IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Prevalence Of Chronic Pain & Its Impact On Daily Life, And Treatment Practices In The Metro City Kolkata

[1]Sudipta Dey, [2]Jaydeep Sengupta

[1]PhD research scholar, [2]Assistant Professor

[1]Anthropology and Tribal Studies

[1]Sidho Kanho Birsha University, Purulia, India

Abstract:

Objective: Chronic pain (CP) is a major concern to health care professionals, society, patients, and negatively impacts Quality of Life (QoL). The present study identified the point prevalence of chronic pain in Kolkata, its impact on an individual's Quality of Life, unveiling the current treatment practices of Chronic Pain, and level of satisfaction with the treatment.

Methods: This survey consisted of 2 questionnaires: One, screening questionnaire that assessed the prevalence of Chronic Pain, its frequency during the past week, the intensity of pain during the last episode, body parts of pain, the main causes, and a comprehensive questionnaire that evaluated frequency, demography, intensity of pain, and duration; the impact of CP on QoL, respondent's insight regarding the perspective of their friends, family, doctors, and neighbours toward their CP.

Results: A total of 300 respondents were included from ten words in Kolkata Municipal Corporation (KMC). The inclusive point prevalence of CP was 13%, and the mean intensity of pain on the NRS (Numeric Rating Scale) was 7.05. Respondents who have chronic moderate & chronic severe pain were 35% and 65% respectively. Pain in joints (32%), back (29%), and keens (21%) were the most prevalent. Respondents with CP were no longer able to sleep, exercise, maintain good relationships with friends, neighbours, and family, and maintain a sovereign lifestyle. Almost 30% of the patients have lost working time of ≥4 hours in the past 6 months. Preponderance (66%) of respondents was treated for CP with over-the-counter drugs, and most were taking non-steroidal anti-inflammatory drugs (NSAIDs, 90%).

Conclusion: A significant population of Kolkata suffering from CP, and their Quality of Life is affected leading to some disabilities. Some proportions of respondents who were receiving CP treatment were taking non-prescription medicines with a majority of respondents on non-steroidal anti-inflammatory drugs. A very few were consulting pain management specialists.

Index Terms **– Chronic Pain, Urban Population, Quality of Life, point prevalence, impact on daily life.**

Introduction

Chronic Pain is one of the most familiar reasons to visit a general physician. Chronic Pain results from several criterions such as a chronic health condition, an underlying disease, or periodically due to unknown reasons. CP, sometimes described as long-standing pain that results past the real-time of healing or happens along with the chronic health condition, has multi-dimensional implications in assessment, etiology, and treatment (Bond, 2011). A survey was conducted by the World Health Organization (WHO) in fifteen centers across Asia, Europe, Africa, and the USA demonstrated the prevalence of CP in 5 % to 33% of that population of those areas (Gureje et. al., 1998).

A study by Vieira et al. (2012) described that women were much more likely to experience their pain as compared with men. Apart from these differences in gender, few psychological factors, the presence of degenerative diseases, and genetic factors may leverage the prevalence of CP among the patients. (Craig, 2010). The economic status has also been identified to be associated with CP. Prevalence of Pain study conducted in Singapore displays a significant expansion in CP among populations with lower income (Yeo., 2009).

Chronic pain adversely affects patients' Quality of Life (QoL), including psychological and environmental aspects. Efficient pain management improves the quality of life and reduces disability. Optimum treatment of chronic pain can be obtained by evaluating the characteristics of pain such as quality, duration,location, intensity, effect on QoL, and clearly defining the purpose of therapy (Lambert 2010). The International Association for the Study of Pain (IASP) survey found that lack of education, inadequate government policies, fear of opioid dependency, high cost of analgesics, Patient non-compliance is major impediment to optimal pain management in developing countries (Bond, 2011).

Some other countries are conducting pain studies to study the epidemiology of pain, but there is no evidence of such studies in India as well as in Kolkata. Current chronic pain epidemiological studies aimed to identify indicators of pain, including point prevalence of pain, its duration, intensity, QoL, and its impact on treatment patterns. This study was conducted using a questionnaire-based telephone survey to determine the point prevalence of chronic pain and its impact on quality of life in India. The study also seeks to identify treatment patterns for pain populations across India.

Methods

The present study was a cross-sectional survey for evaluation of the prevalence of CP in eight wards and their suburbs across Kolkata Municipal Corporation (KMC).

