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Musculoskeletal Symptoms and Health-Related Quality of Life among Housewives at Kholamora Union in Dhaka District

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Bachelor of Science in Physiotherapy (B.Sc. PT)

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Submitted by **Tuly Akter** for the partial fulfillment of the requirement for the degree of Bachelor of Science in Physiotherapy.

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DECLARATION

I declare that this is all my own work and has not been previously submitted for assessment and it does not contain unreferenced material copied from any other sources. I am aware about plagiarism, if it is shown that material has been plagiarized or have otherwise attempted to obtain an unfair advantage for myself or others, I understand that I may face sanctions in accordance with the policies and procedures of the Institute. A mark zero may be awarded and the reason for that mark will be recorded on my file.

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LIST OF ACROMYMS

BDT	**:**	Bangladeshi Taka
BMI	**:**	Body Mass Index
HRQoL	**:**	Health-Related Quality of Life
MSDs	**:**	Musculoskeletal Disorders
MSK	**:**	Musculoskeletal
MSS	**:**	Musculoskeletal Symptoms
QoL	**:**	Quality of Life
SPSS	**:**	Statistical Package for Social Sciences
WHO	**:**	World Health Organization
WMSDs	**:**	Work-Related Musculoskeletal disorders

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ABSTRACT

Introduction: Musculoskeletal symptoms refer to a wide range of complaints which involve the muscles, bones, joints, tendons, ligaments and nearby soft tissues. These may present as pain, stiffness, swelling, tenderness, weakness, numbness and can affect specific regions like the back, neck or joints. Musculoskeletal symptoms are frequently seen in housewives due to the nature of their daily household work. **Objective:** To determine the prevalence of musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district. **Methodology:** This was a descriptive type of cross-sectional study to determine musculoskeletal symptoms and HRQoL among housewives at Kholamora union in Dhaka district using a sample of 272. Interviews and phone calls using a pre-tested questionnaire were used to collect data. Symptoms severity was assessed using the HRQoL questionnaire and chi-square testing along with additional analysis were performed using SPSS. **Results:** The mean age of the participants was 46.5 years (SD = 15.0). 38.2% had primary education, 32.2% completed intermediate level, 25% were illiterate and 4.6% had secondary or higher education. A large majority 93.4% reported musculoskeletal symptoms in the past month. Pain intensity during household work was mostly moderate 73%, with 14.5% reporting mild and 12.5% severe pain. Based on the HRQoL almost all participants described their health as fair 98.0%. Only a few reported their health as poor 1.3% and just 0.7% said their health was good. **Conclusion:** Housewives commonly suffer from musculoskeletal problems especially in the hip, knee and neck. Pain affects their daily work and overall health. Factors like age, education, income, children and marriage years increase the risk. Physiotherapy, ergonomic support and awareness can improve their quality of life.

Key Words: *Household activities, Housewives, Low back pain, Musculoskeletal pain, Musculoskeletal Disorders.*

CHAPTER-I INTRODUCTION

1.1 Background:

A vast range of physical ailments affecting muscles, bones, joints, ligaments, tendons and supporting soft tissues are referred to as musculoskeletal (MSK) symptoms (Norouzi et al. 2023, p. 617). These symptoms which can happen while moving or when at rest usually show up as pain, stiffness, swelling, weakness, numbness, tingling sensations and discomfort (Karandikar et al. 2021, p. 227). They frequently develop gradually as a result of repetitive activities, ongoing stress, bad posture or overuse of specific body parts during daily duties rather than being the direct result of trauma or acute injuries (El-Tallawy et al. 2021, p. 181).

Musculoskeletal pain is a widespread occurrence that can happen at any point in life. While chronic pain develops gradually as a result of age-related degeneration or repetitive stress acute MSK pain may be the consequence of recent strain or damage. These symptoms have a major impact on peoples ability to perform daily tasks (Gupta and Nandini 2015, p. 313). Due to chronic pain and restricted mobility those who are impacted frequently have both physical and psychological costs particularly when symptoms disrupt regular household or work-related tasks (Sharma et al. 2019, p. 130).

The five main body regions that are usually associated with musculoskeletal discomfort are the head, neck, trunk, lower limbs and upper limbs. According to epidemiological data women experience more discomfort than men in the majority of these places (Mondal and Bhattacharjee 2022, p. 252). For example because of their everyday household duties women are more prone to chronic lower back pain which frequently coexists with discomfort in other body areas like the neck, shoulders or wrists (Nazish, Charles and Kumar 2020, p. 215). Musculoskeletal problems rank among the most frequently reported medical conditions worldwide. It is estimated that 1.7 billion people worldwide suffer with MSK conditions making them the fourth most common health issue (Punnett and Wegman 2015, p. 13).

In low-income countries musculoskeletal symptoms are reported by about one-fourth of the population particularly by those working in labor-intensive or informal sector

occupations (Andarini et al. 2019, p. 1). These symptoms cause daily discomfort that makes it difficult to carry out daily chores which significantly lowers productivity and general quality of life (Gasibat, Simbak and Aziz 2017, p. 27).

Several studies have found that women have a higher tendency than men to face MSK symptoms. Numerous anatomical, hormonal and occupational factors are believed to be the cause of this disparity (Fazli et al. 2016, p. 53). The skeletal architecture, lesser muscle mass and differing hormonal cycles of females typically affect how pain is perceived and how much weight is supported by joints and muscles (Jacob and Ying 2020, p. 817). Women usually perform household and professional responsibilities that call for prolonged periods of static posture or repeated movement (Karla and Bhatnagar 2017, p. 2395).

For example housewives frequently engage in a variety of physically taxing activities without ergonomic assistance. The musculoskeletal system may experience chronic tension from daily tasks such lifting, cleaning, cooking and child care (Chung et al. 2012, p. 144). When these physically demanding and repeated activities are performed without adequate they can lead to chronic discomfort and cumulative harm. This eventually results in decreased functionality and a decreased capacity to participate in social and domestic activities (Razavi et al. 2012, p. 395).

Musculoskeletal problems especially in women are determined by various demographic and behavioral components. The development of MSK symptoms is influenced by a number of factors including age, body weight, body mass index (BMI), education level, healthcare access, time spent on household tasks and the quality of social support (Apostoli et al. 2012, p. 421). Due to their increased participation in physically demanding household tasks and lack of access to ergonomic equipment or preventative healthcare women with lower socioeconomic status are frequently more impacted (Dhone and Khare 2017, p. 39).

The risk of strain and injury is further increased by poor body mechanics such as bending incorrectly, lifting large objects unsupported or maintaining bad posture (Chan et al. 2017, p. 1). Many housewives don't get any official instruction on ergonomics or safe lifting methods. Years of prolonged tension often lead to musculoskeletal

dysfunction which can either last or get worse as people age (Hasan and Uddin 2016, p. 40). Domestic work requires a lot of mental, emotional and physical energy particularly in societies where women are largely in charge of taking care of the home. Cooking, cleaning, laundry, child care and providing care for ailing or old family members are among the tasks that demand strength and endurance frequently without enough time for relaxation (Shettar and Sherkhane 2017, p. 718). These activities are mostly unregulated and unpaid which puts women at risk for physical strain. These efforts frequently go unappreciated or unacknowledged despite their vital role in society (Vieira et al. 2015, p. 110).

According to the World Health Organization (WHO) women make up around 42% of the workforce worldwide and many of them work in physically demanding or informal industries including household work or agriculture (Clewley et al. 2018, p. 1). For instance more than 60% of Indian women work mostly in the home performing unpaid duties (Sharma et al. 2019, p. 130). Cooking alone can take up about six hours every day and it frequently requires awkward lifting, reaching and prolonged standing. These circumstances expose housewives to comparable health risks and reflect the pressures of industrial workplaces (Norouzi et al. 2023, p. 617).

It is acknowledged that musculoskeletal conditions pose a serious threat to occupational health. Heavy lifting, awkward postures, extended standing or sitting and repetitive motions are some of the employment demands that lead to work-related musculoskeletal diseases (WMSDs) (Ferreira et al. 2010, p. 747). These risk factors are common in homes as well as workplaces, especially for stay at home moms who do physically demanding jobs every day without access to ergonomic facilities (Habib, Fathallah and Messing 2010, p. 28).

Research indicates that in a variety of work environments women have a higher tendency than males to report having MSK pain. This could be partially explained by the fact that women tend to report lower pain thresholds than males which could result in earlier symptom awareness and reporting (Kaur et al. 2024, p. 340). Women are more strained and more susceptible to physical wear and tear due to the combined weight of job and household duties (Karandikar et al. 2021, p. 227). Life standard is greatly affected when persistent musculoskeletal complaints are present. Prolonged pain can

cause social disengagement, physical restrictions and exhaustion (Gupta and Nandini 2015, p. 313). These symptoms have the potential to weaken motivation over time, affect work output and cause interpersonal stress. Quality of life (QoL) according to the World Health Organizations Quality of Life Group is a broad complex notion that includes a persons views of their environment, goals, values, cultural background and health (Nedjat et al. 2015, p. 61).

Research repeatedly demonstrates that working women have a greater quality of life (QoL) than women who only handle household chores. This could be as a result of working women having greater access to health resources, financial independence and social contact (Dhone and Khare 2017, p. 39). Countries have different prevalence rates of musculoskeletal illnesses. Approximately 79% of women in affluent countries like the US will at some point in their lives have MSK symptoms. About half of women in Canada report having comparable problems. According to study, about 35.9% of housewives in India have MSK discomfort. The most common complaint affecting 10.7% of respondents is lower back pain which is followed by upper back pain at 7.9% (Bihari et al. 2013, p. 80133).

The likelihood of getting musculoskeletal problems can be considerably reduced by using ergonomic principles. People can lessen the strain that daily chores place on joints and muscles by encouraging good posture, body mechanics and movement strategies (Rosa et al. 2021, p. 13400). The strain of repeated or demanding household tasks can be reduced with the use of devices such ergonomic kitchen platforms, adjustable seats, cushioned shoes and rest periods (Leino et al. 2015, p. 1881).

Successful preventative initiatives also require early diagnosis, physical therapy, occupational health services and health education (Arju et al. 2020, p. 189). Awareness initiatives that teach posture hygiene, stretching techniques and safe lifting techniques should target both working women and stay at home mothers. Regular exercise and the provision of ergonomic equipment at home can enhance muscle strength, flexibility and resilience (Ohlendorf et al. 2020, p. 8740).

