the annual cost of neck and upper limb symptoms in the Netherlands was estimated to be 2.1 billion euros. This cost included medical expenses, sick time, lost productivity, and chronic incapacity from work. Teenagers who experience neck pain are more likely to experience similar symptoms as adults. Childhood may be the source of chronic neck pain that lasts a lifetime (Kanchanomai et al. 2011, p. 1).

1.2 Justification of the study:

Neck pain is a prevalent musculoskeletal condition with significant personal, societal, and economic consequences. It affects individuals across various age groups, impacting their health-related quality of life (HRQoL), daily functioning, and productivity. The Global Burden of Disease study highlights neck pain as one of the leading causes of disability worldwide, underscoring the necessity of further research into its causes, consequences, and management strategies.

Despite its widespread occurrence, there is limited research in Bangladesh examining the impact of neck pain on HRQoL, particularly among young and adult populations. Studies conducted in other countries have established strong links between neck pain and various risk factors, including poor posture, sedentary lifestyles, prolonged computer use, and psychological stress. However, the specific nature, severity, and long-term consequences of neck pain among young adults in urban settings like North Dhaka remain understudied.

Understanding the HRQoL of individuals suffering from neck pain is crucial for designing targeted interventions, improving healthcare services, and formulating preventive strategies. Given the rising use of technology, increased desk work, and shifting lifestyle patterns, it is imperative to explore the interplay between physical health, mental well-being, and socio-demographic factors in individuals experiencing neck pain.

This study aims to bridge the knowledge gap by assessing the HRQoL among young and adult populations with neck pain in North Dhaka City. By identifying the extent of mobility issues, daily activity limitations, mental distress, and other health concerns associated with neck pain, this research can contribute to evidence-based healthcare planning, awareness programs, and rehabilitation strategies tailored to the specific needs of this demographic

1.3 Research question:

1. What is the level of health related quality of life among young adults with neck pain in north Dhaka city?

2. What is the status of mobility, eating, elimination and performing daily activities of the patients?

3. What is the quality of vision, hearing, breathing, sleeping and speech of the patients?

4. What is the level of mental function, depression, distress and vitality of the participants?

1.4 Objectives of the study:

1.4.1 General objective:

To explore the health related quality of life among young adults with neck pain in North Dhaka City.

1.4.2 Specific objectives:

I. To assess the level of health related quality of life among young adults with neck pain in North Dhaka city.

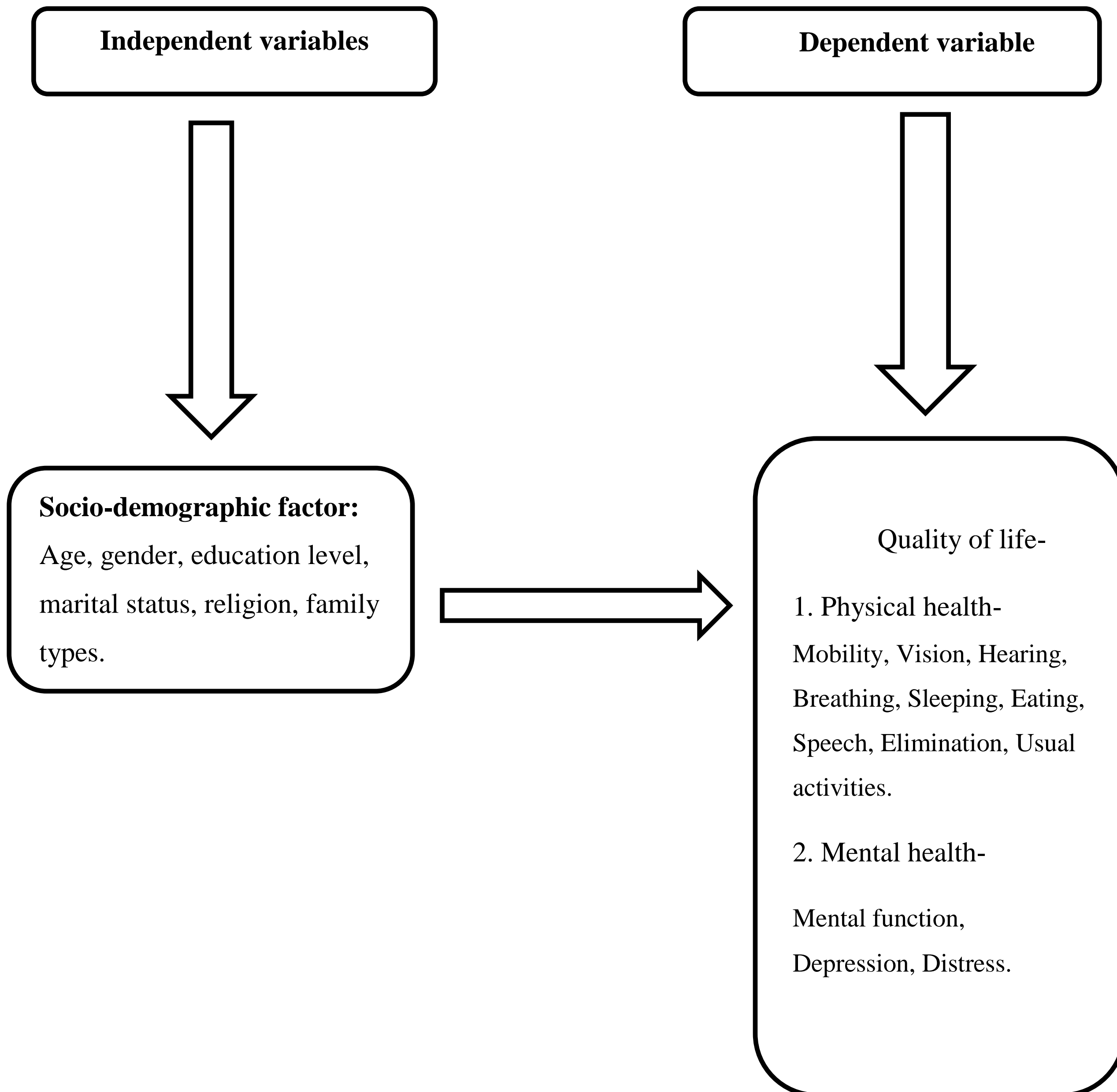
II. To determined the status of mobility, eating, elimination and performing daily activities of the patients.

III. To evaluate the quality of vision, hearing, breathing, sleeping and speech of the patients.

IV. To assess the level of mental function, depression, distress and vitality of the participants.

V. To describe the sociodemographic factor of the participants.

1.5 Conceptual frame work:



1.6 Operational Definition:

Pain: Pain is an unpleasant emotion that is frequently brought on by strong or harmful stimuli. "An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage" is how the International Association for the Study of Pain describes pain (Kazeminasab et al. 2022, p. 1)

Neck pain: The most widely used definition of neck pain (NP) is discomfort that is felt laterally along sagittal planes peripheral to the lateral borders of the neck, between the superior nuchal line and an imagined transverse line that passes through the tip of the first thoracic spinous process. A neck ache may be localized, referable to the head, one or both upper limbs, or both. In addition to its definition based on anatomy, NP can also be described according to its duration (acute, subacute, or chronic) or cause of onset (Bier et al. 2018, p. 162).

Health related Quality of Life: According to the World Health Organization, "a person's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns" is what is meant to be understood as quality of life (QOL) (Lacerda et al. 2005, p. 1)

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, p. 250).

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, p.1). 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, p. 13). 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, p. 1809).

Moreover, the impact of neck pain extends beyond the academic realm, affecting sleep, daily activities, and social engagement (Carter et al. 2017, p. 1). 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, p.18).

A complex condition, neck discomfort is a significant issue in contemporary life. Even if it might not be the most prevalent musculoskeletal condition, neck discomfort is crucial even now. The financial toll that neck pain takes has been astounding and includes issues with employment, lower productivity, and treatment expenses. With an estimated $134.5 billion in medical costs in

2016, low back and neck pain accounted for the largest portion of all ailments among the 154 that were treated in the US. An average of 11.4 days of missed work were attributed to neck pain among 25.5 million Americans in 2012. 2017 saw a 3551.1 global age-standardized prevalence and an incidence rate of 806.6 cases per 100,000 people for neck discomfort (Kazeminasab et al. 2022, p. 1).

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, p. 132).The nerve ending, which is the termination of a nerve at the distal end of an exon 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 (Cote et al. 2008, p. 60).

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 damage tissue, although nerve damage is most frequently the cause (Cote et al. 2008, p. 60).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, p. 78). 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, p. 78).