Selection of Respondents

Some randomly selected respondents suffering from chronic pain that lasted more than 3 months continuously or intermittently during the 6 months prior to the interview were considered the subject of the study. In addition, respondents have been in pain for the past week, have been in pain at least twice a week, and should have a numerical rating scale (NRS) rating of pain intensity of 5 to 10. (0: no pain; 1 to 3: low pain; 4 to 6: moderate pain; and 7 to 9: severe pain; 10: worst pain). Pain lasting less than 30 days was considered acute. Temporary pain caused by waves or patterns was considered intermittent, and continuous pain was defined as pain lasting more than 12 hours per day. Respondents who had more than one type of pain were considered more chronic.

Data Collection

Several methodologies adopted for data collection include population coverage and sample size determination, survey surveys, databases used for surveys, sampling and respondent selection methods, pilot surveys, data collection, and quality checks (QC). It consisted of phases. The data collected. The completed questionnaire was subject to random quality control after submission. Interview QC was conducted, and questions and problematic questionnaires were revised and reviewed. The first 1000 questionnaires during the interim analysis were 100% QC processed. However, a total of 40% was quality checked for final analysis.

Data processing has been done to evaluate the below-mentioned parameters: (1) Identification of key factors, (2) Pain characteristics, (3) Pain effects, and (4) Chronic pain management.

Next, we analyzed the data collected to identify key factors.

- Point out the prevalence of pain.
- The intensity of pain.
- Main problems.
- The effects of pain on daily activities and work.
- Loss of work.
- Main treatment methods.
- Medical consultation.

Study Questionnaires

Two questionnaires were used in this study: a screening questionnaire and a depth questionnaire (detailed pain questionnaire).

Screening questionnaire

The screening questionnaire was used as a screening interview to select the right respondents. Consisting of a total of 12 questions, the survey lasted about 5-10 minutes. The screening questionnaire assessed the prevalence of pain, the frequency of pain in the past week, the intensity of pain in past episodes, the location of pain, and the main causes of pain.

In-Depth Questionnaire

Respondents who fulfilled the criteria of the screening questionnaire and willing to participate in the in-depth survey were interviewed using the detailed pain questionnaire. An in-depth questionnaire mainly evaluated the

(1) Demographic details;

(2) Frequency of pain;

(3) Duration and intensity of pain;

(4) Impact of pain on the QoL;

(5) Perception of the attitude of their family, friends, and doctors towards their pain; and

(6) Interaction with doctors. The complete screening procedure of subjects has been illustrated in Figure 1.

Statistical Analysis

A total of 300 respondents were to be included in this study. Sample size estimates were performed using population and age data from the 2011 Census. Considering some rejections and screening failures, 1500 subjects should be interviewed to reach the planned sample size of 300 respondents. The sample size was calculated with 95% confidence and 1.5% accuracy, assuming 50% prevalence. A unique data entry form was created to collect respondent data. Then, after performing labeling and data merging with SAS software (SAS Institute Inc., Cary, NC, U.S.A.), the data was transferred to SPSS (SPSS, Armonk, NY, U.S.A.). MS Access was used as backend software. Analysis and reporting are complete according to your requirements.

Result

Subjects

Analysts conducted 50 surveys for every 10 complete interviews. Of these, 2 were semi-completed, 9 were opt-out respondents, 9 were painless, 5 were chronically painless, and 11 were mild. The total number of respondents who answered the question using the available data for each question was not the same as the total number of respondents interviewed in the detailed survey. This is because some respondents did not answer some questions, also they did not know the answer, or the question did not apply. Therefore, the percentage reflects the percentage of respondents who answered that particular question, not the total number of respondents polled extensively.

In this survey, a total of 300 respondents from 10 stations were interviewed for a detailed survey across KMC (Ward 12: 33, Ward 14: 45, Ward 15: 23, Ward 17: 38, Ward 18: 35, Ward 20: 21, Ward 22: 41, Ward 23: 19, Ward 24: 24, Ward 26: 34, Table 1).

Table 1. Ward-wise Data of Proposed Sample Size vs. the Actual Sample Size

Ward	Proposed sample size	Actual sample size
Ward No. 12	156	33
Ward No. 14	159	45
Ward No. 15	141	23
Ward No. 17	138	38
Ward No. 18	162	35
Ward No. 20	135	21
Ward No. 22	174	41
Ward No. 23	135	19
Ward No. 24	152	24
Ward No. 26	148	34

Intensity of Pain

The overall mean intensity of pain across India was 7.05 (NRS scale: 0 to 10). The intensity of pain was higher among women (7.50) as compared with men (6.90). The intensity of pain was higher among respondents who were above the age of 80 years (7.89) as compared with other age groups (70 to 79 years: 7.15, and 60 to 69 years: 6.79) (Figure 3).

The proportion of respondents with chronic moderate and chronic severe pain was 38% and 62%, respectively. The male and female gender distribution was almost equivalent (47% male and 53% female). Most of the male respondents (78%) were full-time employees, and most female respondents (55%) were not employed.

