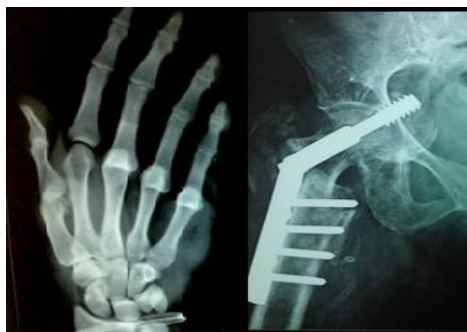




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Sociodemographic profile, disease pattern, and prescribing trends among orthopaedics OPD patients

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Abstract

Objective: To determine the sociodemographic Profile of the patients attending orthopaedics OPD including their disease pattern and Prescribing Trends.

Materials and Methods: A prospective cross-sectional study from March 2025 to August 2025 among 427 patients was conducted. Patients were selected through random sampling, and the location was selected by convenience sampling, who fulfilled the inclusion and exclusion criteria. Data were collected using a pre-tested, interviewer-administered, semi-structured questionnaire. The data were collected by the principal investigator and co-investigators. After data collection, the questionnaires were checked for completeness and marked with unique identification numbers. The data were entered, coded and analysed anonymously by using SPSS.

Result: Majority, 268(62.8%) were between 21 to 40 years old. More than half 226(52.9%) were female and 348(81.5%) were Muslim. A significant number 293(68.6%) of the patients were from rural areas. The majority 147(34.4%) were suffering from the symptoms for more than three weeks to three months, and 219(51.3%) had no history of trauma. Among the patients, 113(26.5%) visited orthopedic OPD because of lower back pain, 57(13.3%) had Osteoarthritis, 54(12.7%) suffered from tendinopathies, 42(9.8%) patients had fracture, 32(7.5%) were suffering from cervical spondylosis. Because of their current suffering, 336(78.7%) were advised NSAIDs, 305(71.4%) were prescribed anti-ulcer drugs, 109(25.5%) were prescribed multivitamins and minerals, and 84(19.7%) were advised on skeletal muscle relaxants.

Conclusion: Orthopaedic outdoor areas are usually visited by young Muslim female patients. Most of the patients were from rural areas. A significant number of patients were suffering from the current symptoms for more than three weeks to three months, while the majority had no history of trauma. Most of the patients were mainly suffering from lower back pain, osteoarthritis, tendinopathies, fractures and cervical spondylosis. A considerable number of patients were treated with NSAIDs, anti-ulcer drugs, multivitamins, minerals and skeletal muscle relaxants.

Keywords: Orthopaedics, OPD, cross-sectional study, SPSS and prospective study

Introduction

The orthopaedic department is an important part of the health care delivery system. Due to numerous reasons, there is a significant number of patients attending the orthopaedic OPD. Patients usually visited the OPD to have treatment for problems like lower back pain, multiple joint pain, a history of trauma and other causes ^[1]. The pattern of the orthopaedic OPD can differ from one geographical location to another, which may also be influenced by age, sex, religion, occupation, race, lifestyle, socio-economic status and associated comorbidities. Orthopaedics is a complex discipline involving both bone and soft tissue pathology ^[2]. The pattern of diseases may also be influenced by environmental factors; even a lower level of vitamin D may also impact the general population's disease pattern ^[3]. Another study revealed that one of the most common orthopaedic problems, such as low back pain, is most commonly seen among people who are performing sedentary work. A recent study conducted by Hameed PS found that 50% of their study participants who are suffering from different joint pains are leading a sedentary lifestyle ^[4]. There is a significant difference between the orthopaedic OPD to other department OPD because orthopaedic patients may present with fractures, which need more time to heal.

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For some patients, they need to restrict their work for a significant period of time. Because of absence from work, the impact of the disease on the patient is different from other diseases [5, 6]. A study conducted in India revealed that most of the patients of the orthopedic department were suffering from low back pain, neck pain, arthritis, soft tissue injury, neuropathies, joint stiffness, infectious cases and osteoporosis [7]. A study by Lakshmeesha T and team found that a significant number of orthopedic patients may also have associated injuries like head injury, pelvic injury, thoracic injury, abdominal injury or genitourinary injury [8]. So, it is important to evaluate the prescription pattern of the drugs of patients who attended the orthopaedic outpatient department. It can monitor the current requirement of drugs which needed to treat the patients [9]. It will also justify the rational use of drugs, which includes the appropriate drugs, the appropriate dose and adequate duration [10].