The fourth most common cause of disability is neck pain, which affects more than 30% of people annually. The majority of acute neck pain episodes will go away with or without therapy, although about 50% of people will still have pain or frequent bouts. A physical examination and history can offer significant hints regarding the nature of the pain, such as whether it is mechanical or neuropathic. They can also be utilized to spot "red flags" that could indicate more serious pathology, like metastases, myelopathy, and atlantoaxial subluxation. Although there is a significant frequency of aberrant results in asymptomatic people, magnetic resonance imaging should be taken into consideration when a patient is being referred for interventional treatment, has focal neurologic complaints, or is not responding to standard treatment (Cohen et al. 2015, p. 284).

There aren't many clinical trials that have assessed neck pain remedies. Patients with neck pain seem to benefit from exercise therapy. There is inconsistent evidence for epidural corticosteroid injections for radiculopathy, weak positive evidence for cervical facet joint radiofrequency denervation, and modest data supporting muscle relaxants in acute neck discomfort related to muscle spasm. Surgery seems to be more beneficial than nonsurgical therapy in the short term for individuals with radiculopathy or myelopathy, but not in the long run for the majority of them (Cohen et al. 2015, p. 284).

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 object, 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, p. 390). 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 lower quality of life in terms of health (Sabeen et al. 2013, p. 137) 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, p. 763). 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, p. 1)

There are three categories or type of neck pain: axial neck pain, which is a type of musculoskeletal pain that is limited to soft tissue pain in the neck, such 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, 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, p. 1) There are two type 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, p. 60)

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, p. 1) 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, p. 137) 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 yours 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, p. 484)

One of the main issues facing contemporary civilization is neck discomfort, a multifactorial illness. Neck discomfort is nevertheless highly essential even though it might not be the most frequent musculoskeletal issue. Neck pain has a staggering financial impact because of difficulty at work, medical expenses, and decreased productivity. Low back and neck pain accounted for the largest portion of health care spending in the US in 2016, with an estimated $134.5 billion spent on treatment, out of 154 ailments. Approximately 25.5 million Americans missed an average of 11.4 days of work in 2012 due to neck pain. 2017 saw a 3551.1 global age-standardized prevalence and an incidence rate of 806.6 cases per 100,000 people for neck discomfort, respectively (Kazeminasab et al. 2022, p. 1).

Neck discomfort can become chronic or repeat, but it normally goes away in a few days or weeks. In many professions, neck injuries cause just as many missed work days as low back pain (see to the review on low back pain [acute]). Depending on the underlying cause, the percentage of people with chronic neck pain is estimated to be around 10%, which is comparable to the percentage of people with low back pain. Severe disability is caused by neck pain in 5% of cases. There is little information available about the clinical course of neck discomfort in the absence of formal therapy (Hoy et al. 2010, p. 783).

Adults frequently have neck pain; 14 -71% of adults will experience it at some point in their lives. Adults with it have a 1-year frequency of 16 -75%. A significant 19 -37% of people with neck pain will experience persistent neck pain. Due to pain, incapacity, and a decreased quality of life, neck pain significantly impairs one's ability to function at work. Treating incapacitating neck discomfort has major financial ramifications. According to a recent estimate, the annual cost of neck and upper limb symptoms in the Netherlands was estimated to be 2.1 billion euros. This cost included medical expenses, sick time, lost productivity, and chronic incapacity from work.

Teenagers who experience neck pain are more likely to experience similar symptoms as adults.

Childhood may be the source of chronic neck pain that lasts a lifetime (Kanchanomai et al. 2011, p. 1).

One of the most common conditions causing significant pain, disability, and financial burden is neck pain. It not only represents a significant personal hardship, but it also has an impact on families, the healthcare system, and national economies. Despite the significance of neck pain, its global burden has not been thoroughly documented in a manner that can be used as the foundation for various epidemiological research and for assessing the various healthcare systems across the globe. For instance, utilizing information from the worldwide Burden of Disease Study 2010, only one study has documented the precise burden of neck discomfort at the regional and worldwide levels. A few studies conducted more recently have revealed the combined burden of musculoskeletal disorders on a worldwide or regional scale, but they have not included information particular to neck discomfort. Furthermore, although systematic reviews have shown prevalence for a few particular nations, national estimates of the burden from neck discomfort have not been published for all countries (Safiri et al. 2017, p. 368). The human body frequently experiences neck pain, which can lead to economic difficulties, disability, and discomfort. With an estimated $134.5 billion in medical costs in 2016, low back and neck pain accounted for the largest share of all ailments among the 154 conditions treated in the US. Its costs also included indirect methods like lost productivity in addition to direct ones. This is a burden for the social and economic systems as well as the neck pain sufferer. Even though neck pain is common, not much is understood about it. A 2017 study on the global burden of disease (GBD) found that neck pain was most common in the Nordic region (Shin et al. 2022, p. 1).

Neck discomfort is one of the most prevalent and costly musculoskeletal conditions in Western society. It is estimated that up to 67% of adults may experience neck pain at some point in their lives. In populations in Europe, 15% to 19% of instances develop into chronic conditions. Approximately 20% of individuals globally report experiencing ongoing neck pain at any given moment. People who suffer from chronic pain are twice as likely to seek medical assistance as people in general. Annual state expenditures for lost productivity due to sick days, medical services, and compensation amount to significant sums of money (O'Riordan et al. 2014, p. 770).

In the general population, neck pain is a frequent musculoskeletal disease. Revealed that the point prevalence of neck discomfort was 22.2% and the age-standardized lifetime prevalence was 66.7%. It is expensive in terms of medical care, personal misery, and Lost productivity at work. It is widely acknowledged that muscles are crucial for supporting and shielding joints. By regulating the neutral zone, muscles with direct attachments to the vertebrae may be in charge of maintaining segmental stability, according to criso and Panjabi. The stability of the cervical spine is mostly dependent on the deep neck muscles, which function similarly to dynamic ligaments. There is a considerable correlation between neck pain and atrophy of the neck muscles, as shown by several investigations (Chiu et al. 2005, p. 1).

As the primary cause of years lived with disability worldwide, neck and back pain has significant negative health and financial effects. The fact that many patients experience acute episodes of pain that do not go away and instead become chronic or recurrent pain is what drives the societal burden of these disorders. In this study, neck pain will be referred to as "non-traumatic neck pain." Alternatively, it may originate from a non-traumatic cause, such as that which happens in office workers, or it may result from a traumatic event, typically a motor vehicle crash (whiplash associated disorder, or WAD) (Sterling et al. 2019, p. 1219). There are many who contend that there is minimal distinction between the two types of neck discomfort and have created classification schemes that do not distinguish between them. When WAD and non-traumatic neck pain are directly compared, it is discovered that the former group had worse follow-up results, more psychological anguish, pronounced hyperalgesia and hypoesthesia characteristic of nociplastic pain, and higher degrees of pain and disability. Based on the patient's appearance, distinct classification schemes and therapeutic approaches may be required, as these results imply that distinct mechanisms may underlie non-traumatic neck pain and WAD (Sterling et al. 2019, p. 1219).

A frequent and often incapacitating global health issue, neck pain affects up to 70% of people at some point in their lives. The socioeconomic burden associated with chronic neck discomfort is rising as a result of its prevalence. Therefore, improving treatment choices and lowering socioeconomic costs may benefit from a deeper comprehension of the pathophysiology underlying chronic neck discomfort.
Idiopathic and trauma-induced persistent neck pain are two common classifications for the

condition based on its cause. Whiplash associated disorders (WAD) are a term used to describe patients with trauma-induced neck pain (De Pauw et al. 2017, p. 42).

Chapter- III METHODOLOGY

3.1 Study design:

This was a descriptive type of cross sectional study carried out with the objective of determining the health related quality of life among the young adults with neck pain.

3.2 Study area:

Data was collected from North Dhaka City- Uttara (sector 8) at Aichi Hospital.

3.3 Study period

The study period was one year from July2022 to June 2023

3.4 Study of population:

The young adult patients with neck pain constituted the study population for the present study.

3.5 Sample size:

The sample size of the study was calculated by the following statistical formula.

$$n = \frac{z^2 p(1-p)}{d^2}$$

$$n = \frac{(1.96)^2 \times 0.80(1-0.80)}{(0.05)^2}$$

$$= \frac{3.84 \times 0.80 \times 0.20}{0.0025}$$

$$= \frac{0.6144}{0.0025}$$

$$= 245$$

So, sample size 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 research 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 limitation, so the researcher had to limit with 121 person as sample.

3.6 Sampling technique:

Convenience sampling technique was applied to select the study participants from Aichi Hospital at Uttara, Dhaka.

