ISSN: 1607-8322, e-ISSN: 2220-5799 Anaesthesia, Pain & Intensive Care
Vol 27(4); August 2023 DOI: 10.35975/apic.v27i4.2266

ORIGINAL RESEARCH PAIN MANAGEMENT

The spectrum of pain patients reporting to the pain clinic of Holy Family Hospital, Rawalpindi (Pakistan)

Yasmeen Azeem, FCPS,[1] Ayesha Mansoor, FCPS,[2] Uzma Naeem, M Phil,[3] Jawad Zahir, FCPS,[4] Abeera Zareen, FCPS[5]

Author affiliation:

1. Senior Registrar, Department of Anesthesia, Holy Family Hospital, Rawalpindi, Pakistan; E-mail: dr.yasmeenazeem01@gmail.com
2. Assistant Professor, Department of Anesthesia, DHQ Hospital Rawalpindi, Pakistan; E-mail: ayeshamansoor@hotmail.com
3. Associate Professor, Department of Pharmacology, IIMC, Riphah University, Rawalpindi, Pakistan; E-mail: uzma.naeem@riphah.edu.pk
4. Associate Professor, Department of Anesthesia, Holy Family Hospital, Rawalpindi, Pakistan; E-mail: drjayzee@hotmail.com
5. Assistant Professor, Department of Anesthesia, Benazir Bhutto Hospital, Rawalpindi, Pakistan; E-mail: abeerajsk@gmail.com

Correspondence: Dr. Uzma Naeem, E-mail: uzma.naeem@riphah.edu.pk; Phone: +92 300 9196818

ABSTRACT

Background & Objective: Pain is the most common symptom, which brings a patient to the doctor. An ever-increasing spectrum of painful conditions are shared by both of the genders and have a significant influence on health and well-being. This impact can be reduced by proper diagnosis and management. We aimed to present an audit of our experience of pain related conditions and their management at our pain clinic at a tertiary care hospital.

Methodology: This cross-sectional descriptive study was conducted in Holy Family Hospital, on 1414 patients of both genders, who presented with pain at the specialized pain clinic of our hospital. To record the pattern of diseases among patients attending our specialized pain clinic, the data regarding the pain conditions diagnosed, the management strategies, and the relationship with the age and gender were noted.

Results: The mean age of patients was 44.25 ± 7.04 y; regarding gender, 29.4% were males, while 70.6% were females. Most of the patients were diagnosed with paraspinal muscle spasms and trigger points (24.82%), and osteoarthritis knee (16.19%). Medications and physical therapy (61.74%) served as the mainstay of treatment for mild to moderate pains. The relationship of pain with a causative disease was significant with gender ($P < .001$), but insignificant with age ($P = 0.921$).

Conclusion: Patients presented between the ages of 18 to 62 y, and most of them were females. Paraspinal muscle spasm was the most frequent diagnosis. Mild to moderate pains were managed with medication and physical therapy, and severe cases with interventional procedures. The patient's gender was related to pain disorders.

Key words: Pain clinic; Gender; Pain diagnosis; Pain treatment

Citation: Azeem Y, Mansoor A, Naeem U, Zahir J, Zareen A. The spectrum of pain patients reporting to the pain clinic of Holy Family Hospital, Rawalpindi (Pakistan). Anaesth. pain intensive care 2023;27(4):558−564.

DOI: 10.35975/apic.v27i4.2266

Received: May 13, 2023; **Reviewed:** June 28; **Accepted:** July 06, 2023

1. INTRODUCTION

In Latin, "poena" (pain) denotes misery. An unpleasant bodily sensation called pain can range from slight, localized discomfort to agony and is brought on by an illness or injury. Pain is one of the most prevalent issues in the world and one of the main causes of seeking medical attention is pain.[1] Chronic pain is quite common and is linked to serious morbidity, such as reduced mobility, social isolation, and depressed mood.[2] Chronic musculoskeletal pain is among the most troublesome