Materials and Methods

A prospective cross-sectional study was conducted in orthopaedic outdoor department of a selected medical college hospital. The study duration was 6 months from March 2025 to August 2025. Among the patients, 427 were selected for the current study through simple random sampling by using a random number generator to select the participants, who fulfilled the inclusion and exclusion criteria. For the selection of medical colleges, a convenience sampling method will be employed. Data were collected using an interviewer-administered, semi-structured questionnaire covering all relevant study variables. The questionnaire was initially developed in English and then translated into Bangla. To ensure clarity, relevance and appropriateness, pretesting was conducted in a similar geographical location. Pre-tested questionnaire was used for data collection. Data collection began with a detailed explanation of the study's purpose to each patient, emphasising the importance of their participation. The data were collected by the principal investigator and co-investigators. Informed consent was obtained from each participant. The participation in the study was voluntary, and the confidentiality of the patients was assured to be maintained. Each completed questionnaire was reviewed for completeness to ensure accuracy of the data. To ensure the accuracy and reliability of the data, strict quality control measures were taken. The questionnaire was pretested to ensure the clarity of the questions. The questionnaire was coded to facilitate data entry. After completion of each questionnaire, it was checked for completeness and

consistency of the data. After data collection, the questionnaires were checked for completeness and marked with unique identification numbers. The data were entered, coded and analysed by using SPSS. Data were presented in tables and figures according to their nature.

Results

Of the patients attended in the orthopaedic OPD, 427 prescriptions were randomly selected. Regarding age, the Majority 268(62.8%) of the respondents were between 21 to 40 years old. Regarding the age, it was found that the majority of them are female, 226(52.9%) were female, and 201(47.1%) were male (Figure 1).

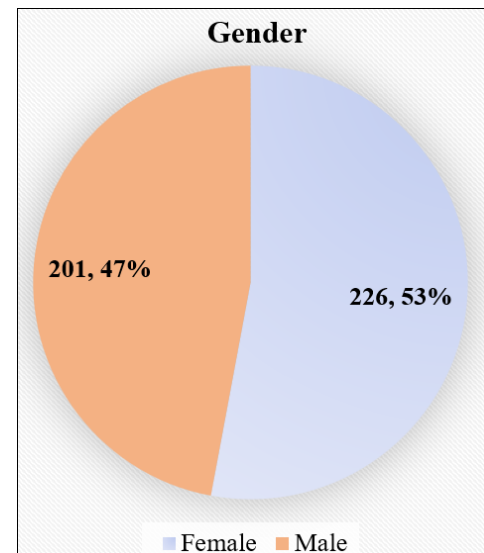


Fig 1: Distribution of respondents by gender

Among the respondents, more than four-fifths 348(81.5%) were Muslim, 63(14.7%) were followers of Hinduism, and 16(3.8%) were followers of Christianity. Among the respondents of the current study, 293(68.6%) of the patients attending the outpatient department were from rural areas, and nearly one-third 134(31.4%) were from urban areas. Depending upon the duration of symptoms, it was revealed that around 96(22.5%) had the symptoms for less than one week, 71(16.6%) were suffering from one to three weeks, 147(34.4%) were from more than three weeks to three months, and 113(26.5%) were having the symptoms for more than three months (Figure 2).

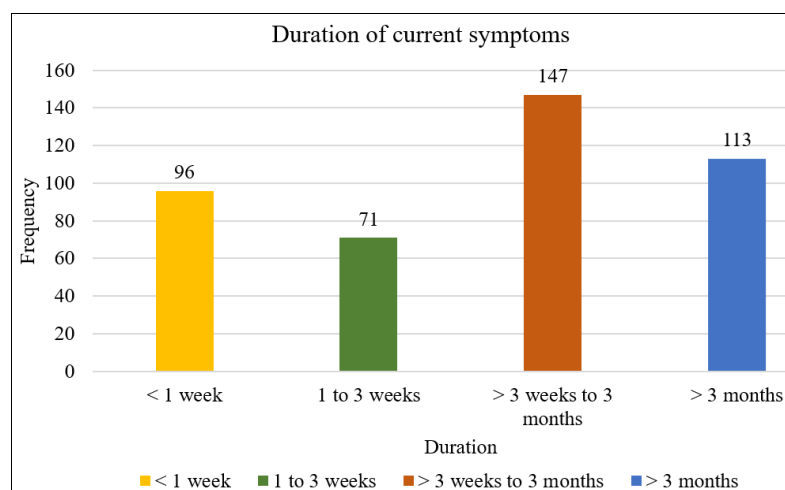


Fig 2: distribution of respondents by current symptoms duration.