3.7 Eligibility criteria

3.7.1 Inclusion criteria:

- Neck pain (Khaired et al., 2022).
- Both male and female (Lacerda et al., 2005)
- Age of participants – (18-48)
- Only north Dhaka city people were selected

3.7.2 Exclusion criteria:

- Unwillingness
- Mentally unstable person.
- Less than 18 years of age participants are not included (Garra et al., 2010)

3.8 Method of data collection:

3.8.1 **Technique of data collection**: Data was collected from the respondents by face to face formal interview.

3.8.2 **Tools of data collection:**

- A pre-tested structured questionnaire was used as an instrument of data collection for the present study.
- 15D Scale was used as another instrument of data collection for Health related quality of life of the participants.

3.8.3 **Procedure of data collection:**

Permission from the hospital authority was obtained by the researcher himself.

Aim and objectives were explained to the patients with neck pain. Those who agreed to participate included in this study. Then the researcher started interviewing the participants one by one. The pretested questionnaire was used to collect information on

socio demographic characteristics and 15D Scale was used to collected data on health related quality of life of the participants and at the end of the interview the researcher thanked the participants.

3.9 Data management

3.9.1 Data editing: After data collection, the questionnaires were checked for any error, missing and inconsistency. Necessary corrections were done accordingly. The responses were coded adequately. Then the coded data were entered into the computer.

3.9.2 Data analysis:

Data was analyzed by according to objectives and variable of this study by Microsoft excel and using SPSS (Statistical package for social science) (25 version). About descriptive analysis mean, median, standard deviation, and percentage were calculated. For inferential statistics and Chi square test was done to analysed the relationship between independent and dependent variables.

3.10 Ethical consideration:

- The Research proposal was submitted to the Ethical Review Board (ERB) of SCMST and approval was obtained from the Board.
- Bangladesh Medical Research Council (BMRC) and World Health Organization (WHO) guideline also were followed to conduct the study.
- The official permission from the hospital authority was taken by the researcher himself to carry out the research. Written informed consent was obtained from the participants before starting the interview. No invasive technique was used to collect information from the participants for the present study. So, no physical harm or hazards happened to the patients.
- The clients name, address and personal information were kept confidential by the investigator.

Chapter- IV RESULT

This was a descriptive type of cross sectional study. The main objective of the study was to find out the health related quality of life among young and adults with neck pain in north Dhaka city. Total 121 data were collected from all over the in north Dhaka city. Data were numerically coded and captured in Microsoft Excel and calculated as percentage and presented by using bar chart, pie chart and table and using an SPSS 26.0 version software program.

4.1 Socio-demographic Information-

Table no 1: Frequency distribution of the participants by age

Age group	Frequency	
	N	**%**
18 -28	14	11.6
29- 38	32	26.4
39 -48	75	62.0
Total	121	100.0

Regarding frequency distribution of the participants by age, it was found that 75 (62.0%) patients were in the age group of 39 - 48 years. It was also found that 32 (26.4%) participants belonged to the age group of 29 - 38 years. (Table no.1).

Gender of the participants:

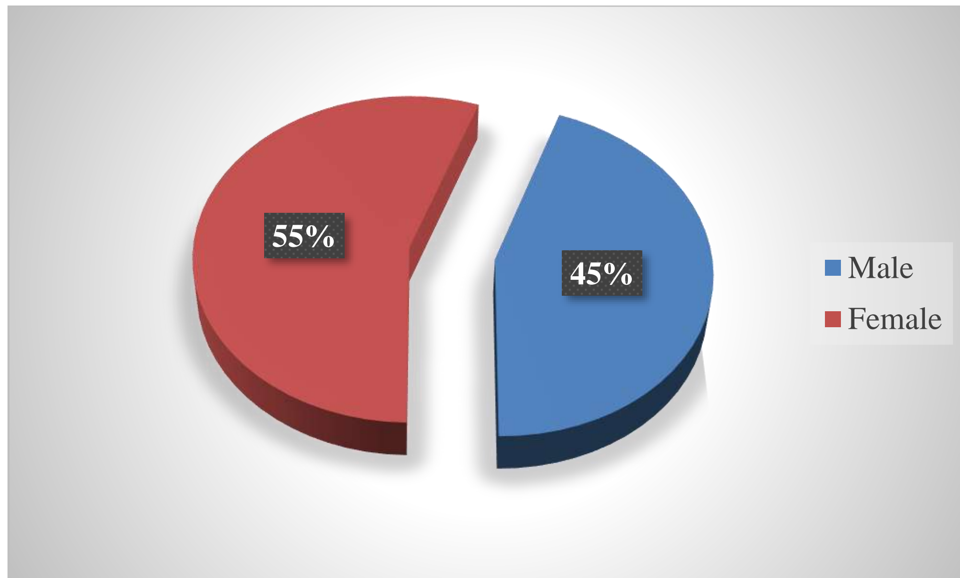


Figure 1: Gender of the participants

About gender of the participants, the study revealed that out of 121, 55 (44.6%) participants were male and 67 (55.4%) participants were female (Figure no.1).

Religion of the participants:

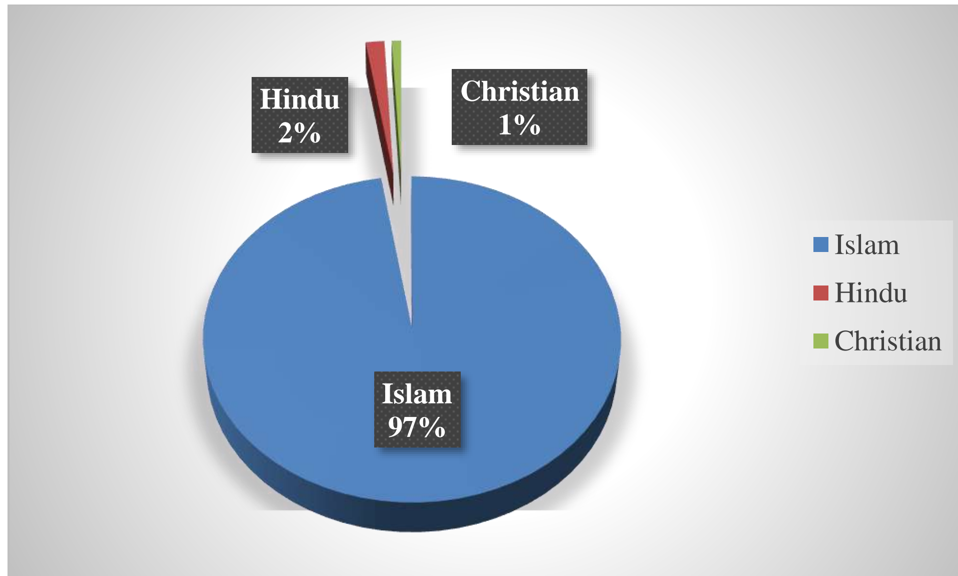


Figure 2: Religion of the participants

This study revealed that out of 121 participants, 118 (97.5%) participants were Muslims and it was also found that 2 (1.7%) participants were Hindus and 1 (0.8%) participant was Christian (Figure no.2).

Education Level:

Table no 2: Frequency distribution of the participants by level of education

Education level	Frequency	
	N	%
PSC	2	1.7
JSC	23	19.0
SSC	42	34.7
HSC	44	36.4
Masters	10	8.3
Total	121	100.0

About level of educational, 44 (34.7%) participants completed their high school level. It was also found that 42 (34.7%) participants passed the secondary school level and 10 (8.3%) participants had Masters Degree (Table no.2).

Marital status:

Table no 3: Frequency distribution of the participants by marital status

Marital status	Frequency	
	N	%
Single	19	15.7
Married	99	81.8
Divorced	2	1.7
Separated	1	0.8
Total	121	100.0

This study revealed that 99 (81.8%) participants were married and 19 (15.7%) participants were single (Table no.3).

Family Type:

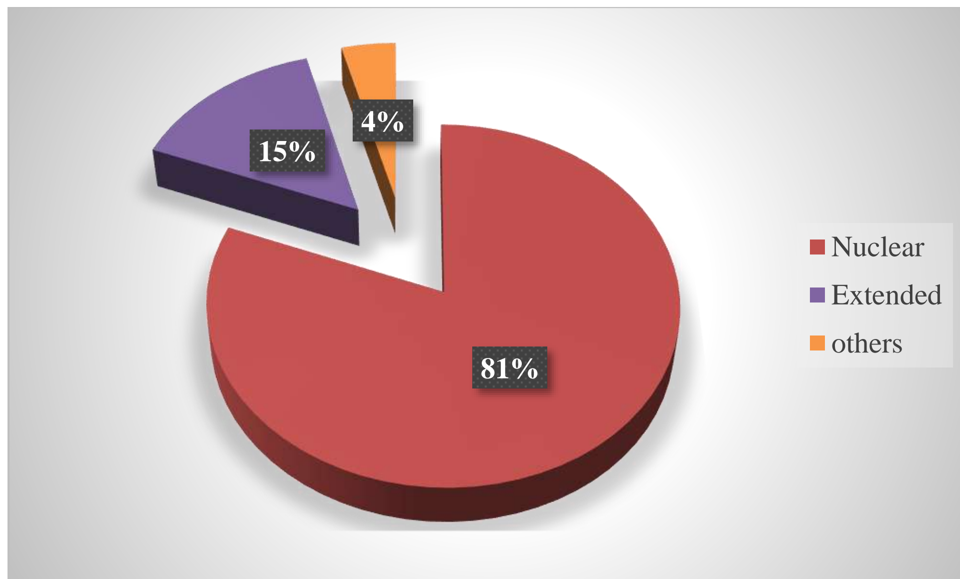


Figure no 3: Family type of the participants

This study was conducted on 121 participants. Among them 98 (81%) participants belonged to nuclear family and 18 (15%) came from extended family (Figure no.3).