clinical problems faced by clinicians.[3] The worldwide incidence of pain is about 30.7%.[4] One in five people in North American and European populations have chronic pain, which is a significant contributor to disability.[5] According to the World Health Organization, pain disorders of the locomotor apparatus, i.e., muscles, tendons, the skeleton, cartilage, ligaments, and nerves, are among the most prevalent health conditions that impact people's life. These locomotor pain conditions can be exacerbated or induced by employment, though frequently other activities, such as housework or sports, may also be implicated.[6] About 9.5 million working days were lost in Great Britain from 2014 to 2015 because of these pain disorders, making upto 40% of the working days lost owing to illness.[7,8] The best chance for success in treating chronic pain is through a multidisciplinary approach; treatment programs containing physical therapy, multimodal pharmacological alternatives, and other chosen interventions as necessary, offer the best results.[9,10]

There is extensive research on pain's frequency, distribution, treatment, and effects on patients, but only a few come from our population. Our nation has only a small number of specialized pain clinics, and this specialty has not yet taken off.

This study aimed to assess the types of painful conditions experienced by patients who visited our specialized pain clinic, the most common modes of treatments, and the association between the gender and the manifestation of specific pain conditions. This data is thought to be essential for setting up specialist pain clinics and national healthcare management policies.

2. METHODOLOGY

This cross-sectional descriptive study was carried out in the specialized pain clinic of the Holy Family Hospital, Rawalpindi, from November 2021 to March 2023, after getting an ethical approval from the hospital ethical committee (Ref number 30/Su/1/HFH). Individuals of both genders who agreed to take part in the trial and experienced any sign of pain were included in the study. Those with impaired cognitive and communication problems and concomitant brain injuries were not included. Clinical histories of pain were obtained from the patients during interviews, and the data was then entered into specific forms. Age, gender, presenting complaints, the primary diagnosis of the pain complaint, and the pain management technique used were among the information gathered. After that, the same examiner assessed the patients to determine the initial diagnosis and the initial course of treatment based on the complaint. The privacy and identities of the patients were maintained. SPSS for Windows, version 23.0 was used to analyze the data. For quantitative variables descriptive statistics were used, while frequencies and percentages described the qualitative variables. To establish a relationship between the disease-causing pain and the gender and age of the patients, Chi-square tests were used and a $P \leq 0.05$ was deemed significant.

3. RESULTS

Out of 1414 patients that presented in our pain clinic 998 (70.6 %) were females, while 416 (29.4 %) were males ($P < 0.001$) as shown in Figure 1.

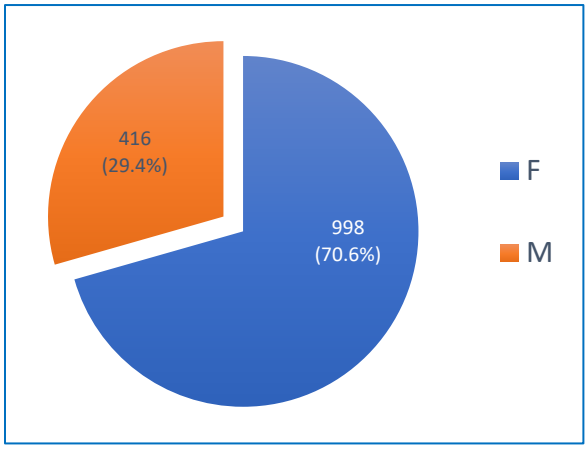

Figure 1: Male to female ratio of the patients.

The mean age of patients was 44.25 ± 7.04 y, and most of the patients were between 32 to 51 y of age (Figure 2), the Chi-Square test between the pain-causing diseases and the age of the patients was insignificant ($P = 0.921$).

Table 1: Chi-Square Tests between diseases and the age of the patients

Value	Df	Asymp. Sig. (2-sided)
2050.299[a]	2142	.921
1487.555	2142	1.000
1414		

Most of the patients presented with lower back pain and diagnosed with paraspinal muscle spasms and trigger points (24.82%). The second common presenting complaint was knee pain, mainly due to knee joint osteoarthritis (16.19%). These two diseases were followed by sacroiliitis (9.12%) and facet arthropathy (8.97%), both of the two also presented with lower back pain. Radiculopathy (cervical, lumbar, sacral), coccydynia, and generalized musculoskeletal pains were other common problems that brought patients to the pain clinic. Bursitis of the shoulder or knee joints was diagnosed in 4.17% of the patients (Table 2).