Worldwide musculoskeletal complaints and illnesses place a heavy strain on people, families and healthcare systems. Due to their physical obligations, lack of ergonomic

assistance and restricted access to preventive care women especially housewives face disproportionate risks (Demircioglu, Ozkal and Dag 2022, p. 115). Comprehensive public health policies and community-based interventions are necessary to treat these symptoms which are not solely medical issues but are influenced by social, economic and cultural variables (Manaf et al. 2021, p. 11).

There is a pressing need for ergonomic education proactive healthcare services and focused awareness due to the rising incidence and consequences of MSK disorders especially among women (Razavi et al. 2012, p. 395). Housewives quality of life can be significantly enhanced and the long-term burden of musculoskeletal disorders can be decreased by ensuring improved support for them through accessible rehabilitation services ergonomic measures and policy changes (Vieira et al. 2015, p. 110).

1.2 Justification:

Musculoskeletal symptoms are very common among women who spend most of their time doing household activities. Regular tasks such as cooking, cleaning, carrying water and lifting heavy objects often create extra pressure on muscles and joints. As a result many housewives gradually develop pain and discomfort which may interfere with their daily work. These health problems usually remain unnoticed and are not given much importance compared to other occupational groups. Quality of life is closely related with health conditions. When women suffer from musculoskeletal problems it as well as impacts their structural strength but also influences their mental as well as social well-being. In rural areas like Kholamora union the situation may become worse due to limited healthcare facilities and lack of awareness about prevention. For these reasons it is important to carry out this study in Kholamora union. The findings will help to identify how common musculoskeletal problems are among housewives and how these problems affect their overall quality of life. This knowledge can be useful for raising awareness, planning preventive steps and guiding health professionals and policymakers to improve the health of housewives in rural communities. This research will assist to fill the knowledge gap in this area and ensure a strong base for future research. The outcomes can contribute to the development of evidence-based practice which will benefit both the housewives and the healthcare system in rural settings.

1.3 Research Question:

1. What is the prevalence of musculoskeletal symptoms among housewives at Kholamora union in Dhaka district?

2. What is the level of health-related quality of life among housewives?

1.4 Objectives of the study:

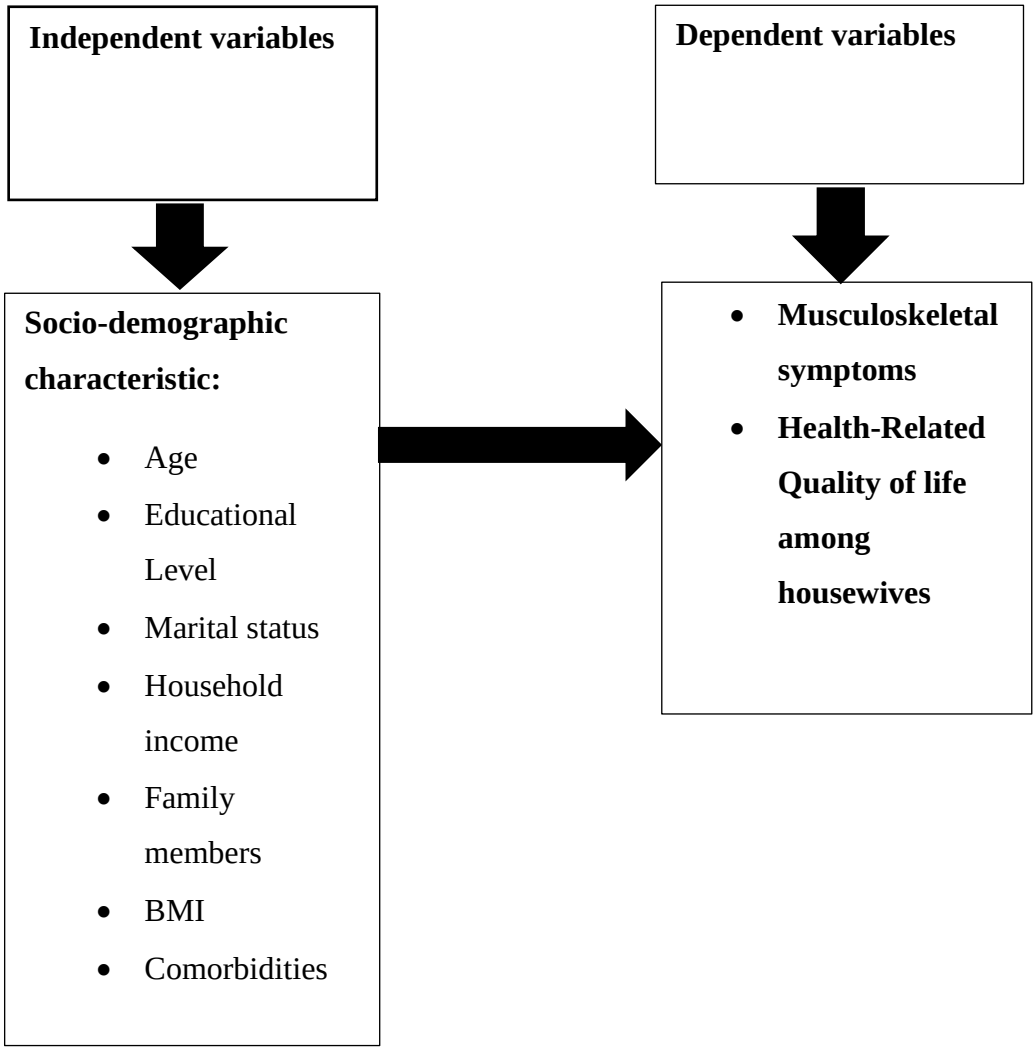
1.4.1 General Objective:

To determine the prevalence of musculoskeletal symptoms and health related quality of life among housewives at Kholamora union in Dhaka district.

1.4.2 Specific Objectives:

I. To evaluate the frequency and distribution of socio-demographic data.
II. To determine the prevalence and types of musculoskeletal symptoms experienced by housewives at Kholamora union in Dhaka district.
III. To evaluate different dimensions of health-related quality of life by Centers for Disease Control and Prevention (CDC) HRQoL-14.
IV. To explore the association between musculoskeletal symptoms and socio-demographic data (age, education).
V. To explore the association between Health-Related Quality of Life (HRQoL) and socio-demographic data (age, education).

1.5 Conceptual Framework



1.6 Operational definition of variables

Musculoskeletal Symptoms

Pain: A feeling of unpleasant sensation that happens when tissues are injured or at risk of damage.

Stiffness: A condition in which movement of a joint or muscle is restricted or difficult.

Swelling: An increase in the size of a body part, usually because of fluid build-up, inflammation or trauma.

Numbness: A condition where the normal sense of touch or feeling is reduced or absent in a body area.

Functional limitation: A difficulty or inability to carry out normal daily activities due to a health condition.

Health-Related Quality of Life (HRQoL)

Health-related quality of life is a multidimensional concept that reflects an individuals overall wellbeing in relation to their physical health, mental state, social interactions and ability to perform daily activities.

Housewives

Housewives are defined as a married woman who primarily focuses on managing household duties and taking care of family needs such as cooking, cleaning and childcare.

CHAPTER-II LITERATURE REVIEW

Musculoskeletal (MSK) pain is an important global problem due to its effects on society and the economy. This kind of pain which may be either short-term or long-term can impact the bones, muscles, tendons, ligaments and nerves among other parts of the musculoskeletal system. Most people will certainly suffer some kind of MSK discomfort at some point in their lives. This discomfort is frequently caused by repetitive strain, trauma, ordinary physical activity or pre-existing musculoskeletal problems (Norouzi et al. 2023, p. 617). These diseases can cause chronic pain that develops over time or sudden-onset pain brought on by injury both of which can impede physical function and lower general well-being (El-Tallawy et al. 2021, p. 181).

Musculoskeletal problems rank second among all medical conditions in terms of disability-adjusted life years making them one of the major causes of impairment worldwide. Their burden goes beyond personal hardship it also significantly strains the healthcare system and lowers the productivity of the impacted population (Sharma et al. 2019, p. 130). Women particularly housewives seem to be disproportionately at risk among these groups since they frequently perform heavy physical labor at home without acknowledgment or institutional support (Karla and Bhatnagar 2017, p. 2395).

There are a number of known contributing factors that increase housewives chance of developing musculoskeletal discomfort. These include diminished economical resources, reduced educational attainment and age-related physiological changes. The risk is increased by the long hours spent handling home duties and the lack of sufficient social or family support (Vieira et al. 2015, p. 110). Women are typically in charge of a wide range of taxing household tasks in many cultures including cooking, cleaning, laundry, fetching water and taking care of the elderly and children. These physically demanding activities are frequently carried out without the appropriate ergonomic gear, consistent rest or sufficient recuperation time (Nazish, Charles and Kumar 2020, p. 215).

Housewives usually perform these duties for a number of hours every day frequently without breaks and in physically demanding positions. Musculoskeletal issues

gradually emerge as a result of the cumulative impact of bad posture, repetitive bending, incorrect lifting techniques and extended periods of standing (Gasibat, Simbak and Aziz 2017, p. 27). Often linked to multitasking and providing care. When early intervention and medical consultation are lacking or postponed, these variables may eventually result in chronic pain, functional restrictions and a lower quality of life (Ohlendorf et al. 2020, p. 8740).

In one study for example 62.2% of participants reported having lower back pain making it the most frequent musculoskeletal discomfort among housewives according to recent research (Razavi et al. 2012, p. 395). This finding agrees with previous studies of rural housewives in Kanpur, India where over 83% of participants voiced comparable grievances. Lower back pain considerably hampered the womens capacity to carry out daily duties in both situations indicating a robust correlation between lumbar musculoskeletal stress and household burden (Preeti and Mehta 2022, p. 13). The long-term effects of untreated musculoskeletal pain could be lessened by increasing awareness, encouraging ergonomic education and including domestic workers in public health planning (Rahman et al. 2011, p. 32). The prevalence of MSK diseases is expected to increase in the absence of such interventions especially among women who perform unpaid domestic work (Mondal and Bhattacharjee 2022, p. 252).

Musculoskeletal discomfort was found to be closely connected with tasks including meal preparation, vegetable slicing. These results are consistent with other studies that highlighted ergonomic flaws such as improper kitchen shelf heights and awkward working positions as major causes of musculoskeletal strain (Punnett and Wegman 2015, p. 13). Lower back pain was shown to be the most common complaint in the current study other studies have found different trends based on the participants demographics and professional backgrounds (Bihari et al. 2013, p. 80133).