Living area:

Table no 4: Frequency distribution of the participants by living area

Living Area	Frequency	
	N	%
Rural	1	0.8
Semi-urban	13	10.7
Urban	107	88.4
Total	121	100.0

This study showed that 107 (88.4%) participants were living in urban area and it was also showed that 13 (10.7%) participants were living in semi- urban area (Table no.4).

4.2 Health related quality of life by 15D-

Mobility-

Table no 5: Frequency distribution of the participants by mobility

Mobility	Frequency	
	N	%
I am able to walk normally	109	90.1
I am able to walk without difficulty indoors	9	7.4
I am able to walk without help indoors	2	1.7
I am able to walk indoors only	1	0.8
Total	121	100.0

This study showed that 109 (90.1%) participants were able to walk normally and it was also showed that 9 (7.4%) participants were able to walk without difficulty indoors (Table no. 5).

Vision:

Table no 6: Frequency distribution of the participants by Vision

Vision	**Frequency**	
	N	**%**
I see normally	86	71.1
I can read papers and/or TV text with slight difficulty	28	23.1
I can read papers and/or TV text with considerable difficulty	6	5.0
I cannot read papers	1	0.8
Total	121	100.0

This study revealed that 86 (71.1%) participants were able to see normally and it was also found that 28 (23.1%) participants could read papers and or TV text with slight difficulty. It was found that 6 (5.0%) participants read papers and/or TV text with considerable difficulty (Table no.6).

Hearing:

Table no 7: Frequency distribution of the participants by hearing

Hearing	**Frequency**	
	N	**%**
I can hear normally	101	83.5
I hear normal speech	19	15.7
I hear normal speech with considerable difficulty	1	0.8
Total	121	100.0

This study found that 101 (83.5%) participants' hearing was normal and it was also found that 19 (15.7%) participants had normal speech (table no.7).

Breathing:

Table no 8: Frequency distribution of the participants by Breathing

Breathing	**Frequency**	
	N	**%**
I am able to breathe normally	74	61.2
I have shortness of breath during heavy work or sports	36	29.8
I have shortness of breath when walking on flat ground	6	5.0
I get shortness of breath even after light activity	5	4.1
Total	121	100.0

This study revealed that 74 (61.2%) participants were able to breathe normally and it was also found that 36 (29.8%) participants had shortness of breath during heavy work or sports (Table no.8).

Sleeping:

Table no 9: Frequency distribution of the participants by sleeping

Sleeping	**Frequency**	
	N	**%**
I am able to sleep normally	79	65.3
I have slight problems with sleeping	30	24.8
I have slight problems with sleeping	11	9.1
I suffer severe sleeplessness	1	0.8
Total	121	100.0

About distribution of the patients by sleeping, it was found that 79 (65.3%) participants were able to sleep normally and it was also showed that 30 (24.8%) participants had slight problems with sleeping. This study revealed that 11 (9.1%) participants had slight problems with sleeping (Table no.9).

Eating:

Table no 10: Frequency distribution of the participants by Eating

Eating	Frequency	
	N	%
I am able to eat normally	115	95.0
I am able to eat by myself with minor difficulty	6	5.0
Total	121	100.0

The study showed that 115 (95.0%) study subjects were able to eat normally and it was also found that 6 (5.0%) participants were able to eat by themselves with minor difficulty (Table no.10).

Speech:

Table no 11: Frequency distribution of the participants by Speech

Speech	**Frequency**	
	N	**%**
I am able to speak normally	105	86.8
I have slight speech difficulties	16	13.2
Total	121	100.0

About speech, it was found that that 105 (86.8%) were able to speak normally and 16 (13.2%) participants had slight speech difficulties (Table no 11).

Elimination:

Table no 12: Frequency distribution of the participants by elimination

Elimination	Frequency	
	N	**%**
My bladder and bowel work normally and without problems	71	58.7
I have slight problems with my bladder and/or bowel function	38	31.4
I have marked problems with my bladder and/or bowel function	10	8.3
I have serious problems with my bladder and/or bowel function	2	1.7
Total	121	100.0

Regarding elimination, the study showed that 71(58.7%) participants had bladder and bowel work normally and without problems. It was also showed that 38 (31.4%) participants had slight problems with their bladder and/or bowel function (Table no.12).

Usual activities:

Table no. 13: Frequency distribution of the participants by usual activities

Usual activities	**Frequency**	
	N	**%**
I am able to perform my usual activities	88	72.7
I am able to perform my usual activities slightly less effectively	26	21.5
I am able to perform my usual activities much less effectively	7	5.8
Total	121	100.0

This study was conducted 121 participants. Among them 88 (72.7%) participants were able to perform their usual activities and 26 (21.5%) participants were able to perform their usual activities slightly less effectively (Table no 13).

Mental Health:

Table no. 14: Frequency distribution of the participants by Mental Health

Mental Health	Frequency	
	N	%
I am able to think clearly and logically	69	57.0
I have slight difficulties in thinking clearly and logically	38	31.4
I have marked difficulties in thinking clearly and logically	12	9.9
I have great difficulties in thinking clearly and logically	2	1.7
Total	121	100.0

This study showed that 69 (57.0%) participants were able to think clearly and logically and also showed that 38 (31.4%) had slight difficulties in thinking clearly and logically. It was also found that 12 (9.9%) participants were marked difficulties in thinking clearly and logically (Table no.14).

Discomfort and Symptoms:

Table no. 15: Frequency distribution of the participants by Discomfort and Symptoms

Discomfort and Symptoms	Frequency	
	N	%
I have no physical discomfort or symptoms	8	6.6
I have mild physical discomfort or symptoms	32	26.4
I have marked physical discomfort or symptoms	61	50.4
I have severe physical discomfort or symptoms	20	16.5
Total	121	100.0

It was found that 61 (50.4%) participants had marked physical discomfort or symptoms and also found that 32 (26.4%) participants had mild physical discomfort or symptoms. The study revealed that 20 (16.5%) participants had severe physical discomfort or symptoms (Table no 15).

Depression:

Table no 16: Frequency distribution of the participants by depression

Depression	Frequency	
	N	%
I do not feel at all sad	2	1.7
I feel slightly sad	47	38.8
I feel moderately sad	53	43.8
I feel very sad, melancholic	13	10.7
I feel extremely sad	6	5.0
Total	121	100.0

About depression, it was found that 53 (43.8%) participants were moderately sad. It was also showed that 47 (38.8%) participants had slightly sad and 13 (10.7%) participants was very sad (Table no 16).

Distress:

Table no. 17: Frequency distribution of the participants by distress

Distress	Frequency	
	N	%
I feel slightly anxious	87	71.9
I feel moderately anxious	25	20.7
I feel very anxious, stressed	8	6.6
I feel extremely anxious, stressed	1	0.8
Total	121	100.0

Regarding distress of the patients, it was revealed 87 (71.9%) participants had slightly anxiety and it was also found that 25 (20.7%) participants were moderately anxious (Table no. 17).

Vitality:

Table no. 18: Frequency distribution of the participants by vitality

Vitality	Frequency	
	N	%
I feel healthy and energetic	3	2.5
I feel slightly weary	89	73.6
I feel moderately weary	22	18.2
I feel very weary, tired, or feeble	7	5.8
Total	121	100.0

The study showed that 89 (73.6%) participants were slightly weary and it was also found that 22 (18.2%) participants were moderately weary (Table no. 18).

Sexual activity:

Table no. 19: Frequency distribution of the participants by Sexual activity.

Sexual activity	**Frequency**	
	N	**%**
My state of health has no adverse effect	31	25.6
My state of health has a slight effect on my sexual activity	67	55.4
My state of health has a considerable effect on my sexual activity	20	16.5
My state of health makes sexual activity almost impossible.	3	2.5
Total	121	100.0

The study revealed that 67 (55.4%) participants told that their state of health had a slight effect on their sexual activity and it was also found that 31 (25.6%) participants told that their state of health had no adverse effect and it was also revealed that 20 (16.5%) participants' state of health had a considerable effect on their sexual activity (Table no.19).