Table 2: Showing distribution of the different diagnoses of presentation and their relationship with gender; Data presented as n (%)

No.	Diagnosis	Male	Female	Total
1.	Paraspinal muscle spasm and trigger points.	104 (29.6)	247 (70.4)	351 (24.82)
2.	Osteoarthritis knee	94 (41.04)	135 (58.95)	229 (16.19)
3.	Sacroiliitis	22 (17.05)	107 (82.95)	129 (9.12)
4.	Radiculopathy (cervical, and lumbar)	33 (25.8)	95 (74.2)	128 (9.05)
5.	Facet arthropathy	30 (23.8)	96 (76.2)	126 (8.97)
6.	Coccydynia	30 (28.03)	77 (71.97)	107 (7.56)
7.	Generalized musculoskeletal pains.	11 (12.64)	76 (87.36)	87 (6.15)
8.	Bursitis	32 (54.23)	27 (45.76)	59 (4.17)
9.	Frozen shoulder	11 (22.45)	38 (77.55)	49 (3.46)
10.	RA	10 (22.72)	34 (77.27)	44 (3.11)
11.	Planter fasciitis	9 (33.33)	18 (66.66)	27 (1.90)
12.	Postherpetic neuralgia	7 (33.33)	14 (66.66)	21 (1.48)
13.	Occipital neuralgia	6 (31.6)	13 (68.4)	19 (1.34)
14.	Piriformis syndrome	5 (38.5)	8 (61.5)	13 (0.91)
15.	Costochondritis	6 (66.7)	3 (33.3)	9 (0.63)
16.	Rotator cuff syndrome	3 (37.5)	5 (62.5)	8 (0.56)
17.	Carpel tunnel syndrome	2 (50)	2 (50)	4 (0.28)
18.	Others	1 (25)	3 (75)	4 (0.28)
	Total	**416 (29.4)**	**998 (70.5)**	**1414 (100)**
	Pearson Chi-Square (P-value)			**< 0.001**

