

Musculoskeletal Problems among Third-Gender People in Dhaka

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Abstract

Purpose: The study aimed to identify the Musculoskeletal problem among the third-gender population in Dhaka. **Objective:** This study's objective was to find out socio-demographic information, and Musculoskeletal problems among the third-gender population in Dhaka. **Methodology:** This study was performed in a cross-sectional study design. This study was conducted to determine the Musculoskeletal problem among the third-gender population. This study's sample was collected through a convenience sampling procedure and a total sample of 62. The data was collected from the different areas across Dhaka. The data collection process was a questionnaire with a face-to-face interview. Data was analyzed with Microsoft Office, and Excel 2019 using the SPSS 25 version software program and test use of study chi-square test. **Result:** This study's participant means and standard deviation of participant age where are Mean \pm SD= 30.90 \pm 10.710; About (45%) third gender age 18-27 years; (32%) age 28-37 years; (12%) age 38-47 years; and 11% more than 47 years. 72.6% were male sex at birth and 27.4% were female sex at birth. Around (14.50%) of them live in rural areas, 4.80% are semi-urban and (80.60%) are from urban areas. (53.2%) were experiencing pain in the different body parts. 21.2% neck pain, 15.2% shoulder pain, 6.1% elbow pain, 39.4% knee, and 39.4% hip pain. severity level was mild pain felt at 8.10%, moderate pain experienced at 27.40% and 17.70% suffered from severe pain. **Conclusion:** The database revealed a significant prevalence of musculoskeletal issues (53.2%), primarily affecting the hip and knee. To enhance accuracy, employing a standardized observation tool is recommended. Further research, including larger samples among the third gender in Bangladesh, is essential for robust decision-making and increased awareness.

Keywords: Third gender, musculoskeletal problem, Hijra, Transgender.

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INTRODUCTION

The term "third gender" refers to a marginalized group in Bangladesh, commonly known as hijra, who are often excluded from mainstream society [1]. Unfortunately, our observations reveal that these individuals are frequently deprived of their fundamental freedoms and face limited access to healthcare services. Despite their omnipresence in Bangladeshi society, their presence remains largely hidden. Considered neither male nor female, they are often perceived as lacking sexual feelings [2]. However, it is important to recognize that they are ordinary human beings whose musculoskeletal system is comparable to that of cisgender individuals.

Consequently, they are equally susceptible to musculoskeletal problems, encompassing a wide range of conditions affecting the muscles, tendons, ligaments, joints, peripheral nerves, and blood vessels [3].

Musculoskeletal issues can vary in severity, causing pain and discomfort that hinders daily activities. The prevalence of these problems tends to increase with age and repeated trauma. Such disorders are common and have a significant impact on work productivity and quality of life, often resulting in disabilities and increased healthcare costs [4]. Among the working population, workload imposition plays a significant role in the development of musculoskeletal symptoms, particularly back pain. One study involving

nurses reported that 84.4% had experienced work-related musculoskeletal disorders (WMSDs) at least once during their careers. The prevalence rates of WMSDs over a 12-month and point period were 78% and 66.1%, respectively, affecting various body regions, most commonly the low back (44.1%), neck (28.0%), and knees (22.4%). Approximately 30.3% sought treatment from healthcare professionals for their condition [5].

In Bangladesh, the third-gender community exists but is often marginalized and excluded from society. The Ministry of Social Welfare estimates that around 10,000 third-gender individuals reside in the country, although some believe the actual number to be closer to half a million [6]. Recognizing the importance of inclusivity, the Bangladesh Government made a policy commitment in November 2013 to formally acknowledge hijra as a distinct third gender, a significant achievement celebrated by civil society and the international community. In 2014, a non-governmental organization (NGO) initiated an annual event called "hijra pride" with support from foreign donors to raise awareness and promote visibility [7].

By embracing the principles enshrined in the Bangladesh Constitution, which emphasizes equality before the law and protection against discrimination based on religion, race, caste, or sex [1], and by further addressing the social and healthcare disparities faced by the hijra community, Bangladesh can strive towards creating a more inclusive and equitable society.