Health related quality of life score obtained by 15 D scale.

Table no 20: Frequency distribution of the participants about quality of life by 15 D score.

15 D score	Frequency	
	N	%
1. (0 - 24) Excellent	2	1.7
2. (25 - 49) Good	115	95.0
3. (50 - 74) Moderate	3	2.5
4. (75 - 89) poor	1	0.8
Total	121	100.0

The study revealed that 2 (1.7%) participants' score was excellent and the score was (0 - 24). It was also found that 115 (95%) participants' score was good and the score was (25 - 49) [Tab No: 20].

Table no 21: Frequency distribution of the participants by age and mobility

Age of the participants	Mobility				Total	Pearson chi square	P value
	I am able to walk normally	I am able to walk without difficulty indoors	I am able to walk without help indoors	I am able to walk indoors only			
18 – 28	13	0	1	0	14	9.811[a]	0.133
29 – 38	32	0	0	0	32		
39 – 48	64	9	1	1	75		
Total	109	9	2	1	121		

There was no significant association between age and mobility ($\chi2 = 9.811^{a}$, P= 0.133).

A cross sectional type of descriptive study was used to assess the health related quality of life among young and adults with neck pain in north Dhaka city. One hundred twenty one neck pain patients were recruited in this study. Convenience sampling technique was applied to select the participants from the AICHY hospital. The data were collected from the participants through interview by using a self-developed and 15 D scale.

Regarding frequency distribution of the participants by age, it was found that 62.0% patients were in the age group of 39 - 48 years. It was also found that 26.4% participants belonged to the age group of 29 - 38 years. (Table no.1). About gender of the participants, the study revealed that out of 121, 44.6% participants were male and 67 55.4% participants were female (Figure no.1). In a study conduct in India, They were divided into 3 different age group; young age (18-25), middle age (26-40) and old age (41-60), 25 patients in each group (Gurav et at. 2013, p. 53).

This study revealed that out of 121 participants, 97.5% participants were Muslims and it was also found that 1.7% participants were Hindus and 0.8% participant was Christian (Figure no.2). About level of educational, 34.7% participants completed their high school level. It was also found that 34.7% participants passed the secondary school level and 8.3% participants had Masters Degree (Table no.2). This study revealed that 81.8% participants were married and 15.7% participants were single (Table no.3). This study was conducted on 121 participants. Among them 81% participants belonged to nuclear family and 15% came from extended family (Figure no.3). This study showed that 88.4% participants were living in urban area and it was also showed that 10.7% participants were living in semi- urban area (Table no.4). This study showed that 90.1% participants were able to walk normally and it was also showed that 7.4% participants were able to walk without difficulty indoors (Table no. 5). This study revealed that 71.1% participants were able to see normally and it was also found that 23.1% participants could read papers and or TV text with slight difficulty. It was found that 5.0% participants read papers and/or TV text with considerable difficulty (Table no.6). This study found that 83.5% participants' hearing was normal and it was also found that 15.7% participants had normal speech (table no.7). This study revealed that 61.2% participants were able to breathe normally and it was also found that 29.8% participants had shortness of breath during heavy work or sports (Table no.8). About distribution of the patients by sleeping, it was found that 65.3% participants were able to sleep normally and it was also showed that 24.8% participants had

slight problems with sleeping. This study revealed that 9.1% participants had slight problems with sleeping (Table no.9). The study showed that 95.0% study subjects were able to eat normally and it was also found that 5.0% participants were able to eat by themselves with minor difficulty (Table no.10).About speech, it was found that that 86.8% were able to speak normally and 13.2% participants had slight speech difficulties (Table no 11). Regarding elimination, the study showed that 58.7% participants had bladder and bowel work normally and without problems. It was also showed that 31.4% participants had slight problems with their bladder and/or bowel function (Table no.12). This study was conducted 121 participants. Among them 72.7% participants were able to perform their usual activities and 21.5% participants were able to perform their usual activities slightly less effectively (Table no 13). This study showed that 57.0% participants were able to think clearly and logically and also showed that 31.4% had slight difficulties in thinking clearly and logically. It was also found that 9.9% participants were marked difficulties in thinking clearly and logically (Table no.14). It was found that 50.4% participants had marked physical discomfort or symptoms and also found that 26.4% participants had mild physical discomfort or symptoms. The study revealed that 16.5% participants had severe physical discomfort or symptoms (Table no 15). About depression, it was found that 43.8% participants were moderately sad. It was also showed that 38.8% participants had slightly sad and 10.7% participants was very sad (Table no 16). Regarding distress of the patients, it was revealed 71.9% participants had slightly anxiety and it was also found that 20.7% participants were moderately anxious (Table no. 17). The study showed that 73.6% participants were slightly weary and it was also found that 18.2% participants were moderately weary (Table no. 18). The study revealed that 55.4% participants told that their state of health had a slight effect on their sexual activity and it was also found that 25.6% participants told that their state of health had no adverse effect and it was also revealed that 16.5% participants' state of health had a considerable effect on their sexual activity (Table no.19). In this study researcher found that the 15D score was 1.7% participants' score was excellent (0 -24). It was also found that 95% participants 'score was good (25-49).on the other study researcher found that The mean 15D score was 0.747, whereas the score is 0.873 in Finns aged 65-74 years and 0.807 in Finns aged 75-84 years (Keränen et al. 2024, p. 84).

Chapter – VI CONCLUSION AND RECOMMENDATION

6.1 Conclusion:

As a musculoskeletal issue, neck discomfort is on the rise in Bangladesh and around the world, according to current scientific research. Physiotherapy is essential for treating neck pain and other neck-related conditions. Around the world and in Bangladesh, neck pain is a common occurrence. Sometimes neck pain results in physical handicap and has significant financial implications for the community. This study was done to find out the health related quality of life among young and adults with neck pain in north Dhaka city. This study researcher found that most age of the thirty nine-forty eight participants had most severe condition. Neck pain is a common condition that causes substantial disability. 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 One hundred twenty-one participants as the sample of this study, in future the sample size would be more. In this study, the investigator took the sample from north city of Dhaka .it was small area to take available sample. So for further study investigator strongly recommended to include many patients.

6.2 Recommendation:

The aim of the study was to find out the health related quality of life among young and adults with neck pain in north Dhaka city.

The main recommendation would be as follow:

- The duration of the study was short, so in future wider time would be taken for conducting the study.
- Different measurement tool need to be included.
- Still now in Bangladesh there is little research had been conducted about cerebral palsy socioeconomic status that is why need to conduct more study about this topic.
- In future someone want to do this topic related research, this research will help for better information.

Chapter-VIII	**REFERENCES**

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APPENDIX-A

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-2017-18/1-2023/25*

3rd January'2023

To

Md. Sani Hsanat Mahmud
4th Professional B.Sc. in Physiotherapy
Saic College of Medical Science and Technology (SCMST)
Mirpur-14, Dhaka-1216.

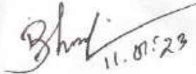
Sub: Permission to collect data

Dear Mahmud,

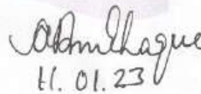
Ethical review board (ERB) of SCMST pleased to inform you that your proposal has been reviewed by ERB of SCMST and we are giving you the permission to conduct study entitled "Health related quality of life among young and adults with neck pain" and for successful completion of this study you can start data collection from now.

Wishing you all the best.

Thanking You,



Head of ERB
Ethical Review Board
Saic College of Medical Science and Technology



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 from:

Dear participate,

I am Md. Sani hasanat mahmud, Student of Bachelor of Physiotherapy program in the Department of Physiotherapy, Saic College Of Medical Science and Technology (SCMST) affiliated by "UNIVERSITY OF DHAKA". Conducting the study entitled-

Health Related Quality of Life among Young Adults with Neck Pain in North Dhaka City

As a part of my thesis work for the partial fulfillment of Bachelor degree. There is a list of Question you need to fill up which is include socio-demographic information, health related quality of life. This will take approximately 8-10 minutes. I need to meet you just once to collect entire information. I would like to inform you that this is a purely academic study and obtain information will not be used for any other purpose. All information provided by you will be kept confidential and also source of information will remain anonymous, your participation in this study voluntarily and also the right not to answer a particular question that you don't like or do not want to answer during interview.

Do you have any question before I start?

So, may I have your consent to proceed with the interview?

Yes ☐ ☐ No

Signature of the Guardian ………………………… Date…………………………

Mobile no……………………………………………………………………………..

Address……………………………………………………………………………

Signature of the Researcher………………………… Date…………………………

Witness signature…………………………………………………………………….