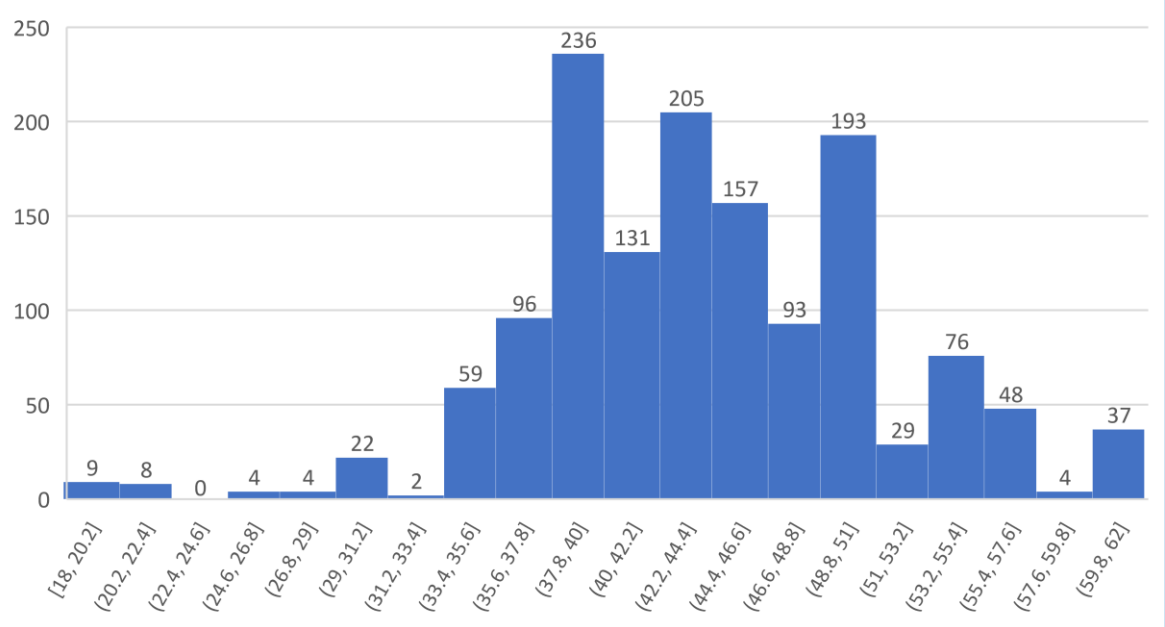

Figure 2: Distribution of the pain patients according to the age groups

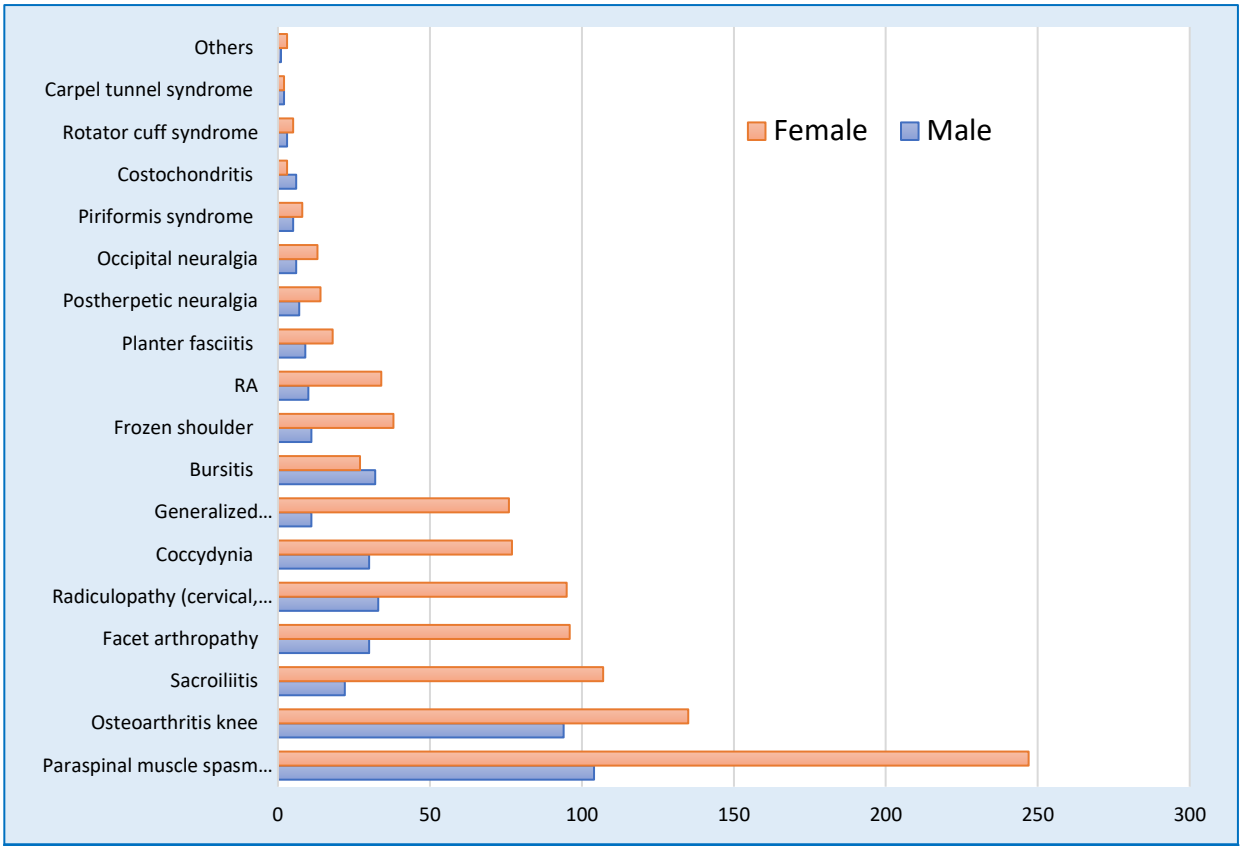

Figure 3: Prevalence of male and female patients with reference to pain-causing diseases.