OBJECTIVES

General objectives:

- To identify musculoskeletal problems among the third gender in Dhaka

Specific objectives:

- To explore Socio-demographic characteristics of the study population
- To establish the prevalence of musculoskeletal problems among the third gender in Dhaka
- To explore the association between Age, living area, and occupation with pain in any body part.
- To investigate the association between age and hampering of daily activity

METHODOLOGY

Study Design:

The study aims to investigate musculoskeletal problems among the third gender population in the Munshigonj and Dhaka districts within the Dhaka division. The study design employed is cross-sectional, which involves identifying the group of individuals and collecting the necessary information during a specific period. Cross-sectional studies provide a "snapshot" of the frequency and characteristics of a population at a

particular point in time. This design is advantageous as it requires less time and fewer resources since there is no need for follow-up.

Data Collection Tools and Methods:

Data collection was conducted through face-to-face interviews with the participants. The collected data was then analyzed using Microsoft Office Excel 2019 and the SPSS 25 software program. The tools utilized in the study included a consent form, a questionnaire, paper, pen, pencil, file, computer, and printer. The questionnaire comprised a combination of open-ended and closed-ended questions. Prior to data collection, informed consent was obtained from each participant. The researchers provided a verbal explanation of the author's identity, the research project, and its purpose. The individuals were then selected based on their interest in participating. A Bengali version of the questionnaire was administered for data collection, and for disease-related conditions, a Bengali version may have been used. Subsequently, a date was scheduled for collecting the completed questionnaires from the participants.

Data Analysis:

Upon completion of data collection, the collected data was entered into the SPSS version 25 software. Descriptive statistics were employed for data analysis, and the results were presented using pie charts, figures, and bar charts.

Ethical Considerations:

The study adhered to ethical guidelines and obtained the necessary approvals. The ethical review board of SCMST granted permission to collect data for the study. Informed consent was obtained from the participating third gender individuals as well as their Guru Ma (respectful term for the community leader or representative). The researchers ensured that all participants were provided with a clear explanation of the study's purpose, procedures, and potential risks or benefits. Verbal consent was obtained from each participant before their involvement in the study, respecting their autonomy and right to participate voluntarily. Confidentiality and anonymity of the participants were maintained throughout the research process, ensuring that their personal information and identities remained protected. The study was conducted with utmost respect for the rights and dignity of the third gender community, following ethical guidelines to ensure the integrity and validity of the research findings.

RESULT

The combination of structured questionnaires, data analysis software, and visual representations played a crucial role in conducting a thorough analysis of musculoskeletal problems among the third gender population, enhancing the clarity and understanding of the research findings.

Table 1: The different characteristics in the study (n=62).

Variable	Number of Participants (N)	Percentage (%)
Assigned Male at Birth	45	72.6%
Assigned Female at Birth	17	27.4%
Age Group		
18-27 years	28	45%
28-37 years	20	32%
38-47 years	7	12%
>47 years	7	11%
Residential Area		
Rural	9	14.50%
Semi-Urban	3	4.80%
Urban	50	80.60%

The study involved a total of 62 third gender participants, with 45 assigned males at birth and 17

assigned females at birth. The mean age \pm standard deviation of the participants is 30.90 ± 10.710 years.