<u>সম্মতিপত্র</u>

প্রিয় অংশগ্রহণকারী,

আমি মোঃসানী হাসনাত মাহমুদ, ঢাকা বিশ্বদ্যিালয় দ্বারা অনুমোদিত "সাইক কলেজ অফ মেডিকেল সায়েন্স এন্ড টেকনোলজি" (এস সি এম এস টি) ফিজিওথেরাপি বিভাগে ব্যাচেলর অফ ফিজিওথেরাপি প্রোগ্রামের ছাত্র।

আমার ব্যাচেলর ডিগ্রীর আংশিক পূর্ণতার জন্য একটি গবেষণা করছি। গবেষণার শিরোনামটি হলো-

" ঢাকা উত্তর শহরের ঘাড়ে ব্যথায় আক্রান্ত তরুণ প্রাপ্তবয়স্কদের মধ্যে স্বাস্থ্য সম্পর্কিত জীবনযাত্রার মান।।"

এখানে সামাজিক জনসংখ্যা সংক্রান্ত তথ্য, স্বাস্থ্যগত আচরণ অবস্থা অন্তর্ভূক্ত করে এমন প্রশ্নের একটি তালিকা রয়েছে যা আপনাকে পূরণ করতে হবে। এটি প্রায় ১৮-২৫ মিনিট সময় নেবে সম্পূর্ণ তথ্য সংগ্রহ করার জন্য আমাকে একবার আপনার সাথে সাক্ষাৎ করতে হবে। আমি আপনাকে জানাতে চাই যে, এটি সম্পূর্ণ একটি একাডেমিক অধ্যয়ন এবং প্রাপ্ত তথ্য অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। আপনার দ্বারা প্রাপ্ত সমস্ত তথ্য গোপন রাখা হবে এবং তথ্যের উৎসও বেনামী থাকবে, এই গবেষণায় আপনার অংশগ্রহণ স্বেচ্ছায় এবং সেই সাথে সাক্ষাৎকারের সময় আপনি পছন্দ করেন না বা উত্তর দিতে চান না এমন প্রশ্নের উত্তর না দেওয়ার অধিকার আপনার রয়েছে।

আমি শুরু করার আগে আপনার কোন প্রশ্ন আছে ?

তাহলে, সাক্ষাৎকার নিয়ে এগিয়ে যেতে আমি কি আপনার সম্মতি পেতে পারি ?

- হ্যা
- না

অভিভাবকের স্বাক্ষরঃ   তারিখঃ

গবেষকের স্বাক্ষরঃ   তারিখঃ

ঠিকানাঃ   মোবাইলঃ

স্বাক্ষীর স্বাক্ষরঃ

APPENDIX-C

QUESTIONNAIRE (English):

Title

Health related quality of life among young adults with neck pain in North Dhaka City.

Date:...............

Code no:

Participant

Name
:..

Address :...

Mobile No **:..**

A. SOCIODEMOGRAPHIC INFORMATION

Serial No:	Question	Response	Code
1	Age of the participant	1= 18-28 2= 28-38 3= 38-48	
2	Sex of the participant	1= Male 2= Female 3= Others	

3	Religion of the participant	1= Islam 2= Hindu 3= Christian 4= Buddhist 5= Others	
4	Education level	1= PSC 2= JSC 3= SSC 4= HSC 5= Masters 6= PhD 7= Others	
5	Marital Status	1= Single 2= Married 3= Divorced 4= Separated 5= Others	
6	Family type	1= Nuclear 2= extended 3= Others	
7	Living area	1= Rural 2= Semi-urban 3= Urban 4= Others	

B. Health related quality of life Assessed by 15D scale.

Question 1. Mobility

1. I am able to walk normally (without difficulty) indoors, outdoors, and on stairs.
2. I am able to walk without difficulty indoors, but outdoors and/or on stairs I have slight difficulties.
3. I am able to walk without help indoors (with or without an appliance), but outdoors and/or on stairs only with considerable difficulty or with help from others.
4. I am able to walk indoors only with help from others.
5. I am completely bed ridden and unable to move about.

Question 2. Vision

1. I see normally; that is, I can read newspapers and TV text without difficulty (with or without glasses).
2. I can read papers and/or TV text with slight difficulty (with or without glasses).
3. I can read papers and/or TV text with considerable difficulty (with or without glasses).
4. I cannot read papers or TV text either with glasses or without, but I can see enough to walk about without guidance.
5. I cannot see enough to walk about without a guide; that is, I am almost or completely blind.

Question 3. Hearing

1. I can hear normally; that is, normal speech (with or without a hearing aid).
2. I hear normal speech with a little difficulty.
3. I hear normal speech with considerable difficulty; in conversation I need voices to be louder than normal.
4. I hear even loud voices poorly; I am almost deaf.
5. I hear even loud voices poorly; I am almost deaf.

Question 4. Breathing

1. I am able to breathe normally; that is, with no shortness of breath or other breathing difficulty.
2. I have shortness of breath during heavy work or sports, or when walking briskly on flat ground or slightly uphill.
3. I have shortness of breath when walking on flat ground at the same speed as

others my age.
4. I get shortness of breath even after light activity—for example, washing or dressing myself.
5. I have breathing difficulties almost all the time, even when resting.

Question 5. Sleeping

1. I am able to sleep normally; that is, I have no problems with sleeping.
2. I have slight problems with sleeping—for example, difficulty in falling asleep, or sometimes waking at night.
3. I have slight problems with sleeping—for example, difficulty in falling asleep, or sometimes waking at night.
4. I have great problems with sleeping—for example, having to use sleeping pills often or routinely, or usually waking at night and/or too early in the morning.
5. I suffer severe sleeplessness—for example, sleep is almost impossible even with full use of sleeping pills, or staying awake most of the night.

Question 6. Eating

1. I am able to eat normally; that is, with no help from others.
2. I am able to eat by myself with minor difficulty (for example, slowly, clumsily, shakily, or with special appliances).
3. I need some help from another person in eating.
4. I am unable to eat by myself at all, so I must be fed by another person.
5. I am unable to eat at all, so I am fed either by tube or intravenously.

Question 7. Speech

1. I am able to speak normally; that is, clearly, audibly, and fluently.
2. I have slight speech difficulties—for example, occasional fumbling for words, mumbling, or changes of pitch.
3. I can make myself understood, but my speech is—for example, disjointed, faltering, stuttering, or stammering.
4. Most people have great difficulty understanding my speech.
5. I can only make myself understood by gestures.

Question 8. Elimination

1. My bladder and bowel work normally and without problems.
2. I have slight problems with my bladder and/or bowel function—for example, difficulties with urination, or loose or hard bowels.
3. I have marked problems with my bladder and/or bowel function—for example, occasional ‘‘accidents’’, or severe constipation or diarrhoea.
4. I have serious problems with my bladder and/or bowel function—for example, routine ‘‘accidents’’, or need of catheterisation or enemas.
5. I have no control over my bladder and/or bowel Function.

Question 9. Usual activities

1. I am able to perform my usual activities (for example, employment, studying, housework, free time activities) without difficulty.
2. I am able to perform my usual activities slightly less effectively or with minor difficulty.
3. I am able to perform my usual activities much less effectively, with considerable difficulty, or no completely.
4. I can only manage a small proportion of my previously usual activities.
5. I am unable to manage any of my previously usual activities.

Question 10. Mental function

1. I am able to think clearly and logically, and my memory functions well.
2. I have slight difficulties in thinking clearly and logically, or my memory sometimes fails me.
3. I have marked difficulties in thinking clearly and logically, or my memory is somewhat impaired.
4. I have great difficulties in thinking clearly and logically, or my memory is seriously impaired.
5. I am permanently confused and disoriented in place and Time.

Question 11. Discomfort and symptoms

1. I have no physical discomfort or symptoms—for example, pain, ache, nausea, itching, etc.
2. I have mild physical discomfort or symptoms—for example, pain, ache, nausea, itching, etc.
3. I have marked physical discomfort or symptoms—for example, pain, ache,

nausea, itching, etc.

4. I have severe physical discomfort or symptoms—for example, pain, ache, nausea, itching, etc.
5. I have unbearable physical discomfort or symptoms—for example, pain, ache, nausea, itching, etc.

Question 12. Depression

1. I do not feel at all sad, melancholic, or depressed.
2. I feel slightly sad, melancholic, or depressed.
3. I feel moderately sad, melancholic, or depressed.
4. I feel very sad, melancholic, or depressed.
5. I feel extremely sad, melancholic, or depressed.

Question 13. Distress

1. I do not feel at all anxious, stressed, or nervous.
2. I feel slightly anxious, stressed, or nervous.
3. I feel moderately anxious, stressed, or nervous.
4. I feel very anxious, stressed, or nervous.
5. I feel extremely anxious, stressed, or nervous.