Studies comparing working women to housewives found that working women experienced shoulder pain more frequently. This variation illustrates how the location and intensity of musculoskeletal pain can be influenced by variables such as occupation, posture and work environment (Dhone and Khare 2017, p. 39). In Chhattisgarh, India found that 60% of housewives had musculoskeletal ailments which lends credence to these findings. Lower back pain (37.95%), bilateral knee pain (39.27%) and hip

discomfort (19.47%) were the most often reported issues in that group. These regional variations emphasize how local lifestyle choices, customs and home ergonomics shape the occurrence and severity of these illnesses (Gupta and Nandini 2015, p. 313). The study populations narrow focus which exclusively included housewives living in Bahawalpur City was another limitation. Because of this regional limitation the findings cannot be carelessly extended to larger populations. The study did find a numerically strong association between musculoskeletal pain and the amount of time spent on domestic tasks. According to complementary results from research done in North India growing older is a major risk factor (Arju et al. 2020, p. 189). These collective observations imply that a more comprehensive and inclusive approach is required to completely comprehend the complex and multivariate nature of musculoskeletal problems among women who perform domestic work (Vieira et al. 2015, p. 110).

The study overall conclusions clearly show that musculoskeletal pain especially lower back pain which was the highest commonly reported problem is substantially correlated with extended household job engagement. These findings are consistent with other studies carried out in Bangladesh and other areas which also highlighted the negative effects of bad posture and repetitive physical activity on musculoskeletal health (Hasan and Uddin 2016, p. 40). Although the study provided insightful information about the impact of musculoskeletal pain on housewives it also highlighted the need for more research that includes ergonomic evaluations, preventative measures and larger more diverse populations in order to create targeted efficient interventions (El-Tallawy et al. 2021, p. 181). Another research intended to investigate the association between the prevalence of musculoskeletal disorders (MSD) and extent of bodily activity. The outcomes showed that 89% of the female participants had MSD which is a rather high prevalence. This rate is noteworthy particularly in light of Malaysia 50% prevalence among office workers of both sexes (Chung et al. 2013, p. 144).

The study prevalence was higher than that of Iran where 53% of women were afflicted and Lebanon where 77% of women were afflicted (Kaur et al. 2024, p. 340). The rate in this study was somewhat lower than that of housewives in India where the frequency approached 100% because to duties like cleaning and often carrying heavy objects or kids who weighed more than 10 kg. Housekeeping is a significant independent risk factor for women musculoskeletal illnesses according to these comparative data (Habib,

Fathallah and Messing 2010, p. 113). Out of all the different kinds of MSDs the low back showed the greatest occurrence (35.4%) followed by the knees (31.7%), ankles or feet (30.6%) and elbows (30.6%). The least common was 1.2%. Lower back MSDs are the most common ailment according to numerous worldwide researches conducted in nations like Malaysia, Brazil, Italy and Canada (Ahlgren et al. 2012, p. 212). Muscle strains weak postural muscles that lead to instability restricted spinal joint flexibility and spinal disc degeneration or herniation are all contributing factors. Research indicates that the kinds of cleaning equipment women use that require bending and kneeling may contribute to MSDs (Preeti and Mehta 2022, p. 843).

The lower back is severely strained by household tasks that call for uncomfortable postures such as bending, kneeling and working in tight areas to sweep, clean floors, wash clothing or move heavy objects. The spine is stressed by these repetitive bending, twisting, lifting and pushing motions (Vieira et al. 2015, p. 110). Housewives with musculoskeletal diseases frequently have higher body mass index than housewives without such conditions. The frequency of MSDs reported and BMI were found to be significantly correlated in the study. Studies including veterans of the armed forces have found similar associations between greater BMI and more severe pain (Gomez, Suarez and Sosa 2023, p. 100654).

Previous research has also shown a strong association between BMI and musculoskeletal problems affecting the lower back, knees, ankles and feet. MSDs are more likely to affect muscles that are subjected to high levels of mechanical stress (Demircioglu, Ozkal and Dag 2022, p. 115). A higher body mass index (BMI) is associated with an increased risk of metabolic syndrome a collection of conditions that includes obesity, hypertension and excessive blood sugar (Leino et al. 2015, p. 1881).

The greater part of housewives were found to be sedentary with only a small percentage (3.7%) being considered physically active. Although it is less than the abnormally high inactivity recorded in Vietnam (93.5%). Its inactivity rate is higher than that of Laos (8.9%), China (9.1%) and the Philippines (6.4%). In contrast earlier studies conducted in Malaysia revealed that the majority of people, regardless of age or occupation, regularly participate in physical activity (66.5%) (Sharma et al. 2019, p. 130). The study looked at 100 housewives prevalence of MSDs and the factors that contribute to them.

32.9% within the age range of 20 and 30, 20.2% within the age range of 40-50 and 46.8% were between the ages of 30 and 40. The incidence of MSDs among housewives is demonstrated by the noteworthy 79% of respondents who reported having them in one or more body parts. These findings are consistent with previous research that indicated that all housewives in Delhi and Noida, India have musculoskeletal issues (Karla and Bhatnagar 2017, p. 2395). 46.8% of participants said that MSDs affected various body locations further highlights the scope of the problem. The lower back (21.5%), neck (19%), knees (10.1%) and shoulders/elbows (1.3%) were the most frequently affected areas. Similar trends were observed in comparison with lower back problems accounting for the majority (19%), knees (17%) and feet/ankles (14.7%).

Environmental, lifestyle, cultural and household duty factors that influence the prevalence and distribution of MSDs may be the cause of these variations between studies (Jacob and Ying 2020, p. 817). A number of risk factors such as physically demanding tasks and postures that put pressure on the body contribute to the development of MSDs in housewives (Shettar and Sherkhane 2017, p. 718). Another important aspect was body mass index (BMI) which in this study showed that 48.1% of overweight women had MSDs. Being overweight probably puts more mechanical strain on tissues and joints, which results in pain, discomfort and decreased mobility (Rosa et al. 2021, p. 13400).

According to earlier studies women who have more dependents experience increased duties, stress and less free time all of which might contribute to the onset of MSDs. These findings are supported by the fact that 50.63% of the housewives surveyed here reported having MSDs and 40% of them had more than four children. Long-term participation in domestic duties raises the risk of MSDs (Gasibat, Simbak and Aziz 2017, p. 27). Prolonged physical exertion and repetitive motions which wear down and strain various body parts. According to this study a 54.4% prevalence of MSDs was reported by 43% of women who worked 5-8 hours a day on housework. When doing housekeeping for at least four hours a day five days a week 36% of housewives reported having MSDs especially lower back pain (Habib, El Zein and Hojeij 2012, p. 201).

Cooking and dishwashing are two common household chores that involve extended standing and repeated hand motions. Mopping and other cleaning duties frequently

require awkward postures due to confined or difficult places (Hawkka et al. 2012, p. 485). According to the survey 40.50% of women worked in childcare and other domestic tasks and 59.49% of women cooked (Chung et al. 2012, p. 144). 23% of housewives reported receiving help with household chores with 13% specifically receiving aid with sweeping and washing according to the research. More people with domestic help reported shoulder and neck pain than other joint pain (Manaf et al. 2021, p. 11).

Compared to part-time housewives full-time housewives devote more time and effort to domestic duties like childcare, cleaning, cooking and money management (Gupta and Nandini 2015, p. 313). 47% of housewives in this study said they regularly exercised which supports the result that just 23.8% of housewives participated in physical activities including jogging, cycling and walking. Studies have shown that consistent exercise increases muscle strength, flexibility and endurance which improves posture, lowers tiredness, speeds up recovery and enhances everyday functional performance (Jacob and Ying 2020, p. 817).

According to the report, 44.3% of housewives avoided doing chores because they were in excruciating discomfort. Of those who sought medical attention 50% went to general practitioners, 26% to orthopedic specialists and 12% to physiotherapists. But just 60% of people who consulted a doctor followed their treatment plans. Social conventions that frequently emphasize medication as the main method of health treatment may have an impact on this disparity (Nazish, Charles and Kumar 2020, p. 215).

CHAPTER-III METHODOLOGY

3.1 Study Design:

This was a descriptive type of cross-sectional study to determine the prevalence of musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district.

3.2 Study Area:

The data for this study were collected from Kholamora union in Dhaka district.

3.3 Study Place:

The present study was conducted at Saic College of Medical Science and Technology (SCMST) at Mirpur in Dhaka city.

3.4 Study Period:

The duration of the study was June 2024 to July 2025.

3.5 Study Population:

The study population was housewives whose ages were between 20 to 79 years at Kholamora union in Dhaka district.

3.6 Sample Size:

To determine the sample size for the study on musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district the following formula for sample size estimation in cross-sectional studies was used:

Formula:

$$n = \frac{Z^2 pq}{d^2}$$

$$= \frac{1.96^2 \times 0.77 \times 0.23}{0.05^2}$$

$$= 272$$

Here,

z (confidence interval) =1.96

p (prevalence) = 0.77 (Habib et al., 2012, p. 201)

d (margin of error) =0.05

And, *q* = (1-p)

= (1-0.77)

= 0.23

The actual sample size was, *n* = 272

So, the researcher aims to focus her study by 272 sample following the calculation above initially.

3.7 Sampling Technique:

The study utilized a Convenience sampling technique to select participants from Kholamora union in Dhaka district.

3.8 Eligibility Criteria

3.8.1 Inclusion Criteria:

1. Housewives whose age was between 20 years to 79 years were able to participate (Soares, Sundin and Grossi 2015, p. 181).
2. Who willingly participated.

3.8.1 Exclusion Criteria:

1. Pregnant housewives were excluded from the study.
2. Any case of recent surgery was excluded from the study.
3. Housewives who were involved in any economically productive occupation was Excluded from the study (Kaur et al. 2024, p. 390).

3.9 Method of Data Collection:

3.9.1 Technique of Data Collection:

Data were collected from housewives through face to face interviews.

3.9.2 Instrument and Tools of Data Collection:

Instrument of Data Collection:

A pre-tested structured questionnaire was used for data collection. It was divided into three main sections. The first section focused on socio-demographic information, including age, religion, education, family details, income, height, weight, BMI, number of children and marriage duration. The second section addressed musculoskeletal problems, covering the presence and site of symptoms, duration of household activities and pain intensity during work. The third section assessed Health-Related Quality of Life (HRQoL) using the core healthy days, activity limitations modules and healthy days symptoms module. This part measured general health status, number of physically and mentally unhealthy days, activity limitations due to health conditions and the need for assistance in daily tasks.

Tools of Data Collection:

Measurement tape, weight machine.