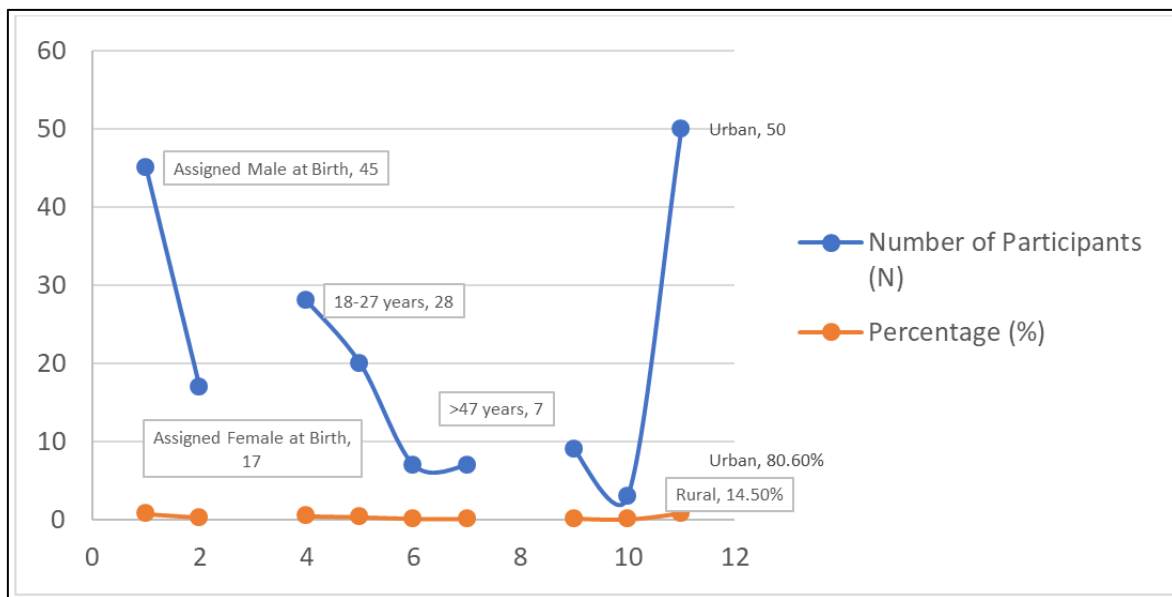


Figure 1: Socio-demographic condition

Among all participants fifty-three-point, two percent (53.2%) were experienced pain in the different body parts. In this study 11.3% suffered from neck pain,

8.1% experienced shoulder pain, 3.2% suffered elbow pain, 21% feel pain in the knee, 21% third gender suffered ankle pain and 4.8% experienced other pain.

Table 2: Musculoskeletal problem-related condition (n=62)

Variables	Frequency	Percentage
Pain in any body part		
Yes	33	53.2%
No	29	46.8%
If the answer "Yes" responsible area is		
Neck	7	21.2%
Shoulder	5	15.2%
Elbow	2	6.1%
Hip	13	39.4%
Knee	13	39.4%
Ankle	8	24.2%
Others	3	9.1%

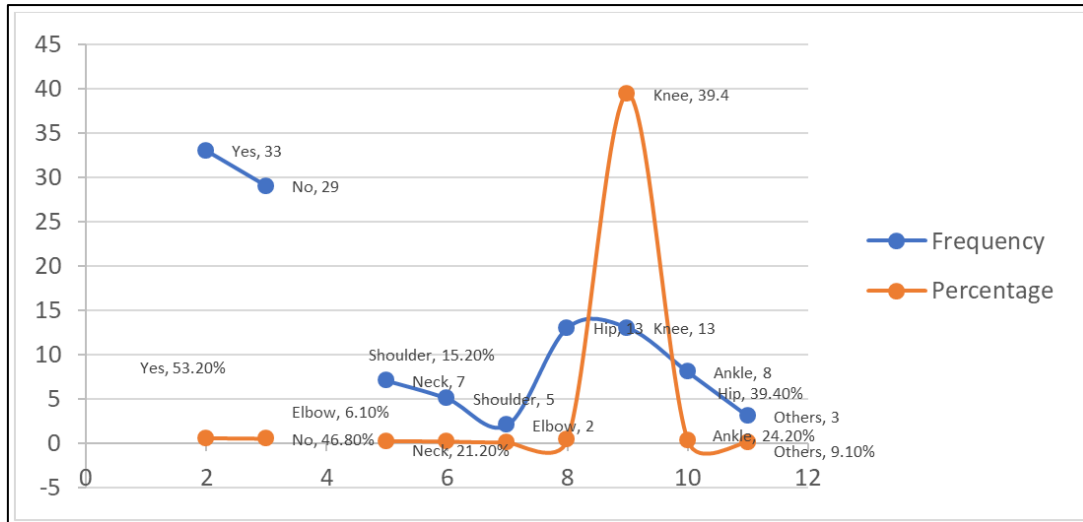


Figure 2: Pain in any body part of participant: (Multiple responses)

Out of all participants, 19.4% reported muscle weakness, while the remaining 80.6% did not. Within the group experiencing muscle weakness, 25% had right upper limb weakness, 8.3% had left upper limb

weakness, 50% had right lower limb weakness, 16.7% had left lower limb weakness, and the remaining 8.3% had muscle weakness affecting other areas.