Regarding the presence history of trauma for their current symptoms, it was found that 208(48.7) had a history of trauma and more than half 219(51.3%) had no history of trauma. Regarding provisional diagnosis, it was found that 113(26.5%) were suffering from lower back pain, 57(13.3%) had osteoarthritis, 54(12.7%) had tendinopathies, 42(9.8%) patients had different types of fracture, 32(7.5%) had cervical spondylosis, 29((6.8%) had shoulder related problems, 23(5.4%) had soft tissue injury, 21(4.9%) had nonspecific body aches, 18(4.2%) had infectious causes as reason for attending OPD, 12(2.8%) had ligamentous injury and 26(6.1%) had other different reasons for visiting OPD (Table 1).

Table 1: Respondents by provisional diagnosis

Duration	Frequency	Percentage
Lower back pain	113	26.5%
Osteoarthritis	57	13.3%
Tendinopathies	54	12.7%
Fracture	42	9.8%
Cervical spondylosis	32	7.5%
Shoulder-related problems	29	6.8%
Soft tissue injury	23	5.4%
Nonspecific body aches	21	4.9%
Infectious causes	18	4.2%
Ligamentous injury	12	2.8%
Others	26	6.1%

Among the patients, 336(78.7%) were prescribed NSAIDs, 305(71.4%) were prescribed anti-ulcer drugs, 109(25.5%) were given multivitamins and minerals, 84(19.7%) were advised with skeletal muscle relaxants, 67(15.7%) were prescribed antibiotics, 21(4.9%) had antidepressant, 18(4.2%) were prescribed steroids and 125(29.3%) had prescribed other different drugs according to indications (table 2).

Table 2: Respondents by prescribed medicine

Duration	Frequency	Percentage
NSAIDs	336	78.7%
Anti-ulcer drugs	305	71.4%
Multivitamins & minerals	109	25.5%
Skeletal muscle relaxants	84	19.7%
Antibiotics	67	15.7%
Antidepressant	21	4.9%
Steroids	18	4.2%
Others	125	29.3%

Discussion

Of the patients attended in the orthopaedic OPD, 427 prescriptions were randomly selected. Regarding age, the Majority 268(62.8%) of the respondents were between 21 to 40 years old. This is consistent with the study conducted by Lakshmeesha T and associates, where they found that the majority 80% of the orthopaedic department care seekers were from 11 to 45 years [8]. Regarding the age, it was found that the majority of them are female, 226(52.9%) were female, and 201(47.1%) were male. A recent study by Raj V. *et al.*, found that around 52.2% of the study participants were female and 47.8% were male. This is not consistent with current study findings that might be attributed to the small sample size, and purposive selection of the study group, sampling units, as well as the study area [11]. Among the respondents of the current study, 293(68.6%) of the patients attending the outpatient department were from rural areas and nearly one-third 134(31.4%) were from urban areas. Regarding place of residence, Gupta S. and team found that

around 72% of the patients were living in rural areas and only 28% of them were residents of urban area [12].

Depending upon the duration of symptoms, it was revealed that around 96(22.5%) had the symptoms for less than one week, 71(16.6%) were suffering from one to three weeks, 147(34.4%) were from more than three weeks to three months, and 113(26.5%) were having the symptoms for more than three months. This is more or less supported by the study conducted by Gani A and team, where they found that around 11.8% patient who are attended in OPD were suffering from the current symptoms for less than an week, 13.7% had their current problems for more than an week to 3 weeks, more than one-third 34.35% were suffering from more than three weeks to three months and a significant number 40.07% were from more than three months [2].

Regarding the presence history of trauma for their current symptoms, it was found that 208(48.7) had a history of trauma and more than half 219(51.3%) had no history of trauma. A recent study also supported our current study, where 39% of their study respondents had a history of trauma, and the majority 61% were nontraumatic patients [2].