Validity and Reliability of CDC HRQoL-14 Questionnaire:

The CDC Health-Related Quality of Life (HRQoL) questionnaire is a widely used tool developed by the Centers for Disease Control and Prevention to assess an individuals perceived physical and mental health overtime. Its validity is supported because it looks at different areas of life such as physical health, mental well-being, social relationships which together give a complete picture of a persons quality of life. Research has also shown that HRQoL scores match well with factors like disease severity daily functioning and overall health which means it truly measures what it is meant to measure. Its reliability is also strong as studies report good internal consistency with Cronbach's alpha usually above 0.70 showing that the questions within each section are closely related. The application of HRQoL in this cross-sectional study provides a standardized, reliable and valid assessment of musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union Dhaka district.

Procedure of Data Collection:

The researcher obtained permission from the Commissioner of Kholamora Union in Dhaka district to conduct the study. Eligible individuals were approached and informed about the study goals and aims. After answering questions individuals signed a written consent form confirming their voluntary participation. Following consent the researcher performed face to face interviews with a standardized questionnaire. The researcher thanked the participants after the interview and all data were recorded in strict confidentiality.

3.10 Data Editing:

After data collection, the completed questionnaires were extensively reviewed for mistakes in the responses. Necessary corrections were done as needed. All responses were adequately coded for analysis.

3.11 Data Entry:

The obtained information was coded and entered into a computer. First, variable names were input into SPSS variable view, together with their types, values, decimals, labels, alignment and measurement levels. After setting up the variables the data were entered into SPSS data view. After all of the data the researcher double checked it to ensure that all of the information from the questionnaire was correctly transcribed into the SPSS data view. Following verification, the raw data was available for SPSS analysis.

3.12 Data Analysis:

The data for the study were analyzed with SPSS (Statistical Package for Social Sciences). Initially the data were cleansed by checking questionnaires for any missing information. In SPSS variable names were entered in the variable view, together with their types, values, decimal places, labels and measurement levels (nominal, ordinal, ratio). Data were then entered into the data view to insure appropriate transcription of the questionnaire. After that descriptive statistic including frequencies, percentages and means were computed. Bivariate analysis including chi-square tests was used to investigate the association between independent and dependent variables. The finding were then evaluated and presented in tables and charts to facilitate comprehension**.**

3.13 Ethical Consideration:

- The research proposal was submitted to the Ethical Review Board (EBR) of Saic College of Medical Science and Technology (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 aims and objectives of the research were explained to every participant before interview and asked for their response. The respondents who gave informed verbal consent included in the study.
- No physical examination or any invasive technique was applied to the participants for the present study. The participant was also informed of her right to discontinue at any point of interview.
- The name, address and personal information of the participants were kept confidential by the investigator.

CHAPTER-IV RESULTS

For the purpose of this research a total of 152 housewives were studied to assess musculoskeletal symptoms and health-related quality of life at Kholamora Union in Dhaka District. The researcher collected descriptive data and calculated frequency, percentages which were then presented in tables. Individual results of the socio-demographic information, musculoskeletal problem-related information and health-related quality of life information are shown in different tables. The associations between musculoskeletal symptoms and socio-demographic variables as well as between health-related quality of life and socio-demographic variables are also presented in tabular form.

4.1 Socio-Demographic Information

Table no. 1: Frequency distribution of respondents according to socio-demographic variables

Variables	Category	Frequency (N)	Percentage (%)
Age	20-29	26	17.1
	30-39	21	13.8
	40-49	39	25.7
	50-59	19	12.5
	60-69	36	23.7
	70-79	11	7.2
	Total	152	100

Age overall (Mean ± SD) 46.49 ±15.040

The majority of participants were aged 40-49 years (25.7%), followed by 60-69 years (23.7%). Other age groups included 20-29 years (17.1%), 30-39 years (13.8%), 50-59 years (12.5%) and 70-79 years (7.2%). The mean age was 46.49 ± 15.040 years.

Table no. 2: Frequency distribution of respondents according to socio-demographic variables

Variables	Category	Frequency (N)	Percentage (%)
Educational Qualification	Illiterate	38	25.0
	Primary Education	58	38.2
	Intermediate	49	32.2
	Secondary or higher	7	4.6
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Household members	1-10	144	94.7
	11-20	8	5.3
	Total	152	100

Most participants had completed primary education (38.2%), followed by intermediate level education (32.2%). Approximately of the participants (25.0%) had no formal education while only a small proportion (4.6%) had completed secondary education or higher. In terms of household size the vast majority (94.7%) lived in households of 1-10 members with only 5.3% in households of 11-20 members.

Table no. 3: Frequency distribution of respondents according to socio-demographic variables

Variables	Category	Frequency (N)	Percentage (%)
Monthly family income (BDT)	10000-20000	78	51.3
	21000-40000	35	23.0
	41000-80000	24	15.8
	81000-120000	15	9.9
	Total	152	100

Monthly family income overall (Mean ± SD) 41625.00 ± 20812.50

Variables	Category	Frequency (N)	Percentage (%)
Body Mass Index	16.0-18.4 (under-weight)	6	3.9
	18.5-24.9 (Normal weight)	66	43.4
	25.0-29.9 (Over weight)	56	36.8
	30-34.9 (Moderately obese)	17	11.2
	35-39.9 (Severely obese)	5	3.3
	Above 40.0 (Morbidly obese)	2	1.3
	Total	152	100

In terms of monthly family income the majority of participants 78 individuals (51.3%), reported earning between BDT 10000 and 20000 per month. A smaller proportion 35 participants (23.0%), had an income ranging from BDT 21000 to 40000. 24 participants (15.8%) earned between BDT 40000 and 80000 while 15 participants (9.9%) reported a monthly income of BDT 81000 to 120000. The overall mean monthly family income was BDT 41625.00 ± 20812.50. In terms of Body Mass Index (BMI) 66 participants (43.4%) fell within the normal range (18.5-24.9) while 56 individuals (36.8%) were classified as overweight (25.0-29.9). A smaller number of participants 17 (11.2%), were moderately obese (30.0-34.9). Underweight participants 7 (3.9%), severely obese participants 5 (3.3%), morbidly obese participants 2 (1.3%) (Table no. 3).

Table no. 4: Frequency distribution of respondents according to socio-demographic variables

Variables	Category	Frequency (N)	Percentage (%)
Number of children	<2	43	28.3
	3-4	88	57.9
	>5	20	13.2
	5	1	0.7
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Marriage duration	<5	2	1.3
	6-10	18	11.8
	11-15	14	9.2
	16-20	14	9.2
	>20	104	68.4
	Total	152	100

The number of children over half of the participants 88 (57.9%) had between 3 and 4 children. 43 participants (28.3%) had fewer than 2 children, 20 participants (13.2%) had more than 5 and only 1 participant (0.7%) had exactly 5 children. As for the duration of marriage the majority 104 participants (68.4%) had been married for over 20 years. A further 18 (11.8%) had been married for 6-10 years, 14 (9.2%) for 11-15 years another 14 (9.2%) for 16-20 years and only 2 participants (1.3%) had been married for less than 5 years.

4.2 Musculoskeletal problem related Information

Table no. 5: Frequency distribution of respondents according to musculoskeletal problem related questions

Variables	Category	Frequency (N)	Percentage (%)
Experienced MSK symptoms in last month	Yes	142	93.4
	No	10	6.6
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Location of pain/discomfort	Neck	19	12.5
	Arms/Elbows	14	9.2
	Hips	97	63.8
	Knees	21	13.8
	Feet	1	0.7
	Total	152	100

In the last month 142 participants (93.4%) reported musculoskeletal (MSK) symptoms, while 10 participants (6.6%) did not. Among the affected body areas, the hips were the most frequently reported site of discomfort, mentioned by 97 participants (63.8%). Neck pain was reported by 19 individuals (12.5%), while 21 (13.8%) experienced knee pain and 14 (9.2%) had pain in the arms or elbows. Only one participant (0.7%) reported discomfort in the feet.

Table no. 6: Frequency distribution of respondents according to musculoskeletal problem related questions

Variables	Category	Frequency (N)	Percentage (%)
Hours spent on household activities	2-4 hours	92	60.5
	4-6 hours	47	30.9
	6-8 hours	10	6.6
	>8 hours	3	2
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Number of participants by pain Intensity during household work	Mild	22	14.5
	Moderate	111	73
	Severe	19	12.5
	Total	152	100

Duration of daily household activities the majority of participants 92 (60.5%) reported spending 2 to 4 hours on such tasks. A further 47 participants (30.9%) spent 4 to 6 hours, 10 participants (6.6%) engaged in household work for 6 to 8 hours and just 3 participants (2.0%) reported working more than 8 hours per day. Concerning pain intensity during household chores, most respondents 111 (73.0%) described their pain as moderate. Meanwhile, 22 individuals (14.5%) reported mild pain, and 19 participants (12.5%) experienced severe pain during these activities.

4.3 Health-Related Quality of Life

Table no. 7: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
General health status	Good	1	0.7
	Fair	149	98.0
	Poor	2	1.3
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Physically unhealthy days	5 days	20	13.2
	10 days	42	27.6
	15 days	90	59.2
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Mentally unhealthy days	5 days	6	3.9
	10 days	21	13.8
	15 days	1	0.7
	None	124	81.6
	Total	152	100

The participants general health revealed that only a very small proportion (0.7%) reported their health as good. The vast majority (98%) rated their health as fair, while just 1.3% described it as poor. In terms of physical health difficulties, more than half of the respondents (59.2%) experienced 15 physically unhealthy days within a month. 27.6% reported 10 days of poor physical health, whereas 13.2% indicated only 5 days of such difficulties. With respect to mental health, a large majority (81.6%) did not report any mentally unhealthy days. However, 13.8% experienced 10 days of mental distress, 3.9% reported 5 days and only 0.7% indicated 15 days of mental health problems (Table no. 7).

Table no. 8: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Days poor health limited activities	5 days	5	3.3
	10 days	8	5.3
	15 days	3	2
	None	136	89.5
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Any activity limitation	Yes	143	94.1
	No	9	5.9
	Total	152	100

The number of days in which poor health restricted daily activities, most respondents (89.5%) experienced no such limitations. 5.3% reported being limited for 10 days, 3.3% for 5 days and 2% for 15 days. 94.1% of participants acknowledged experiencing some form of limitation, only 5.9% reported no limitations.