Table 3: Weakness of muscles of participant (n=62).

Variables	Frequency	Percentage
Weakness of muscles		
Yes	12	19.4%
No	50	80.6%
If the answer "Yes" responsible area is		
Weakness in right upper limb	3	25%
Weakness in left upper limb	1	8.3%
Weakness in right lower limb	6	50%
Weakness in left lower limb	2	16.7%
Weakness in others site	1	8.3%

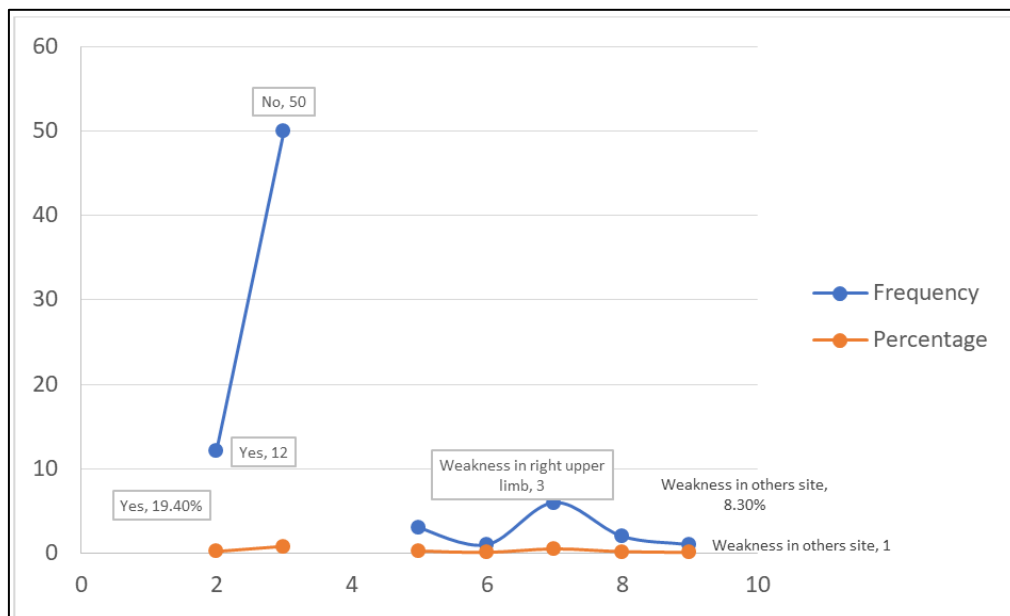


Figure 3: Area of muscles weakness of participant

A total of 62 participants were included. Among them, 53.2% (33 participants) reported experiencing pain in different body regions.

Additionally, 38.7% (24 participants) sought treatment, and all of them used medication as their chosen method of treatment.

Table 4: Taking any treatment of participant (n=62).

Variables	Frequency	Percentage
Participants experiencing pain	33	53.2%
Medication	24	38.7%
Yes	24	38.7%
No	38	61.3%
If the answer “Yes” types of treatment.		