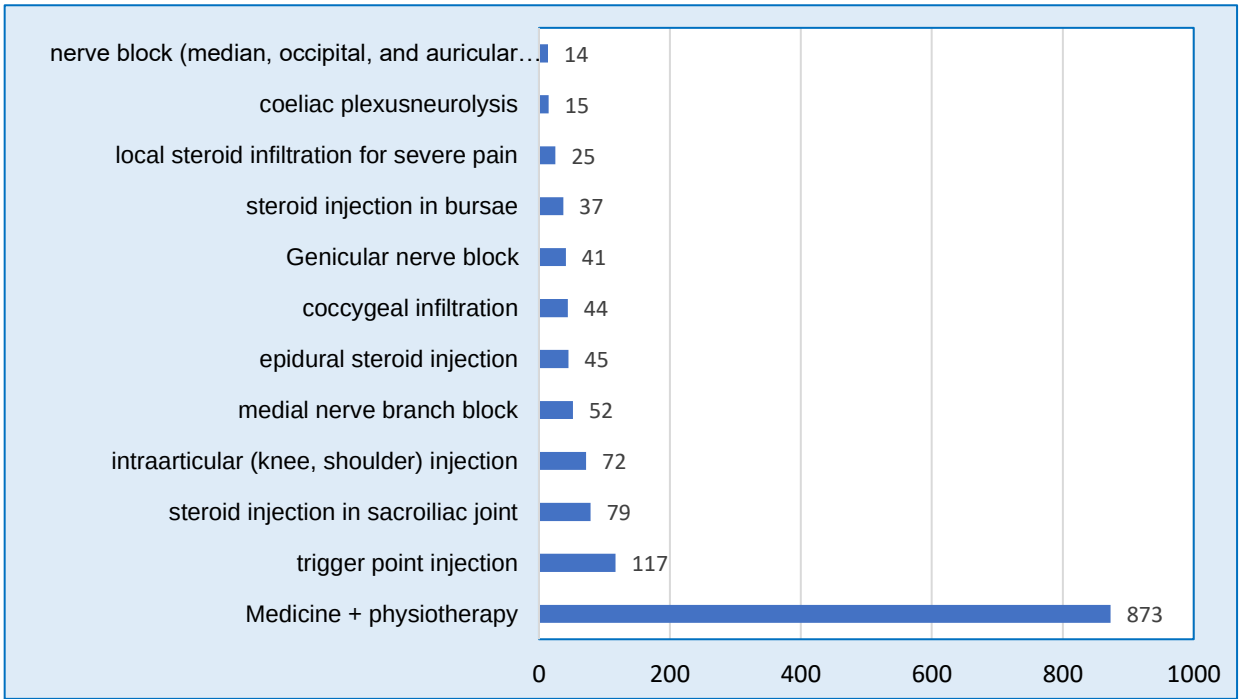

Figure 4: Different pain management strategies used in our pain clinic during the study period.

The distribution pattern of these diseases among males and females, shows that all diseases are more prevalent in females except bursitis and costochondritis. There was a statistically significant correlation between pain-causing diseases and gender ($P < 0.001$) as shown in Table 2 and Figure 3.

In terms of the treatment, most (59.19%) of the patients with mild to moderate pain causing diseases were offered drug therapy and physiotherapy, and responded well. Severe intensity pains were treated with different types of procedures. Trigger point injections (TPI) of local anesthetic and steroid (8.2%) were the most commonly used modality for the severe paraspinal muscle spasms with trigger points. Intraarticular injections of local anesthetics and steroids for sacroiliac joint arthritis (5.5%); and for knee and shoulder joint (5.1%) injections for severe sacroiliitis and osteoarthritis respectively were the next most frequent procedures. All interventional procedures performed during the study period are displayed in Figure 4.