Table no. 9: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Major impairment type	Arthritis	67	45.6
	Back or neck problem	5	3.4
	Fractures, Bone/joint injury	4	2.7
	Walking problem	22	15.0
	Lung/breathing problem	5	3.4
	Vision problem	1	0.7
	Heart problem	31	21.1
	Diabetes	7	4.8
	Other impairment/problem	5	3.4
	Total	147	100

Among the various impairment types arthritis was the most frequently reported condition (45.6%). Heart problems accounted for 21.1% of cases while walking difficulties were reported by 15%. Other impairments included diabetes (4.8%), back or neck problems (3.4%), lung/breathing difficulties (3.4%), fractures or bone/joint injuries (2.7%), vision problems (0.7%) and other miscellaneous issues (3.4%).

Table no. 10: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Duration of limitation	0-1 weeks	96	65.3
	2-3 weeks	49	33.3
	4 weeks and more	2	1.4
	Total	147	100

Variables	Category	Frequency (N)	Percentage (%)
Needs help for personal care	Yes	5	3.4
	No	142	96.6
	Total	147	100

Activity limitations lasted for 0-1 weeks in 65.3% of participants and for 2-3 weeks in 33.3%, while only 1.4% experienced limitations extending beyond 4 weeks. When considering the need for assistance almost all participants (96.6%) reported not requiring help with personal care while a small proportion (3.4%) did.

Table no. 11: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Needs help for routine tasks	Yes	27	18.4
	No	120	81.6
	Total	147	100

Variables	Category	Frequency (N)	Percentage (%)
Days pain limited activities	5 days	14	9.2
	10 days	40	26.3
	15 days	96	63.2
	None	2	1.3
	Total	152	100

81.6% participants did not require assistance with routine tasks whereas 18.4% reported needing support. Pain-related restrictions were also explored. Most participants (63.2%) reported that pain interfered with their daily activities for 15 days. Another 26.3% reported 10 days of pain-related limitation, 9.2% experienced 5 days and only 1.3% reported no restriction from pain.

Table no. 12: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Days felt sad/depressed	5 days	5	3.3
	10 days	11	7.2
	15 days	5	3.3
	None	131	86.2
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Days felt anxious	5 days	3	2.0
	10 days	9	5.9
	15 days	3	2.0
	None	137	90.1
	Total	152	100

The results indicate that the majority of participants did not frequently experience emotional distress. For sadness or depression 131 participants (86.2%) reported no days feeling sad while 5 participants (3.3%) felt sad for 5 days**,** 11 participants (7.2%) for 10 days and 5 participants (3.3%) for 15 days. In terms of anxiety 137 participants (90.1%) did not feel anxious with 3 participants (2.0%) feeling anxious for 5 days**,** 9 participants (5.9%) for 10 days and 3 participants (2.0%) for 15 days.

Table no. 13: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Days lacked sleep	5 days	8	5.3
	10 days	8	5.3
	15 days	45	29.6
	None	91	59.9
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
Days felt very healthy/energetic	5 days	1	0.7
	10 days	17	11.2
	15 days	134	88.2
	Total	152	100

59.9% of participants did not experience any days of sleep deprivation while 29.6% reported lacking sleep for 15 days. Smaller proportions reported 5 days (5.3%) or 10 days (5.3%) of insufficient sleep. Regarding participants perception of their health and energy, most participants (88.2%) felt very healthy and energetic for 15 days, 11.2% for 10 days and only 0.7% for 5 days.

Table no. 14: Frequency distribution of respondents according to Health-Related Quality of Life

Variables	Category	Frequency (N)	Percentage (%)
Sum of physical + mental unhealthy days	1-10	52	34.2
	11-20	85	55.9
	21-30	15	9.9
	Total	152	100

Variables	Category	Frequency (N)	Percentage (%)
30-unhealthy days	1-10	22	14.5
	11-20	114	75.0
	21-30	16	10.5
	Total	152	100

The combined total of physical and mental unhealthy days 55.9% of participants experienced 11-20 days of poor health, while 34.2% reported 1-10 days and only 9.9% experienced 21-30 days. Looking specifically at 30-day unhealthy days the majority 75% reported 11-20 unhealthy days, 14.5% experienced 1-10 days and 10.5% had 21-30 days.

4.4 Association

Table no. 15: Association between musculoskeletal symptoms and age

Variables	Category	Musculoskeletal symptoms			Chi Square Test	
		Yes	No	Total	$\chi 2$	P-value
Age	20-29	25	1	26	6.469	0.05
	30-39	19	2	21		
	40-49	35	4	39		
	50-59	18	1	19		
	60-69	36	0	36		
	70-79	9	2	11		

Musculoskeletal symptoms were reported across all age groups with the highest number in the 60-69 years age group (36 participants) and the 40-49 years age group (35 participants). The lowest number of participants reporting symptoms was seen in the 70-79 years group (9 participants). The chi-square analysis shows a statistically significant association between age and experienced musculoskeletal symptoms (X^2 = 6.469, p = 0.05) indicating that musculoskeletal symptoms differs significantly across different age categories.

Table no. 16: Association between musculoskeletal symptoms and educational qualification

Variables	Category	Musculoskeletal symptoms			Chi Square Test	
		Yes	No	Total	$\chi 2$	P-value
Educational qualification	Illiterate	35	3	38	0.626	0.006
	Primary Education	54	4	58		
	Intermediate	46	3	49		
	Secondary or higher	7	0	7		

The findings indicate a significant association between education and experienced musculoskeletal symptoms ($X^2 = 0.626$, $p = 0.006$). Specifically among illiterate participants 35 out of 38 reported musculoskeletal symptoms. Similarly 54 out of 58 participants with primary education and 46 out of 49 participants with intermediate education experienced musculoskeletal symptoms. All 7 participants with secondary or higher education also reported musculoskeletal symptoms.

Table no. 17: Association between HRQoL and age

Variables	Category	Activity limitation			Chi Square Test	
		Yes	No	Total	$\chi 2$	P-value
Age	20-29	22	4	26	9.043	0.054
	30-39	19	2	21		
	40-49	36	3	39		
	50-59	19	0	19		
	60-69	36	0	36		
	70-79	11	0	11		

The findings indicate that activity limitation varies across different age groups. The highest number of participants reporting activity limitation was observed in the 40-49 years (36 participants) and 60-69 years (36 participants) age groups. The Chi-square test shows significant association between age and activity limitation ($X^2 = 9.043$, $p = 0.054$).

Table no. 18: Association between HRQoL and educational qualification

Variables	Category	Activity limitation			Chi Square Test	
		Yes	No	Total	$\chi 2$	P-value
Educational qualification	Illiterate	38	0	38	7.425	0.060
	Primary Education	56	2	58		
	Intermediate	43	6	49		
	Secondary or higher	6	1	7		

The findings indicate that activity limitation was reported across all education levels, with the highest number observed among participants with primary education 56 out of 58, followed by intermediate education 43 out of 49, illiterate participants 38 out of 38 and secondary or higher education 6 out of 7. The Chi-square test ($X^2 = 7.425$, $p = 0.060$) suggests that there is significant association between educational qualification and activity limitation.

CHAPTER-V DISCUSSION AND LIMITATION

5.1 Discussion:

The objective of the study was to determine the prevalence of musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district. Researcher found that 152 total populations had a history of musculoskeletal symptoms. A total of 152 groups had a history of musculoskeletal complaints according to the research. The participants in this study were primarily 40-49 years old (25.7%), followed by 60-69 years old (23.7%) 20-29 years old (17.1%), 30-39 years old (13.8%), 50-59 years old (12.5%) and 70 years or over (7.2%). According to the earlier study which involved 100 housewives the majority of participants were between the ages of 30 and 40 (37%) followed by those between the ages of 20 and 30 (26%) and those between the ages of 40 and 50 (16%) (Karla and Bhatnagar 2017, p. 2395).

According to a different study, the majority of participants (52.3%) among the 384 housewives from Bahawalpur City were in the 25-34 age range. Next in line were 23.2% of those aged 35-44, 16.9% of those aged 45-54, 6.3% of those aged 55-64 and just 1.3% of those aged 65 and above (Hafeez et al. 2024, p. 422). According to a different assess the age group of 30 to 40 years age group represented greatest percentage of instances (46.8%), followed by women in the 20-30 age range (32.9%). The age range of 40-50 years had the lowest prevalence (20.2%) (Habib et al. 2010, p. 113).

According to our survey the hips were the most often affected area in terms of musculoskeletal discomfort (63.8%), followed by the knees (13.8%), neck (12.5%), arms/elbows (9.2%) and feet (0.7%). In the prior study, 21.5% of individuals experienced lower back discomfort, 19% reported neck pain, 10.1% reported knee pain and 1.3% reported shoulder/elbow pain. These discrepancies could be the consequence of changes in lifestyle, daily routines, cultural customs and environmental influences. Our participants may experience hip pain more frequently as a result of specific postures or repetitive housework (Karandikar et al. 2021, p. 227).

According to another study 60% of housewives in Chhattisgarh, India reported having musculoskeletal discomfort. The most prevalent symptoms were hip pain (19.47%), low back pain (37.95%) and pain in both knees (39.27%). These findings support the current research and demonstrate how lifestyle, cultural customs and ergonomic settings might affect the distribution and prevalence of musculoskeletal illnesses. This implies that the regions of the body that are most vulnerable to musculoskeletal problems are greatly influenced by local daily activities and work habits (Jacob and Ying 2020, p. 817).

In this study the majority of housewives (60.5%) said they worked on domestic chores for two to four hours per day, followed by four to six hours (30.9%), six to eight hours (6.6%) and eight hours or more (2%). A more equal distribution was seen in the other study where 30.2% worked between two and four hours, 30.5% worked between four and six hours 22.7% worked between six and eight hours and 16.7% worked more than eight hours. This implies that the current study participants spent less time on domestic tasks overall. The majority of participants (73%), reported moderate pain, followed by mild pain (14.5%) and severe pain (12.5%) (Gupta and Nandini 2015, p. 313).

The study also found a correlation between increased household work hours and increased pain intensity mild pain was more common in those who worked 2-4 hours, moderate pain during those who worked 4-8 hours and severe pain during those who worked more than 8 hours. While the percentage of people experiencing severe pain was lower in the current study which is probably because of shorter working hours the pattern is comparable (Hafeez et al. 2024, p. 422). In a different study that examined how many hours people spent on home chores the majority (30.5%) said they worked four to six hours a day closely followed by 30.2% who worked two to four hours. 16.7% of respondents said they engaged in more than eight hours a day while 22.7% said they spent six to eight hours on home chores. This distribution shows that a sizable portion of housewives spend a lot of time doing home chores. Even while a sizable percentage worked at moderate levels (2-4 or 4-6 hours) a sizable portion dedicated more than 6 hours each day to these activities.