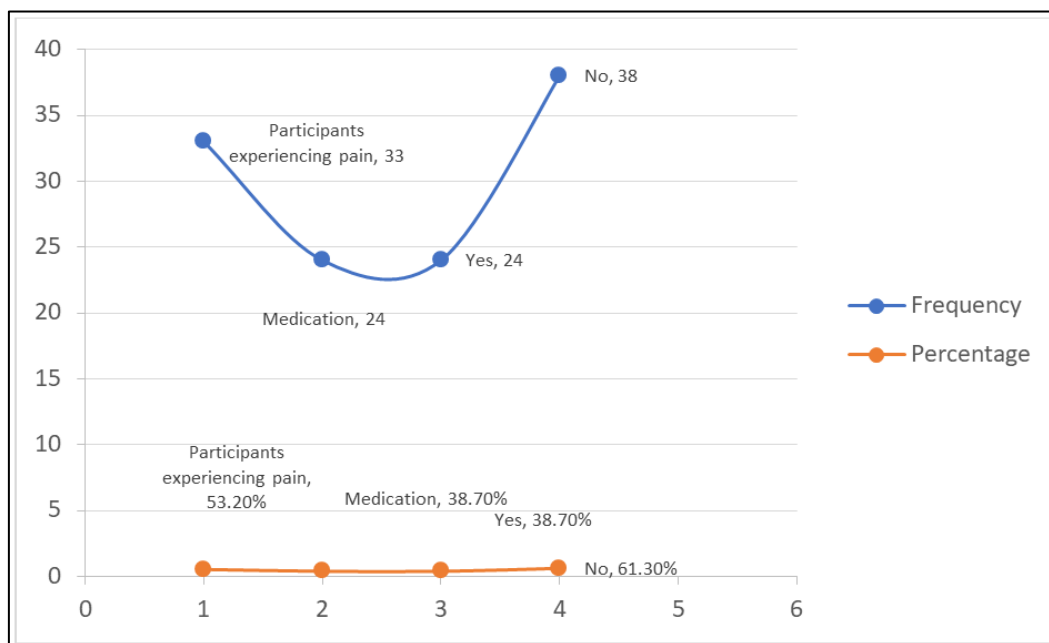


Figure 4: Mentioning all possible treatments for the participant (n = 62)

Table 5: Association between age and hampering of daily activity of the participant (n=62).

Age of Participant	Hampering of Daily Activity of the Participant	Yes	No	Chi Value	P-value
18-27 Years	N	6	22	10.945	.012
	%	21.4%	78.6%		
28-37 Years	N	10	10		
	%	50.0%	50.0%		
38-47 Years	N	6	1		
	%	85.7%	14.3%		
>47 Years	N	3	4		
	%	42.9%	57.1%		
Total	N	25	37		
	%	40.3%	59.7%		

DISCUSSION

This study aims to provide a comprehensive survey of the musculoskeletal problem among the third gender people in Dhaka. About this study around 62 third gender people are involved, which there is 53.2% (72.6%) are born with the male genital organ that's why they are male at birth and (27.4%) are born with female genital organ for this reason they are female at birth. A survey among the third gender in Switzerland shows that (28%) had male sex assigned at birth and (68%)

had female sex assigned at birth. One person stated to have “other” sex assigned at birth [8].

Another survey among the third gender shows that Overall, 2168 students (2.7%) responded that they identified as third gender/Transgender/Gender Non-Conforming Adolescents; this prevalence was twice as high among birth-assigned females (3.6%) as birth-assigned males (1.7%). Transgender/Gender Non-Conforming Adolescents (TGNC) students varied across race/ethnicity and economic indicators, with

particularly high prevalence among American Indian (5.2%), Hawaiian/Pacific Islander (8.6%), those of multiple races (4.5%), and those experiencing severe economic hardship (6.2%). The prevalence of TGNC youth was not significantly different in metropolitan versus non-metro locations [9].

This survey shows that around fourteen-point five-zero percent (14.50%) of the third gender is living in a rural area, four-point eight zero percent (4.80%) are from semi-urban, and eighty-point six zero percent (80.60%) from urban areas. In this study of participant educational level thirty-five-point, five percent (35.5%) where are illiterate, sixty-one-point three percent (61.3%) are primary education; three-point two percent (3.2%); are HSC level education another study among the third gender find out their educational level 21% illiterate, primary education 14%, secondary 53%, graduate and above 13% [10].