4. DISCUSSION

Over the previous few decades, the treatment, management, and recognition of pain as a disease process has rapidly advanced. Ideal outcomes in the management of pain can be achieved by focusing on people's well-being, their capacity to lead independent lives, their productivity, and their social connections rather than just seeking to eliminate the source of the pain.[11] It is evident from different studies that women are more likely to report a variety of mild to severe pains, that may be transient or constant, in addition to the pains related to menstruation, pregnancy, and childbirth.[12,13] The findings of our study also suggested that the percentage of females (70.6%) presented in our pain clinic was significantly higher than the males (29.4%). Females reported more severe and frequent pains of longer duration than males. Our findings are consistent with the results of the Spanish National Health Survey, 2017. They concluded that more than 50% of chronic pain conditions were more common in women.[14]

In our findings, the incidence and prevalence of pain-related disorders were higher in the population aged 35 to 60 y. Our results are supported by Goyal & Mohanty's research conclusion, which estimated that 37% of middle-aged and older Indian inhabitants frequently experienced pain, and pain prevalence rises with age and is higher in women.[15] These findings of our study are also in agreement to a recent study among the US population, which confirmed that chronic pain is more prevalent in middle-aged and elderly females.[16]

We found that most patients presented with pains due to multiple musculoskeletal disorders. In our study, many patients presented with low back pain due to paraspinal muscle spasms and trigger points (24.82%), sacroiliitis (9.12 %) facet arthropathy (8.97%), radiculopathy (9.05%), and coccydynia (7.56 %). Our findings synchronize with the results of Gibbs et al., who studied differential diagnosis and management of back pain.[17] Knee pains were also frequent in our population and have osteoarthritis (16.19%), and bursitis (4.17%) as the two main causes. Other frequently presented musculoskeletal disorders were generalized musculoskeletal pains, frozen shoulder, rheumatoid arthritis (RA), planter fasciitis, occipital neuralgia, piriformis syndrome, costochondritis, rotator cuff syndrome, and carpel tunnel syndrome. According to reports from around the world, these musculoskeletal disorders are one of the main reasons for the pain-causing disease burden.[18] Rendering to data from the World Health Organization (WHO) on the burden of musculoskeletal disease, the percentage of patients, especially females, increased significantly from 2000 to 2015 ($P < 0.001$).[19] A chi-square test representing gender and pain sources revealed that women were more likely to have most of the diseases except bursitis and costochondritis (Figure 3). These findings are contrary to the findings of Schumann, who concluded that costochondritis is more prevalent in females and Hispanics.[20]

In our study, most of the patients presented with mild to moderate musculoskeletal pains and responded very well to a combination of drugs, e.g., non-steroidal anti-inflammatory drugs, muscle relaxants, pregabalin, and antidepressants, and physiotherapy (59.19%). These findings are consistent with the results of Lewis et al., who reviewed the different treatment options for musculoskeletal pain disorders.[21] Recently a review was published on the role of physiotherapy along with other measures for mild to moderate musculoskeletal pains, it was concluded that physiotherapy is mandatory for integrated, high-value, and economical approaches for pain management.[22]

Medicines and physiotherapy remained effective for mild to moderate pains, while to relieve severe pains different procedures were performed. The most frequently used technique was local anesthetic and steroid-containing TPI (8.2%) for severe paraspinal muscle spasms and trigger points. According to a randomized study conducted by Kocak et al., TPI outperformed intravenous NSAIDs in treating acute severe low back pain caused by trigger points.[23] Steroid injections at the sacroiliac joints relieved the acute sacroiliitis while intraarticular steroid or hyaluronic acid injections comforted acute knee osteoarthritis. For grades III and IV osteoarthritis genicular nerve blocks were used while shoulder osteoarthritis and bursitis responded very well to steroid injections. Infiltration of local anesthetic and steroids in the piriformis muscle

around the sciatic nerve was helpful in treating piriformis syndrome. Steroid injections also relieved severe scar tenderness and lateral and medial epicondylitis. Coeliac plexus neurolysis was used for cancer pain originating from the pancreas and colon, as well as for chronic pancreatitis. The median nerve block was used for carpal tunnel syndrome and the occipital nerve block for the occipital neuralgia. Hsu et al. reviewed the literature and developed recommendations on acute musculoskeletal pain management by using a multimodal approach for different acute pains and their results were in harmony with our pain-relieving techniques.[24]

5. LIMITATIONS

Our study was conducted in a single center, and most of the patients belonged to the urban dwellings, and to low to medium income group. The study does not offer quantitative analysis of the treatment outcome, as it was not our objective, but it will serve as a stimulant for more studies at other centers to present us a country-wide picture of the pain.