Long-term participation in household chores may raise the risk of musculoskeletal issues and cause more physical strain. In contrast those who work for shorter periods of time are probably less likely to be physically stressed but people who labor for six to eight hours or longer are more likely to get pain or discomfort from repetitive jobs and insufficient sleep (Karla and Bhatnagar 2017, p. 2395).

Only a tiny percentage of participants in the article were illiterate (6.32%) while the majority had higher levels of education, with secondary or above (39.24%) and intermediate (36.7%) being the largest groupings. In this survey only 4.6% had secondary or higher education, 25% were illiterate and the majority had only primary (38.2%) or intermediate (32.2%) education. This implies that the current study participants typically had lower educational attainment, which could have an impact on their knowledge of ergonomics and self-care techniques (Karandikar et al. 2021, p. 227).

In another article a tiny percentage of participants (5.5%) had certificate-level qualifications or higher while the majority of participants (64.0%) had completed upper secondary school followed by those with lower secondary education (19.2%) and primary education (12.3%). The majority of respondents had modest levels of formal education which may have affected their perspectives, health awareness and capacity to make wise decisions while handling personal and family duties (Saat et al. 2022, p. 12).

A large portion of participants in this study lived in homes with 1-10 members (94.7%) and a tiny percentage had 11-20 members, the article depicted an almost equal distribution between smaller households (1-4 members) and bigger households (>4 members). A higher domestic workload may be associated with larger households, which could raise the risk of musculoskeletal issues (Ahlgren et al. 2012, p. 212). There were no obese individuals in the article instead most participants were overweight (48.1%) or normal weight (29.11%). A significant percentage of participants in this study were moderately to severely obese (15.8%), although the majority were either normal weight (43.4%) or overweight (36.8%). This samples obesity may be an additional factor in musculoskeletal stress (Kaur et al. 2024, p. 390).

In a different article Participants BMI indicated a significant health concern. Sixty-three percent were obese, 27.4 percent were overweight, 12.3 percent were within the normal range and none were underweight. Elevated prevalence of overweight and obesity point to a combination of eating habits, lifestyle choices and physical labor from household tasks. A known risk factor for musculoskeletal issues, obesity can exacerbate physical limits in day to day activities by compromising the spine and weight bearing joints (Saat et al. 2022, p. 13).

According to the article none of the ladies had more than three children while the majority (64.55%) had two to three. A smaller fraction in this study had more than five children (13.9%), while the majority had three to four children (57.9%). A larger family may result in more work around the house which would put more strain on the body. According to the report the majority of participants (50.63%) had been married for 6 to 15 years with fewer having longer or shorter lengths. The majority of survey participants (68.4%) had been married for more than 20 years. Longer marriages can indicate more time spent on household duties which could increase the likelihood of musculoskeletal issues (Kaur et al. 2024, p. 390).

In this study a significant association was found between pain intensity and age $p = 0.041$. Similarly educational level was significantly related to pain intensity $p = 0.006$. A significant relationship was also observed between monthly family income and pain intensity $p = 0.045$. No significant association was noted between household size and pain intensity $p = 0.986$. When compared with previous findings reported a stronger association between age and musculoskeletal pain, where the significance level was $p < 0.01$. The relationship between educational level and pain severity was also found to be significant $p < 0.05$, which is consistent with the present study (Rahman et al. 2021, p. 45).

On the other hand while monthly family income showed a significant relationship in this research $p = 0.045$ (Khan et al. 2020, p. 32) found no such significant association $p > 0.05$, indicating partial variation between studies. The results also revealed that the number of physically unhealthy days in the past 30 days was significantly associated with the number of children $p = 0.050$ and marriage duration $p = 0.022$. Age and poor health limiting activities showed a borderline significant association $p = 0.054$. In

contrast major impairment type and education were not significantly associated $p = 0.167$ (Khan et al. 2020, p. 32). These findings are supported by who also reported a significant association between number of children and physically unhealthy days $p < 0.05$. Similarly observed a significant relationship between marriage duration and health-related limitations $p < 0.05$, which aligns with the present results. The association between age and activity limitations was found to be stronger in another study $p < 0.01$ compared to this research $p = 0.054$ suggesting that age may play a more influential role in other populations (Akter et al. 2020, p. 61).

5.2 Limitation:

In any investigation including this one complete precision is impossible to attain. When interpreting the finding certain restrictions and challenges must be considered:

1.The study planned for 272 participants but due to time and situation data could only be collected from 152 women.

2. The research was done in only one union (Kholamora) so the results may not match with women living in other areas or conditions.

3. Only housewives were included working women or other occupational groups were not studied.

CHAPTER-VI CONCLUSION & RECOMMENDATION

6.1 Conclusion:

This research showed that musculoskeletal (MSK) problems are very common among housewives. The hip experienced the greatest impact body part followed by the knees and neck. Most women reported moderate pain, which often disturbed their household work. Almost all participants rated their general health as only fair. The outcomes also indicated that age, level of education and household income had a strong link with the level of pain. The number of children and years of marriage were related to more physically unhealthy days while family size did not make a difference. Common health problems reported by the participants included arthritis, heart disease and walking difficulties. Many also experienced sleep problems and pain-related activity limitations. The findings suggest that long hours of household work without proper support increase MSK issues. Physiotherapy care, ergonomic changes and health awareness can help reduce these problems and improve housewives quality of life.

6.2 Recommendations:

1. The sample size of this study was limited. Future research with an expanded sample size is necessary to improve statistical reliability and ensure that the findings are more representative of the wider population.

2. This study focused only on one union within Dhaka district future investigations should include housewives from different rural and urban areas of Bangladesh.

3. This present study focused on musculoskeletal symptoms and health-related quality of life future investigations should also explore other contributing factors such as nutritional status, psychological well-being and the level of social support.

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APPENDIX

Consent form

Respondent ID

Dear participant,

I am Tuly Akter, student of B.Sc. in physiotherapy program in the department of Saic College of Medical Science & Technology (SCMST) which is affiliated with Dhaka University. I am conducting the study entitled "Musculoskeletal Symptoms and Health-Related Quality of Life among Housewives at Kholamora Union in Dhaka District" 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 include socio- demographic, information related, disease related and treatment related questions. For spending your time to participate in this self- administered interview which will take around 15-20 minutes. There is a list of questionnaires and you need to fill up each answer. The information gained from this questionnaire will be used for 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 query. Looking forward to your kind co-operation.

Declaration of the participant

I have been invited to participate in this survey. The foregoing information has been read to me and that has been answered to my satisfaction. I have noticed participation in this study is totally voluntary and I have the right to withdraw from the interview at any clarification. I give my consent voluntarily to be participants in this study.

Respondent name: …….. Witness name: ……

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

সম্মতি ফর্ম

উত্তরদাতা আইডি:

সম্মানিত অংশগ্রহণকারী,

আমি তুলি আক্তার, বি.এসসি এর ছাত্রী। ঢাকা বিশ্ববিদ্যালয়ের অধিভুক্ত সাইক কলেজ অফ মেডিকেল সায়েন্স অ্যান্ড টেকনোলজি (SCMST) বিভাগে ফিজিওথেরাপি প্রোগ্রামে। আমি বি.এসসি এর আংশিক পরিপূর্ণতার জন্য আমার থিসিসের কাজের অংশ হিসাবে " ঢাকা জেলার খোলামোরা ইউনিয়নের গৃহিণীদের মধ্যে মাংসপেশী-অস্থি সম্পর্কিত উপসর্গ এবং স্বাস্থ্যসংক্রান্ত জীবনমান" শীর্ষক গবেষণাটি পরিচালনা করছি ফিজিওথেরাপি ডিগ্রিতে। আপনাকে পূরণ করতে হবে এমন প্রশ্নের তালিকা রয়েছে যার মধ্যে রয়েছে সামাজিক- জনসংখ্যা সংক্রান্ত, তথ্য সম্পর্কিত, রোগ সম্পর্কিত এবং চিকিত্সা সম্পর্কিত প্রশ্ন। এই স্ব-শাসিত সাক্ষাত্কারে অংশ নিতে আপনার সময় ব্যয় করার জন্য যা প্রায় ১৫-২০ মিনিট সময় নেবে। প্রশ্নাবলীর তালিকা রয়েছে এবং আপনাকে প্রতিটি উত্তর পূরণ করতে হবে। এই প্রশ্নাবলী থেকে প্রাপ্ত তথ্য একাডেমিক উদ্দেশ্যে ব্যবহার করা হবে এবং গোপন রাখা হবে। এই অধ্যয়নে আপনার অংশগ্রহণ সম্পূর্ণ স্বেচ্ছায় এবং যেকোনো মুহূর্তে কোনো ব্যাখ্যা ছাড়াই আপনার ইন্টারভিউ থেকে প্রত্যাহার করার অধিকার রয়েছে। আপনি আপনার জিজ্ঞাসা মেটাতে অধ্যয়ন সম্পর্কিত গবেষককে যেকোনো প্রশ্ন জিজ্ঞাসা করতে পারেন। আপনার সদয় সহযোগিতা উন্মুখ.

অংশগ্রহণকারীর ঘোষণা

আমাকে এই জরিপে অংশগ্রহণের জন্য আমন্ত্রণ জানানো হয়েছে। পূর্বোক্ত তথ্য আমাকে পড়া হয়েছে এবং আমার সন্তুষ্টি অনুযায়ী উত্তর দেওয়া হয়েছে।আমি লক্ষ্য করেছি যে এই অধ্যয়নে অংশগ্রহণ সম্পূর্ণরূপে স্বেচ্ছাসেবী এবং যেকোনো স্পষ্টীকরণে আমার সাক্ষাত্কার থেকে প্রত্যাহার করার অধিকার রয়েছে। আমি এই গবেষণায় অংশগ্রহণকারী হতে স্বেচ্ছায় আমার সম্মতি দিচ্ছি।

উত্তরদাতার নাম: ..... সাক্ষীর নাম:.....

স্বাক্ষর এবং তারিখ:..... স্বাক্ষর এবং তারিখ:.....

Questionnaire

Musculoskeletal Symptoms and Health-Related Quality of Life among Housewives at Kholamora Union in Dhaka District

Respondents Identification

Name of respondent …… Code No

Address……

Contact No. ……..