Although some progress has been made, third-gender people still face substantial discrimination and threats to their health and wellbeing. The musculoskeletal problem is a major health problem and its increased day by day. All human beings are affected by this problem and it's become a serious health issue for us. This survey explored that among all participants fifty-three-point, two percent (53.2%) were experienced musculoskeletal problems in the different body parts. In this study 11.3% suffered from neck pain, 8.1% experienced shoulder pain, 3.2% suffered elbow pain, 21% feel pain in the knee, 21% third gender suffered ankle pain and 4.8% experienced other pain. Another cross-sectional study a sample lifetime prevalence for medical conditions in the Deaf transgender sample were as follows: 48.6% for depression/anxiety disorders, 28.8% for hypertension, 20.3% for lung conditions, 16.2% for arthritis/rheumatism, 12.3% for diabetes, 7.0% for cirrhosis/liver/kidney problems, 5.5% for heart conditions, and 2.7% for cancer [11].

Another study among garments workers in 2018 explores that the prevalence of musculoskeletal problems differed considerably by gender. For female, prevalence of musculoskeletal problem was highest in lower back (24.7%; n = 46), followed by neck (23.7%; n = 44) and knees (17.7%; n = 33). For male, prevalence of musculoskeletal problem was highest in neck (21.7%; n = 10) followed by knees (13%; n = 6), lower back (13%; n = 6) and upper back (10.9%; n = 5) [12].

According to this study, 53.2% third gender suffered from pain in different body parts and the severity level was mild pain felt 8.10%, moderate pain experienced 27.40% and 17.70% third gender was suffered from severe pain. This pain was hampering their daily activity very badly and the percentage was 40.3%. Among all study populations, 17.70% of participants had pain duration less than 3 months and

35.50% pain duration more than 3 months. In this survey, we found that 53.2% of third gender participants were suffered from pain in the different body regions and only 38.7% of the participants were taking treatment and they only treat their illness by medication. Only n=46 (24.3%) and n=52 (27.5%) knew the diseases associated with needle sharing and unprotected sex respectively. Seeking health care from government hospitals was negligible (9.5%), they prefer going to private (mostly NGO-based/traditional healers) setups (70.4%) [13].

Access to hijra to healthcare services is constrained due to marginalized social status. If hijra suffered from anal STIs, they could not disclose it to doctors. Not only for STIs, because of holding stigmatized hijra identity, but they also had no access to health facilities. They reported hiding their identity while visiting doctors whether in government or private sectors [2]. "Their presence may create fear and discomfort for other patients", claimed a private medical practitioner in Dhaka city.

CONCLUSION

This study highlights the significant prevalence of musculoskeletal problems among the third gender population in Dhaka, particularly affecting the hip and knee. Further research is required to generate sufficient evidence for informed decision-making and to raise awareness among this community.

RECOMMENDATION

Based on the findings of this study, the following recommendations are proposed:

1. **Increase the sample size:** Conduct a larger-scale study involving a diverse sample of third gender individuals from various regions of Bangladesh to ensure the generalizability of the results.
2. **Physiotherapy services:** Develop and implement specialized physiotherapy services tailored to the needs of the third gender population, addressing their specific musculoskeletal symptoms and promoting overall well-being.
3. **Further research:** Encourage future research efforts to explore additional aspects of musculoskeletal problems among the third gender, such as common issues and the effectiveness of physiotherapeutic interventions for postural pain and complications.
4. **Government and NGO involvement:** Raise awareness among government agencies and non-governmental organizations about the importance and effectiveness of physiotherapy for the third gender population. Encourage them to take necessary steps to ensure access to quality physiotherapy services.

By implementing these recommendations, it is hoped that the healthcare system can better address the

musculoskeletal problems faced by the third gender population in Bangladesh, leading to improved health outcomes and enhanced quality of life.

Limitation

The study's small sample size from Dhaka limits generalizability to the wider third gender population in Bangladesh. Reliance on self-reported data introduces potential biases. Time constraints hindered gathering a larger and more diverse sample. The lack of longitudinal data prevents understanding the progression of musculoskeletal problems. Absence of a comparison group hampers assessing differences between the third gender and other populations. Limited exploration of cultural and social factors overlooks important contextual influences. These limitations highlight the need for future research with larger samples, objective measures, longitudinal designs, comparison groups, and in-depth investigations of cultural and social factors.

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