6. CONCLUSION

Most of the patients that visited our pain clinic were female. The age of pain patients ranged from 18 to 62, the majority of them falling between 30−52 y. The most common discomfort was caused by paraspinal muscle spasms and trigger points. The majority of mild to moderate pain issues were treated with NSAIDs and physical therapy, although multiple interventional pain-relieving procedures were used to treat acute severe pains and chronic pains refractory to medicines and physiotherapy. The patient's gender and the different pain problems were connected.

7. Recommendations

1. We recommend multicenter surveys from other population groups on a greater scale for follow-up research to find additional explanations and justification for these findings.
2. Pain clinics, and qualified pain consultants are the need of the time in every tertiary care hospital. Due to non-availability of these facilities, most of the patients remain undiagnosed and maltreated.
3. National guidelines for pain management in general, and for specific common pain conditions need to be adopted.

8. Availability of data

The numerical data generated in this study is available with the corresponding author.

9. Conflict of interest

None declared by the authors. No external or industry funding was involved in this study.

10. Authors' contribution

YA: Concept, Data collection

AM: Concept, Data analysis

UN: Manuscript writing, Data analysis.

JZ: Data collection, Supervision

AZ: Manuscript review

11. REFERENCES

1. Satghare P, Abdin EB, Hombali A, Teh WL, Samari E, Chua BY, et al. Chronic pain: among tertiary care psychiatric out-patients in singapore-prevalence and associations with psychiatric disorders. Pain Res Manag. 2022;2022:1825132. [PubMed] DOI: 10.1155/2022/1825132
2. Schwan J, Sclafani J, Tawfik VL. Chronic pain management in the elderly. Anesthesiol Clin. 2019;37(3):547-560. [PubMed] DOI: 10.1016/j.anclin.2019.04.012
3. Basharat A, Qamar MM, Nasir S, Faraz K. Prevalence of chronic non-specific musculoskeletal pain in household females, and its impact on their quality of life. Pak J Rehab. 2022;11(1):47-54. [FreeFullText]
4. Urits I, Schwartz RH, Orhurhu V, Maganty NV, Reilly BT, Patel PM, et al. A comprehensive review of alternative therapies for the management of chronic pain patients: acupuncture, tai chi, osteopathic manipulative medicine, and chiropractic care. Adv Ther. 2021 Jan;38(1):76-89. [PubMed] DOI: 10.1007/s12325-020-01554-0
5. Deslauriers S, Roy JS, Bernatsky S, Blanchard N, Feldman DE, Pinard AM, et al. The burden of waiting to access pain clinic services: perceptions and experiences of patients with rheumatic conditions. BMC Health Serv Res. 2021 Feb 18;21(1):160. [PubMed] DOI: 10.1186/s12913-021-06114-y
6. Shahzaib MM, Raza H, Javed A, Salik S, Akash NK, Arslan HR. Prevalence of musculoskeletal disorders among IT professionals. Pak BioMed J. 2022;5:197-200. DOI: 10.54393/pbmj.v5i1.275
7. Rathore FA, Attique R, Asmaa Y. Prevalence and perceptions of musculoskeletal disorders among hospital nurses in pakistan: a cross-sectional survey. Cureus. 2017 Jan 26;9(1):e1001. [PubMed] DOI: 10.7759/cureus.1001
8. Siddique M, Jabbar M, Zulfaqar N, Aslam Z, Riasat H. Prevalence of musculoskeletal disorders among housewives in lahore: cross sectional study. Pak J Med Health Sci. 2022 Mar 27;16(02):505-507. DOI: 10.53350/pjmhs22162505
9. Schwan J, Sclafani J, Tawfik VL. Chronic pain management in the elderly. Anesthesiol Clin. 2019 Sep;37(3):547-560. [PubMed] DOI: 10.1016/j.anclin.2019.04.012
10. Hawk C, Whalen W, Farabaugh RJ, Daniels CJ, Minkalis AL, Taylor DN, et al. Best practices for chiropractic management of patients with chronic musculoskeletal pain: a clinical practice guideline. J Altern Complement Med. 2020;26(10):884-901. [PubMed] DOI: 10.1089/acm.2020.0181
11. Bicego A, Monseur J, Collinet A, Donneau AF, Fontaine R, Libbrecht D, et al. Complementary treatment comparison for chronic pain management: A randomized longitudinal study. PLoS One. 2021;16(8):e0256001. [PubMed] DOI: 10.1371/journal.pone.0256001