Socio demographic questions

Serial No.	Question	Response	Code
1.1	Age of the participant	…… Years	
1.2	Religion of the participant	1. Islam 2. Hindus 3. Christian 4. Buddhism 5. Others	
1.3	Educational background of the participant	1. Illiterate 2. Primary education 3. Intermediate 4. Secondary or higher	
1.4	Number of household members	……	
1.5	Family income level	…… BDT	
1.6	Height	……. Inch	
1.7	Weight	…… Kg	
1.8	BMI (Body Mass Index)	……..	
1.9	Number of children	1. <2 2. 3-4	

		3. >5	
1.10	Marriage duration (years)	1. <5 2. 6-10 3. 11-15 4. 16-20 5. >20	

Musculoskeletal problem related questions

Serial No	Question	Response	Code
2.1	Have you experienced any musculoskeletal symptoms or discomfort in the past month?	1.Yes 2.No	
2.2	Where do you typically experience pain or discomfort?	1. Neck 2. Shoulders 3. Back 4. Arms/ Elbows 5. Hips 6. knees 7. Feet 8. Others	
2.3	How much time you spend doing household activities?	1. 2-4 hours 2. 4-6 hours 3. 6-8 hours 4. >8 hours	
2.4	How much pain you experience during household activities?	1. Mild 2. Moderate 3. Severe	

Health-Related Quality Of Life (HRQoL)

- Core healthy days module

Serial No.	Question	Response	Code
3.1	Would you say that in general your health is:	1. Excellent 2. Very good 3. Good 4. Fair 5. Poor	
3.2	Now thinking about your physical health, which includes physical illness and injury for how many days during the past 30 days was your physical health not good?	1. Number of days 2. None	
3.3	Now thinking about your health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good?	1. Number of days 2. None	
3.4	If you answered none to questions 2 and 3, skip question 4 below: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities such as self-care work or recreation?	1. Number of days 2. None	

- Activity limitation module

Instructions: These next questions are about physical, mental or emotional problems or limitations you may have in your daily life.

Serial no	Question	Response	Code
3.5	Are you limited in any way in any activities because of any impairment or health problem?	1. Yes 2. No If no, skip to Healthy days symptoms module.	
3.6	What is the major impairment or health problem that limits your activities?	1. Arthritis 2. Back or neck problem 3. Fractures, bone/joint injury 4. Walking problem 5.Lung/breathing problem 6. Hearing problem 7. Vision problem 8. Heart problem 9. Stroke problem 10. Diabetes 11. Depression/Anxiety/ emotional problem 12. Other impairment/ problem	

3.7	For how long have your activities been limited because of your impairment or health problem?	1. Days 2. Weeks 3. Months 4. Years	
3.8	Because of any impairment or health problem, do you need the help of other persons with your personal care needs, such as eating, bathing, dressing or getting around the house?	1. Yes 2. No	
3.9	Because of any health problem, do you need the help of other persons in handling your routine needs, such as everyday household chores, doing necessary business, shopping or getting around for other purposes?	1. Yes 2. No	

- Healthy days symptoms module

Serial No.	Question	Response	Code
3.10	During the past 30 days, for about how many days did pain make it hard for you to do your usual activities, such as self-care, work, or recreation?	1. Number of days 2. None	
3.11	During the past 30 days, for about how many days have you felt sad or depressed?	1. Number of days 2. None	
3.12	During the past 30 days, for about how many days have you felt worried, tense or anxious?	1. Number of days 2. None	
3.13	During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?	1. Number of days 2. None	
3.14	During the past 30 days, for about how many days have you feel very healthy and full of energy?	1. Number of days 2. None	

Scoring

The core healthy days module subscale contains Q1. The answer format for this question is: 1 = excellent; 2 very good; 3 good; 4 fair; 5 = poor.

The core healthy days module subscale also contains Q2, Q3, and Q4. The answer format for these questions is: 1 = number of day (fill in the blank); 2 = none.

The activity limitations module subscale contains Q5. The answer format for this question is: 1 = yes; 2 = no

The activity limitations module subscale also contains Q6.

The answer format for this question is: 1 = arthritis/rheumatism; 2 = back or neck problem; 3 = fractures, bone/joint injury; 4 = walking problem; 5 = lung/breathing problem; 6 = hearing problem; 7 = eye/vision problem; 8 = heart problem; 9 = stroke problem; 10 = hypertension/high blood pressure; 11 = diabetes; 12 = cancer; 13 = depression/anxiety/emotional problem; 14 other impairment/problem.

The activity limitations module subscale also contains Q7. The answer format for this question is fill in the blank.

To calculate the unhealthy days score for each participant, sum the number of physically unhealthy and mentally unhealthy days. The maximum score is 30 unhealthy days, even if the number of unhealthy days totals more than 30. To calculate a healthy days score, subtract the number of unhealthy days from 30.

প্রশ্নাবলী

ঢাকা জেলার খোলামোরা ইউনিয়নের গৃহিণীদের মধ্যে মাংসপেশী সম্পর্কিত উপসর্গ এবং স্বাস্থ্য সম্পর্কিত জীবন মান।

উত্তরদাতাদের পরিচিতি

উত্তরদাতার নাম …….

ঠিকানা…….. কোড নম্বর

যোগাযোগ নম্বর……

- অংশ-১ (সামাজিক এবং জনসংখ্যাগত প্রশ্ন)

সিরিয়াল নম্বর	প্রশ্ন	উত্তর	কোড
১.১	অংশগ্রহণকারীর বয়স	…….বছর	
১.২	অংশগ্রহণকারীর ধর্ম	১. ইসলাম ২. হিন্দু ৩. খ্রিস্টান ৪. বৌদ্ধ ৫. অন্যান্য	
১.৩	অংশগ্রহণকারীর শিক্ষার পটভূমি	১. অশিক্ষিত ২. প্রাথমিক বিদ্যালয় ৩. মাধ্যমিক বিদ্যালয় ৪. উচ্চ শিক্ষা	
১.৪	আপনার পরিবারের বর্তমান সদস্য সংখ্যা কত?	…….	
১.৫	পরিবারের আয়ের পরিমাণ	……..	
১.৬	উচ্চতা	…….ইঞ্চি	
১.৭	ওজন	……..কেজি	
১.৮	বিএমআই (বডি মাস ইনডেক্স)	……	
১.৯	সন্তান সংখ্যা	১. < ২ ২. ৩-৪	

		৩. >৫	
১.১০	বিবাহের সময়কাল (বছর)	১. < ৫ ২. ৬-১০ ৩. ১১-১৫ ৪. ১৬-২০ ৫. >২০	

- অংশ-২ (পেশী ও হাড় সম্পর্কিত সমস্যা সংক্রান্ত প্রশ্ন)

সিরিয়াল নম্বর	প্রশ্ন	উত্তর	কোড
২.১	আপনি কি গত মাসে কোন মাংসপেশী বা অস্থিসংক্রান্ত উপসর্গ বা অস্বস্তি অনুভব করেছেন?	১. হ্যাঁ ২. না	
২.২	আপনি সাধারণত কোথায় ব্যথা বা অস্বস্তি অনুভব করেন?	১. ঘাড় ২. কাঁধ ৩. পিঠ ৪. হাত/কনুই ৫. কোমর ৬. হাঁটু ৭. পা ৮. অন্যান্য	
২.৩	আপনি দৈনন্দিন গৃহস্থালি কাজে কত সময় ব্যয় করেন?	১. ২-৪ ঘণ্টা ২. ৪-৬ ঘণ্টা ৩. ৬-৮ ঘণ্টা ৪. ৮ ঘণ্টার বেশি	
২.৪	গৃহস্থালি কাজ করার সময় আপনি কতটুকু ব্যথা অনুভব করেন?	১. মৃদু ২. মাঝারি ৩. তীব্র	

৩. স্বাস্থ্য সম্পর্কিত জীবনমান

- মৌলিক সুস্থতা দিনের মডিউল:

সিরিয়াল নম্বর	প্রশ্ন	উত্তর	কোড
৩.১	আপনি সাধারণভাবে আপনার স্বাস্থ্যকে কীভাবে মূল্যায়ন করবেন?	১. চমৎকার ২. খুব ভালো ৩. ভালো ৪. মোটামুটি ৫. খারাপ	
৩.২	এখন আপনার শারীরিক স্বাস্থ্য সম্পর্কে ভাবুন, যার মধ্যে শারীরিক অসুস্থতা এবং আঘাত অন্তর্ভুক্ত। গত ৩০ দিনে কত দিন আপনার শারীরিক স্বাস্থ্য ভালো ছিল না?	১. দিনের সংখ্যা ২. একদিনও না	
৩.৩	এখন আপনার স্বাস্থ্য সম্পর্কে চিন্তা করুন, যার মধ্যে মানসিক চাপ, বিষণ্নতা এবং আবেগজনিত সমস্যা অন্তর্ভুক্ত। গত ৩০ দিনের মধ্যে কত দিন আপনার মানসিক স্বাস্থ্য ভালো ছিল না?	১. দিনের সংখ্যা ২. কোনও দিন নয়	
৩.৪	যদি আপনি প্রশ্ন ২ এবং ৩-এর উত্তরে "কোনোটিই না" বলে উত্তর দিয়ে থাকেন, তবে নিচের প্রশ্ন ৪ এড়িয়ে যান: গত ৩০ দিনে, আনুমানিক কতদিন শারীরিক বা মানসিক	১. দিনের সংখ্যা ২. কোনোদিনই না	

	অসুস্থতা আপনাকে আপনার স্বাভাবিক কার্যকলাপ যেমন আত্ম-যত্ন, কাজ বা বিনোদন করতে বাধা দিয়েছে?		