Question 14. Vitality

1. I feel healthy and energetic.
2. I feel slightly weary, tired, or feeble.
3. I feel moderately weary, tired, or feeble.
4. I feel very weary, tired, or feeble, almost exhausted.
5. I feel extremely weary, tired, or feeble, totally Exhausted.

Question 15. Sexual activity

1. My state of health has no adverse effect on my sexual activity.
2. My state of health has a slight effect on my sexual activity.
3. My state of health has a considerable effect on my sexual activity.
4. My state of health makes sexual activity almost impossible.

5. My state of health makes sexual activity impossible.

[প্রশ্নপত্র (বাংলা):]

শিরোনাম

ঢাকা উত্তর শহরের ঘাড়ে ব্যথায় আক্রান্ত তরুণ প্রাপ্তবয়স্কদের মধ্যে স্বাস্থ্য সম্পর্কিত জীবনযাত্রার মান।

তারিখ:...............

কোড নং:

অংশগ্রহণকারীর নাম...

ঠিকানা............................

মোবাইল নাম্বারt ....

ক. সামাজিক জনসংখ্যা সংক্রান্ত তথ্য

সিরিয়াল না	প্রশ্ন	প্রতিক্রিয়া	কোড
১	অংশগ্রহণকারীর বয়স	১= ১৮-২৮ ২= ২৮-৩৮ ৩= ৩৮-৪৮	
২	অংশগ্রহণকারীর লিঙ্গ	১ = পুরুষ ২ = মহিলা ৩ = অন্যান্য	
৩	অংশগ্রহণকারীর ধর্ম	১ = ইসলাম ২ = হিন্দু ৩ = খ্রিস্টান ৪ = বৌদ্ধ ৫ = অন্যান্য	
৪	শিক্ষা স্তর	১ = পিএসসি ২ = জেএসসি ৩ = এসএসসি ৪ = এইচএসসি ৫ = মাস্টার্স ৬ = পিএইচডি ৭ = অন্যান্য	
৫	বৈবাহিক অবস্থা	১ = একা ২ = বিবাহিত ৩ = তালাকপ্রাপ্ত	

		৪ = বিচ্ছিন্ন ৫ = অন্যান্য	
৬	পারিবারিক ধরন	১ = পারমাণবিক ২ = বর্ধিত ৩ = অন্যান্য	
৭	জীবিত এলাকা	১ = গ্রামীণ ২ = আধা-শহুরে ৩ = শহুরে ৪ = অন্যান্য	

খ. ১৫ডি স্কেল দ্বারা মূল্যায়ন করা স্বাস্থ্য সম্পর্কিত জীবনের মান

প্রশ্ন ১. গতিশীলতা

১. আমি ঘরের ভিতরে, বাইরে এবং সিঁড়িতে স্বাভাবিকভাবে (অসুবিধা ছাড়া) হাঁটতে সক্ষম।
২. আমি বাড়ির ভিতরে অসুবিধা ছাড়াই হাঁটতে পারি, কিন্তু বাইরে এবং/অথবা সিঁড়িতে আমার সামান্য অসুবিধা হয়।
৩. আমি বাড়ির ভিতরে (কোনও যন্ত্র সহ বা ছাড়া) সাহায্য ছাড়াই হাঁটতে পারি, কিন্তু বাইরে এবং/অথবা সিঁড়িতে শুধুমাত্র যথেষ্ট অসুবিধায় বা অন্যদের সাহায্যে।
৪. আমি কেবল অন্যদের সাহায্যে বাড়ির ভিতরে হাঁটতে পারি।
৫. আমি পুরোপুরি বিছানায় শুয়ে আছি এবং চলাফেরা করতে পারছি না।

প্রশ্ন ২. দৃষ্টি

১. আমি সাধারণত দেখি; অর্থাৎ, আমি অসুবিধা ছাড়াই সংবাদপত্র এবং টিভি পাঠ্য পড়তে পারি (চশমা সহ বা ছাড়া।
২. আমি সামান্য অসুবিধা (চশমা সহ বা ছাড়া) কাগজপত্র এবং/অথবা টিভি পাঠ্য পড়তে পারি।
৩. আমি যথেষ্ট অসুবিধার সাথে কাগজপত্র এবং/অথবা টিভি পাঠ্য পড়তে পারি (চশমা সহ বা ছাড়া।

৪. আমি চশমা সহ বা ছাড়া কাগজপত্র বা টিভি পাঠ্য পড়তে পারি না, তবে আমি নির্দেশনা ছাড়াই চলাফেরা করতে যথেষ্ট দেখতে পারি।
৫. গাইড ছাড়া চলাফেরা করার জন্য আমি যথেষ্ট দেখতে পাচ্ছি না; অর্থাৎ, আমি প্রায় বা সম্পূর্ণ অন্ধ।

প্রশ্ন ৩. শুনানি

১. আমি সাধারণত শুনতে পারি; অর্থাৎ, স্বাভাবিক বক্তৃতা (শ্রবণযন্ত্র সহ বা ছাড়া।
২. আমি একটু কষ্ট করে স্বাভাবিক বক্তৃতা শুনি।
৩. আমি যথেষ্ট অসুবিধা সহ স্বাভাবিক বক্তৃতা শুনি; কথোপকথনে আমার কণ্ঠস্বর স্বাভাবিকের চেয়ে উচ্চতর হতে হবে।
৪. আমি এমনকি উচ্চস্বরে খারাপভাবে শুনতে পাই; আমি প্রায় বধির।
৫. আমি এমনকি উচ্চস্বরে খারাপভাবে শুনতে পাই; আমি প্রায় বধির।

প্রশ্ন ৪. শ্বাসপ্রশ্বাস

১. আমি স্বাভাবিকভাবে শ্বাস নিতে সক্ষম; অর্থাৎ, শ্বাসকষ্ট বা অন্য শ্বাসকষ্ট ছাড়াই।
২. ভারী কাজ বা খেলাধুলার সময়, বা সমতল মাটিতে বা সামান্য চড়াই-উৎরাইতে দ্রুত হাঁটার সময় আমার শ্বাসকষ্ট হয়।
৩. আমার বয়সী অন্যদের মতো একই গতিতে সমতল মাটিতে হাঁটলে আমার শ্বাসকষ্ট হয়।
৪. হালকা কার্যকলাপের পরেও আমার শ্বাসকষ্ট হয়-উদাহরণস্বরূপ, নিজেকে ধোয়া বা পোশাক পরা।
৫. আমার প্রায় সব সময় শ্বাসকষ্ট হয়, এমনকি বিশ্রামের সময়ও।

প্রশ্ন ৫. ঘুমাচ্ছে

১. আমি স্বাভাবিকভাবে ঘুমাতে সক্ষম; অর্থাৎ আমার ঘুমের কোন সমস্যা নেই।
২. আমার ঘুমের সাথে সামান্য সমস্যা আছে-উদাহরণস্বরূপ, ঘুমাতে অসুবিধা, বা কখনও কখনও রাতে জেগে উঠতে।
৩. আমার ঘুমের সাথে সামান্য সমস্যা আছে-উদাহরণস্বরূপ, ঘুমাতে অসুবিধা, বা কখনও কখনও রাতে জেগে উঠতে।
৪. ঘুমের সাথে আমার অনেক সমস্যা আছে-উদাহরণস্বরূপ, প্রায়ই বা নিয়মিতভাবে ঘুমের বড়ি ব্যবহার করতে হয়, বা সাধারণত রাতে এবং/অথবা খুব ভোরে ঘুম থেকে উঠে।
৫. আমি তীব্র নিদ্রাহীনতায় ভুগছি-উদাহরণস্বরূপ, ঘুমের ওষুধের সম্পূর্ণ ব্যবহার বা