12. Pieretti S, Di Giannuario A, Di Giovannandrea R, Marzoli F, Piccaro G, Minosi P, et al. Gender differences in pain and its relief. Ann Ist Super Sanita. 2016;52(2):184-189. [PubMed] DOI: 10.4415/ANN_16_02_09

13. Casale R, Atzeni F, Bazzichi L, Beretta G, Costantini E, Sacerdote P, et al. Pain in women: a perspective review on a relevant clinical issue that deserves prioritization. Pain Ther. 2021;10(1):287-314. [PubMed] DOI: 10.1007/s40122-021-00244-1

14. Palacios-Ceña D, Albaladejo-Vicente R, Hernández-Barrera V, Lima-Florencio L, Fernández-de-Las-Peñas C, Jimenez-Garcia R, et al. Female gender is associated with a higher prevalence of chronic neck pain, chronic low back pain, and migraine: results of the Spanish National Health Survey, 2017. Pain Med. 2021;22(2):382-395. [PubMed] DOI: 10.1093/pm/pnaa368

15. Goyal AK, Mohanty SK. Association of pain and quality of life among middle-aged and older adults of India. BMC Geriatr. 2022;22(1):939. [PubMed] DOI: 10.1186/s12877-022-03480-y

16. Yong RJ, Mullins PM, Bhattacharyya N. Prevalence of chronic pain among adults in the United States. Pain. 2022;163(2):e328-e332. [PubMed] DOI: 10.1097/j.pain.0000000000002291

17. Gibbs D, McGahan BG, Ropper AE, Xu DS. Back pain: differential diagnosis and management. Neurol Clin. 2023;41(1):61-76. [PubMed] DOI: 10.1016/j.ncl.2022.07.002

18. Liu S, Wang B, Fan S, Wang Y, Zhan Y, Ye D. Global burden of musculoskeletal disorders and attributable factors in 204 countries and territories: a secondary analysis of the Global Burden of Disease 2019 study. BMJ Open. 2022 Jun 29;12(6):e062183. [PubMed] DOI: 10.1136/bmjopen-2022-062183

19. Sebbag E, Felten R, Sagez F, Sibilia J, Devilliers H, Arnaud L. The world-wide burden of musculoskeletal diseases: a systematic analysis of the World Health Organization Burden of Diseases Database. Ann Rheum Dis. 2019;78(6):844-848. [PubMed] DOI: 10.1136/annrheumdis-2019-215142

20. Schumann JA, Sood T, Parente JJ. Costochondritis. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2023. Available from: https://www.ncbi.nlm.nih.gov/books/NBK532931/

21. Lewis JS, Stokes EK, Gojanovic B, Gellatly P, Mbada C, Sharma S, et al. Reframing how we care for people with persistent non-traumatic musculoskeletal pain. Suggestions for the rehabilitation community. Physiotherapy. 2021;112:143-149. [PubMed] DOI: 10.1016/j.physio.2021.04.002

22. Calner T, Isaksson G, Michaelson P. Physiotherapy treatment experiences of persons with persistent musculoskeletal pain: A qualitative study. Physiother Theory Pract. 2021;37(1):28-37. [PubMed] DOI: 10.1080/09593985.2019.1622162

23. Kocak AO, Ahiskalioglu A, Sengun E, Gur STA, Akbas I. Comparison of intravenous NSAIDs and trigger point injection for low back pain in ED: A prospective randomized study. Am J Emerg Med. 2019;37(10):1927-1931. [PubMed] DOI: 10.1016/j.ajem.2019.01.015

24. Hsu JR, Mir H, Wally MK, Seymour RB; Orthopaedic Trauma Association Musculoskeletal Pain Task Force. Clinical practice guidelines for pain management in acute musculoskeletal injury. J Orthop Trauma. 2019;33(5):e158-e182. [PubMed] DOI: 10.1097/BOT.0000000000001430