- ক্রিয়াকলাপ সীমাবদ্ধতা মডিউল

নির্দেশনা: পরবর্তী প্রশ্নগুলো আপনার দৈনন্দিন জীবনে শারীরিক, মানসিক বা আবেগগত সমস্যা বা সীমাবদ্ধতা সম্পর্কে।

সিরিয়াল নম্বর	প্রশ্ন	উত্তর	কোড
৩.৫	আপনি কি কোনো অক্ষমতা বা স্বাস্থ্য সমস্যার কারণে কোনো কার্যকলাপে সীমাবদ্ধ আছেন?	১. হ্যাঁ ২. না যদি না, তবে "সুস্থ দিনসমূহের লক্ষণ মডিউল" এ চলে যান।	
৩.৬	কোনটি আপনার প্রধান প্রতিবন্ধকতা বা স্বাস্থ্য সমস্যা যা আপনার কার্যকলাপ সীমিত করে?"	১. আর্থ্রাইটিস ২. পিঠ বা গলার সমস্যা ৩. ফ্র্যাকচার, হাড়/সন্ধির চোট ৪. হাঁটার সমস্যা ৫. ফুসফুস/শ্বাস-প্রশ্বাস সমস্যা ৬. শ্রবণ সমস্যা ৭ .দৃষ্টি সমস্যা ৮. হৃদরোগ সমস্যা ৯. স্ট্রোক সমস্যা ১০. ডায়াবেটিস ১১.বিষণ্নতা/উদ্বেগ/মানসিক সমস্যা ১২. অন্যান্য প্রতিবন্ধকতা/সমস্যা	
৩.৭	আপনার প্রতিবন্ধকতা বা স্বাস্থ্য সমস্যার কারণে কতদিন ধরে আপনার কার্যকলাপ সীমিত রয়েছে?	১. দিন ২. সপ্তাহ ৩. মাস ৪. বছর	

৩.৮	কোনো প্রতিবন্ধকতা বা স্বাস্থ্য সমস্যার কারণে কি আপনাকে খাওয়া, গোসল করা, পোশাক পরা বা বাড়ির ভেতরে চলাফেরার মতো ব্যক্তিগত যত্নের প্রয়োজনগুলোতে অন্যদের সহায়তা নিতে হয়?	১. হ্যাঁ ২. না	
৩.৯	কোনো স্বাস্থ্য সমস্যার কারণে কি আপনার দৈনন্দিন গৃহস্থালি কাজ, প্রয়োজনীয় লেনদেন, বাজার করা বা অন্যান্য উদ্দেশ্যে চলাফেরার মতো নিয়মিত কাজগুলোর জন্য অন্যদের সহায়তা দরকার?	১. হ্যাঁ ২. না	

"সুস্থ দিনের উপসর্গ মডিউল"

সিরিয়াল নম্বর	প্রশ্ন	উত্তর	কোড
৩.১০	"গত ৩০ দিনে, প্রায় কত দিন ব্যথা আপনাকে আপনার স্বাভাবিক কার্যকলাপ, যেমন আত্ম-যত্ন, কাজ, বা অবসর পালন করতে অসুবিধা সৃষ্টি করেছে?"	১. দিনের সংখ্যা ২. কোনোদিনই না	
৩.১১	গত ৩০ দিনের মধ্যে আপনি আনুমানিক কত দিন দুঃখিত বা হতাশ অনুভব করেছেন?	১. দিনের সংখ্যা ২. কোনোদিনই না	
৩.১২	গত ৩০ দিনের মধ্যে আপনি আনুমানিক কত দিন উদ্বিগ্ন, উত্তেজিত বা দুশ্চিন্তাগ্রস্ত অনুভব করেছেন	১ . দিনের সংখ্যা ২. কোনোদিনই না	
৩.১৩	গত ৩০ দিনের মধ্যে আপনি আনুমানিক কত দিন অনুভব করেছেন যে আপনি পর্যাপ্ত বিশ্রাম বা ঘুম পাননি?	১. দিনের সংখ্যা ২. কোনোদিনই না	
৩.১৪	গত ৩০ দিনের মধ্যে আপনি আনুমানিক কত দিন নিজেকে খুবই সুস্থ এবং শক্তিতে পরিপূর্ণ অনুভব করেছেন?	১. দিনের সংখ্যা ২. কোনোদিনই না	

- স্কোরিং

কোর হেলথি ডেজ মডিউল সাবস্কেল-এ Q1 রয়েছে। এই প্রশ্নের উত্তর ফরম্যাট হলো:

1 = চমৎকার, 2 = খুব ভালো, 3 = ভালো, 4 = মাঝারি, 5 = খারাপ।

কোর হেলথি ডেজ মডিউল সাবস্কেল-এ আরও Q2, Q3 এবং Q4 রয়েছে। এই প্রশ্নগুলোর উত্তর ফরম্যাট হলো:

1 = দিনের সংখ্যা (ফাঁকা জায়গায় পূর্ণ করতে হবে); 2 = কোনটি নয়।

অ্যাকটিভিটি লিমিটেশনস মডিউল সাবস্কেল-এ Q5 রয়েছে। এই প্রশ্নের উত্তর ফরম্যাট হলো:7

1 = হ্যাঁ; 2 = না

অ্যাকটিভিটি লিমিটেশনস মডিউল সাবস্কেল-এ আরও Q6 রয়েছে।

এই প্রশ্নের উত্তর ফরম্যাট হলো:

1 = আর্থ্রাইটিস/রিউম্যাটিজম; 2 = পিঠ বা ঘাড়ের সমস্যা; 3 = ফ্র্যাকচার, হাড়/জয়েন্টের চোট; 4 = হাঁটার সমস্যা; 5 = ফুসফুস/শ্বাস প্রশ্বাসের সমস্যা; 6 = শ্রবণ সমস্যা; 7 = চোখ/দৃষ্টির সমস্যা; 8 = হৃদরোগ; 9 = স্ট্রোক সমস্যা; 10 = উচ্চ রক্তচাপ; 11 = ডায়াবেটিস; 12 = ক্যান্সার; 13 = বিষণ্নতা/অস্থিরতা/মনোভাবের সমস্যা; 14 = অন্য কোনো অক্ষমতা/সমস্যা।

অ্যাকটিভিটি লিমিটেশনস মডিউল সাবস্কেল-এ আরও Q7 রয়েছে। এই প্রশ্নের উত্তর ফরম্যাট হলো: পূর্ণ করতে হবে (ফাঁকা জায়গায় লিখতে হবে)।

অস্বাস্থ্যকর দিনের স্কোর হিসাব করতে, প্রতিটি অংশগ্রহণকারীর শারীরিকভাবে অস্বাস্থ্যকর এবং মানসিকভাবে অস্বাস্থ্যকর দিনের সংখ্যা যোগ করতে হবে। সর্বোচ্চ স্কোর ৩০ অস্বাস্থ্যকর দিন, যদিও অস্বাস্থ্যকর দিনের সংখ্যা ৩০-এর বেশি হলেও স্কোর ৩০-এর বেশি হবে না।

হেলথি ডেজ স্কোর হিসাব করতে, অস্বাস্থ্যকর দিনের সংখ্যা ৩০ থেকে বাদ দিতে হবে।

Date: 03/09/2024

To

The Chairman,

Institutional Review Board (IRB)

Saic College of Medical Science & Technology (SCMST)

Mirpur-14, Dhaka-1216.

Subject: **Application for review and ethical approval.**

Dear Sir,

With due respect, I am Tuly Akter, student of 4th year B.Sc. in Physiotherapy Program at Saic College of Medical Science & Technology (SCMST), affiliated by the University of Dhaka. As per the course curriculum, I have to conduct a research project that entitled **"Musculoskeletal Symptoms and Health-Related Quality of Life among Housewives at Kholamora Union in Dhaka District"** under the supervisor Md. Kutub Uddin, Lecturer (Physiotherapy)of SCMST.

The purpose of the study is to determine the musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district. The study involves face to face interview by using structured questionnaire to determine musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district that may take 30 to 40 minutes to fill the questionnaire and there is no likelihood of any harm to the participants. Related information will be collected from the patient's guidebook. Data collectors will receive informed consent from all participants: any data collected will be kept confidential.

Therefore, I look forward to having your kind approval for the thesis proposal and to start data collection. I can also assure you that I will maintain all the requirements for study.

Sincerely,

Tuly Akter
03-09-24

Tuly Akter
Student of 4th Year B.Sc. in Physiotherapy
Session: 2019-20 Reg: 8784
SCMST, Mirpur-14, Dhaka-1216, Bangladesh

SCMST-BPT/IRB/ 03-17/25/45

To
Tuly Akter
4th Year Student of B.Sc. in Physiotherapy
Session: 2019-20. Reg No:8784
Saic College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh

Subject: Approval of the thesis proposal **"Musculoskeletal Symptoms and Health-Related Quality of Life among Housewives at Kholamora Union in Dhaka District"** by ethics committee.

Dear Tuly Akter
Congratulations.
The Institutional Review Board (IRB) of SCMST has reviewed and discussed your application to conductthe above-mentioned dissertation, with yourself, as the principal investigator. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Research proposal.
2	StructuredQuestionnaire (English & Bangla version)
3	Information sheet & consent form.

The purpose of the study is to determine the musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district. The study involves face to face interview by using structured questionnaire to determine the musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district that may take 30 to 40 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants.The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09.00 AM on 4th September 2024 at SCMST.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring during the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

04.09.24

Dr. Abul Kasem Mohammad Enamul Haque
Principal, SCMST&Chairman, Institutional Review Board (IRB)
SAIC College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh

SAIC COLLEGE OF MEDICAL SCIENCE AND TECHNOLOGY

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

Ref: SCMST-BPT/Data/12-03/25/03 Date : ....

To

The UNO

Kholamora Union

Dhaka-1000, Bangladesh

Subject: **Prayer for permission to collect data from Kholamora Union in Dhaka District to conduct a research project.**

Sir,

With due respect and humble submission to state that I am a student of B.Sc. in Physiotherapy at Saic College of Medical Science and Technology (SCMST). As a part of our course curriculum, we have to conduct a research project for the partial fulfillment of the requirement for the degree of B.Sc. in Physiotherapy. My research title is "**Musculoskeletal Symptoms and Health-Related Quality of Life among Housewives at Kholamora Union in Dhaka District**" and the aim of the study is to determine the musculoskeletal symptoms and health-related quality of life among housewives at Kholamora union in Dhaka district. This is a cross-sectional study under the supervisor Md. Kutub Uddin, Lecturer (Physiotherapy) of SCMST. I have chosen the **Kholamora Union** in Dhaka district to collect data from the musculoskeletal symptoms patients and health-related quality of life.

So, I, therefore, pray and hope that you would be kind enough to give permission for data collection that will help me to complete my study.

Yours Faithfully

Tuly Akter

B.Sc. in Physiotherapy (4th Year)

Session: 2019-2020

SCMST, Mirpur-14, Dhaka-1216, Bangladesh.

Address: Saic Tower, M-1/6, Mirpur-14, Dhaka-1206. Mobile: 01936005804
E-mail: simt140@gmail.com, Web:www.saicmedical.edu.bd

Appendix

Gant chart

Activities/ months	Sep 24	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	May 25	June 25	July 25	Aug 25
Proposal presentation												
Introduction												
Literature review												
Methodology												
Data collection												
Data Analysis												
Result												
1st progress presentation												
Discussion												
Conclusion And Recommendation												
2nd progress presentation												
Communication with supervisor												
Final submission												