বেশিরভাগ রাত জেগে থাকা সত্ত্বেও ঘুম প্রায় অসম্ভব।
প্রশ্ন ৬. খাওয়া ১. আমি স্বাভাবিকভাবে খেতে সক্ষম; অর্থাৎ, অন্যদের সাহায্য ছাড়াই। ২. আমি ছোটখাটো অসুবিধার সাথে একাই খেতে পারি (উদাহরণস্বরূপ, ধীরে ধীরে, আনাড়িভাবে, নড়বড়ে, বা বিশেষ যন্ত্রপাতি দিয়ে। ৩. খাওয়ার ব্যাপারে আমার অন্য একজনের সাহায্য দরকার। ৪. আমি নিজে নিজে খেতে অক্ষম, তাই আমাকে অন্য একজনকে খাওয়াতে হবে। ৫. আমি কিছুতেই খেতে পারি না, তাই আমাকে নল বা শিরায় খাওয়ানো হয়।
প্রশ্ন ৭. বক্তৃতা ১. আমি স্বাভাবিকভাবে কথা বলতে সক্ষম; অর্থাৎ স্পষ্টভাবে, শ্রুতিমধুর এবং সাবলীলভাবে। ২. আমার বক্তৃতায় সামান্য অসুবিধা আছে(উদাহরণস্বরূপ, শব্দের জন্য মাঝে মাঝে ঝাঁকুনি, বকবক করা, বা পিচ পরিবর্তন। ৩. আমি নিজেকে বোঝাতে পারি, কিন্তু আমার বক্তৃতা হল-উদাহরণস্বরূপ, অসংলগ্ন, ঝগড়া, তোতলানো, বা স্তব্ধ। ৪. বেশিরভাগ লোকের আমার বক্তব্য বুঝতে খুব অসুবিধা হয়। ৫. আমি শুধুমাত্র অঙ্গভঙ্গি দ্বারা নিজেকে বোঝাতে পারি।
প্রশ্ন ৮. নির্মূল ১. আমার মূত্রাশয় এবং অন্ত্র স্বাভাবিকভাবে এবং সমস্যা ছাড়াই কাজ করে। ২. আমার মূত্রাশয় এবং/অথবা অন্ত্রের কার্যকারিতা নিয়ে আমার সামান্য সমস্যা আছে-উদাহরণস্বরূপ, প্রস্রাবের সমস্যা, বা আলগা বা শক্ত অন্ত্র। ৩. আমি আমার মূত্রাশয় এবং/অথবা অন্ত্রের ক্রিয়াকলাপে সমস্যা চিহ্নিত করেছি-উদাহরণস্বরূপ, মাঝে মাঝে ''দুর্ঘটনা'', বা গুরুতর কোষ্ঠকাঠিন্য বা ডায়রিয়া।

৪. আমার মূত্রাশয় এবং/অথবা অন্ত্রের কার্যকারিতা নিয়ে আমার গুরুতর সমস্যা রয়েছে-উদাহরণস্বরূপ, রুটিন্ড দুর্ঘটনা, বা ক্যাথেটারাইজেশন বা এনিমা প্রয়োজন।
৫. আমার মূত্রাশয় এবং/অথবা অন্ত্রের কার্যকারিতার উপর আমার কোন নিয়ন্ত্রণ নেই।

প্রশ্ন ৯. স্বাভাবিক কার্যক্রম

১. আমি আমার স্বাভাবিক ক্রিয়াকলাপগুলি (উদাহরণস্বরূপ, কর্মসংস্থান, অধ্যয়ন, বাড়ির কাজ, অবসর সময়ে কাজগুলি) অসুবিধা ছাড়াই সম্পাদন করতে পারি।
২. আমি আমার স্বাভাবিক ক্রিয়াকলাপগুলিকে কিছুটা কম কার্যকরীভাবে বা সামান্য অসুবিধা সহকারে সম্পাদন করতে পারি।
৩. আমি আমার স্বাভাবিক ক্রিয়াকলাপগুলি অনেক কম কার্যকরভাবে সম্পাদন করতে সক্ষম, যথেষ্ট অসুবিধা সহ, বা সম্পূর্ণরূপে না।
৪. আমি শুধুমাত্র আমার পূর্বের স্বাভাবিক ক্রিয়াকলাপের একটি ছোট অনুপাত পরিচালনা করতে পারি।
৫. আমি আমার আগের স্বাভাবিক ক্রিয়াকলাপগুলির কোনও পরিচালনা করতে অক্ষম।

প্রশ্ন ১০. মানসিক কাজ

১. আমি স্পষ্টভাবে এবং যৌক্তিকভাবে চিন্তা করতে সক্ষম, এবং আমার মেমরি ভাল কাজ করে।
২. পরিষ্কারভাবে এবং যৌক্তিকভাবে চিন্তা করতে আমার সামান্য অসুবিধা আছে, অথবা আমার স্মৃতি কখনও কখনও আমাকে ব্যর্থ করে দেয়।
৩. আমি স্পষ্টভাবে এবং যৌক্তিকভাবে চিন্তা করতে অসুবিধা চিহ্নিত করেছি, বা আমার স্মৃতিশক্তি কিছুটা দুর্বল।
৪. স্পষ্টভাবে এবং যৌক্তিকভাবে চিন্তা করতে আমার অনেক অসুবিধা আছে, অথবা আমার স্মৃতিশক্তি গুরুতরভাবে দুর্বল।
৫. আমি স্থান এবং সময় স্থায়ীভাবে বিভ্রান্ত এবং দিশেহারা।

প্রশ্ন ১১. অস্বস্তি এবং উপসর্গ

১. আমার কোন শারীরিক অস্বস্তি বা উপসর্গ নেই-যেমন, ব্যথা, ব্যাথা, বমি বমি ভাব, চুলকানি ইত্যাদি।
২. আমার হালকা শারীরিক অস্বস্তি বা উপসর্গ আছে্ড়যেমন, ব্যথা, ব্যথা, বমি বমি ভাব, চুলকানি ইত্যাদি।
৩. আমি শারীরিক অস্বস্তি বা লক্ষণগুলি চিহ্নিত করেছি - যেমন, ব্যথা, ব্যথা, বমি বমি

ভাব, চুলকানি ইত্যাদি।

৪. আমার গুরুতর শারীরিক অস্বস্তি বা উপসর্গ আছে-যেমন, ব্যথা, ব্যথা, বমি বমি ভাব, চুলকানি ইত্যাদি।
৫. আমার অসহ্য শারীরিক অস্বস্তি বা উপসর্গ আছে-যেমন, ব্যথা, ব্যথা, বমি বমি ভাব, চুলকানি ইত্যাদি।

প্রশ্ন ১২. বিষণ্নতা

১. আমি মোটেও দু: খিত, বিষন্ন বা বিষণ্ণ বোধ করি না।
২. আমি কিছুটা দু: খিত, বিষন্ন বা বিষণ্ণ বোধ করি।
৩. আমি মাঝারিভাবে দু: খিত, বিষন্ন বা বিষণ্ণ বোধ করি।
৪. আমি খুব দু: খিত, বিষন্ন, বা বিষণ্ণ বোধ করি।
৫. আমি অত্যন্ত দু: খিত, বিষন্ন বা বিষণ্ণ বোধ করি।

প্রশ্ন ১৩. কষ্ট

১. আমি মোটেও উদ্বিগ্ন, চাপ বা নার্ভাস বোধ করি না।
২. আমি সামান্য উদ্বিগ্ন, চাপ, বা নার্ভাস বোধ করি।
৩. আমি মাঝারিভাবে উদ্বিগ্ন, চাপ বা নার্ভাস বোধ করি।
৪. আমি খুব উদ্বিগ্ন, চাপ, বা নার্ভাস বোধ করি।
৫. আমি অত্যন্ত উদ্বিগ্ন, চাপ, বা নার্ভাস বোধ করি।

প্রশ্ন ১৪. প্রাণশক্তি

১. আমি সুস্থ ও উদ্যমী বোধ করি।
২. আমি কিছুটা ক্লান্ত, ক্লান্ত বা দুর্বল বোধ করি।
৩. আমি মাঝারিভাবে ক্লান্ত, ক্লান্ত বা দুর্বল বোধ করি।
৪. আমি খুব ক্লান্ত, ক্লান্ত, বা দুর্বল, প্রায় ক্লান্ত বোধ করি।
৫. আমি অত্যন্ত ক্লান্ত, ক্লান্ত, বা দুর্বল, সম্পূর্ণরূপে ক্লান্ত বোধ করি।

প্রশ্ন ১৫. যৌন কার্যকলাপ

১. আমার স্বাস্থ্যের অবস্থা আমার যৌন কার্যকলাপের উপর কোন বিরূপ প্রভাব ফেলে না।
২. আমার স্বাস্থ্যের অবস্থা আমার যৌন কার্যকলাপের উপর সামান্য প্রভাব ফেলে।
৩. আমার স্বাস্থ্যের অবস্থা আমার যৌন কার্যকলাপের উপর যথেষ্ট প্রভাব ফেলে।
৪. আমার স্বাস্থ্যের অবস্থা যৌন কার্যকলাপ প্রায় অসম্ভব করে তোলে।
৫. আমার স্বাস্থ্যের অবস্থা যৌন কার্যকলাপ অসম্ভব করে তোলে।

APPENDIX-D **Gantt Chart**

Activities/ Month	July 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23
Proposal presentation												
Introduction												
Literature review												
Methodology												
Data collection												
Result												
1St presentation												
Discussion												
Conclusion and recommendation												
2nd progress presentation												
Communication												
Final submission												