Regarding provisional diagnosis, it was found that 113(26.5%) were suffering from lower back pain, 57(13.3%) had osteoarthritis, 54(12.7%) had tendinopathies, 42(9.8%) patients had different types of fracture, 32(7.5%) had cervical spondylosis, 29((6.8%) had shoulder related problems, 23(5.4%) had soft tissue injury, 21(4.9%) had nonspecific body aches, 18(4.2%) had infectious causes as reason for attending OPD, 12(2.8%) had ligamentous injury and 26(6.1%) had other different reasons for visiting OPD. Another study found that 25.9% of the patients had lower back pain, 18.3% had Tendinopathies and enteropathies, 11% had fractures, 10.6% had arthritis, 9.9% had soft tissue injury, 7.4% had nonspecific injury, 6.4% had ligamentous sprains, 4.8% had neck pain, 1.8% had joint stiffness, and 1% had sports injuries [13]. Another study conducted by Gupta KNP found that 28.9% had low back pain, 8.7% had cervical spondylosis, 11.9% had osteoarthritis, 7.1% had shoulder pain with restriction of movement, 1.1% had clavicular fracture, 2.4% had elbow pain with swelling, 5.9% had forearm pain and swelling, 7.4% had wrist joint pain and swelling, 1.6% had Colles fracture, 5.6% had fingers pain and swelling, 1.4% had hip joint pain, 5.9% had lower limb pain and swelling, 3.1% had foot pain and swelling, 4.3% had ankle pain and swelling, 0.9% had scaphoid fracture and only 4.2% had polyarthritis [14]. Among the patients who had attended in orthopedic OPD, Raj V. and team found that 4.5% had infectious causes, 18.9% had osteoarthritis, 6.7% had knee synovitis, 16.7% had low back pain, 6.7% had cervical spondylosis, 1.7% had clubfoot, 0.5% had scoliosis, 3.3% had frozen shoulder, 8.3% had fractures, 4.7% had ankle sprain, 2.8% had wrist pain and Swelling, 5.6% had polyarthralgia, 0.5% had shoulder dislocation, 0.8% had recurrent shoulder dislocation, 5.6% had tennis elbow, 1.7% had trigger finger, 5.6% had acute backache 1.1% had hip joint pain, 2.2% had gout, 1.1% had De Quervain's Tenosynovitis and 1.1% had bone tumors¹¹. Another study conducted in India found that 29% had low back pain, 9% had cervical spondylosis, 12.5% had osteoarthritis, 7% had shoulder pain with restriction of movement, 1% had clavicular fracture, 2.5% had elbow pain and swelling, 6% had forearm pain and swelling, 7.5% had wrist joint pain and swelling, 1.5% had colles fracture, 5.5% had fingers pain and swelling, 1.5% had hip joint pain, 6% had lower limb pain and swelling, 3% had foot pain and swelling, 4% had ankle pain and swelling, 1% had scaphoid

fracture and 3% had polyarthritis^[15].

Among the patients, 336(78.7%) were prescribed NSAIDs, 305(71.4%) were prescribed anti-ulcer drugs, 109(25.5%) were given multivitamins and minerals, 84(19.7%) were advised with skeletal muscle relaxants, 67(15.7%) were prescribed antibiotics, 21(4.9%) had antidepressant, 18(4.2%) were prescribed steroids and 125(29.3%) had prescribed other different drugs according to indications. This is not in line with the study conducted by Shankar PR and team, where they found that 59.9% were treated with NSAIDs, 8.5% were prescribed multivitamins and minerals, 5.7% had anti-ulcer drugs, 4.8% had centrally acting skeletal muscle relaxants, 4% had benzodiazepines, 3.4% had anabolic steroids, and 13.6% were prescribed other drugs^[16].

Conclusion

Orthopaedics play a significant role in the healthcare delivery system through dealing with complex medical conditions. A majority of young female patients from rural areas visited the OPD to seek treatment. Patients are suffering from the presenting complaints for a variable duration of time, usually for three weeks to three months, while most of them have no history of trauma. A considerable number of patients visited the OPD with complaints of lower back pain, osteoarthritis, fractures, cervical spondylosis, shoulder-related problems, soft tissue injury, nonspecific body aches, infectious causes, ligamentous injury, etc. Patients are mainly prescribed NSAIDs, anti-ulcer drugs, multivitamins, minerals, skeletal muscle relaxants, antibiotics, antidepressants, steroids, and other drugs.

Conflict of Interest

Not available.

Financial Support

Not available.

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