Point Prevalence of Chronic Pain

The overall point prevalence of chronic pain was 19% in the ten wards across KMC. The highest prevalence of CP was observed in Ward no. 14 (45) followed by Ward no. 22 (41) and the lowest in Ward no. 23 (19) (Figure 2).

Duration of Chronic Pain

Most respondents suffered from chronic pain for more than 3 years (37%) as compared with respondents who suffered from chronic pain for 2 to 3 years (21%), 1 to 2 years (17%), and less than 6 months (25%). Most of the respondents experienced intermittent pain (65%) and a few experienced constant pain (29%).

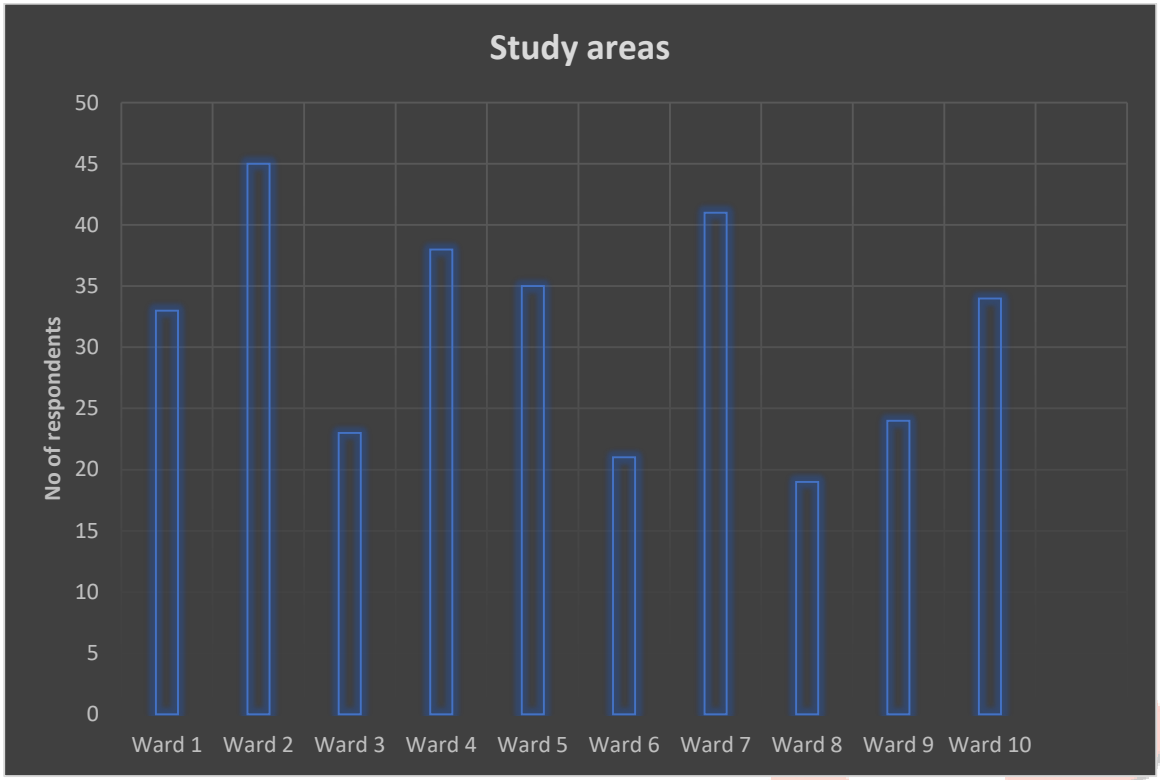
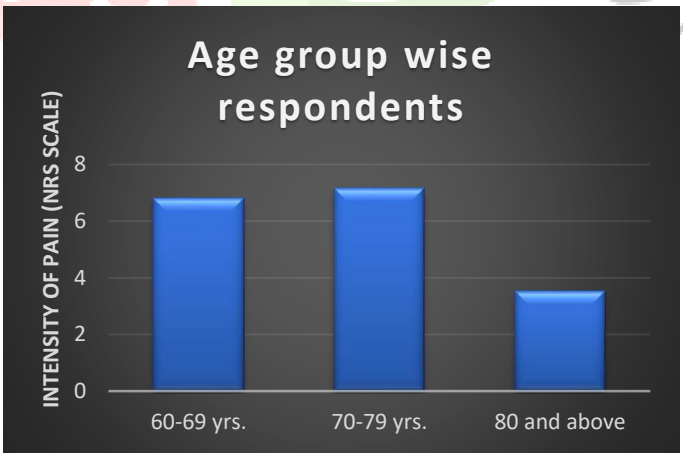


Figure 1. Point prevalence of chronic pain in each region across the study area.



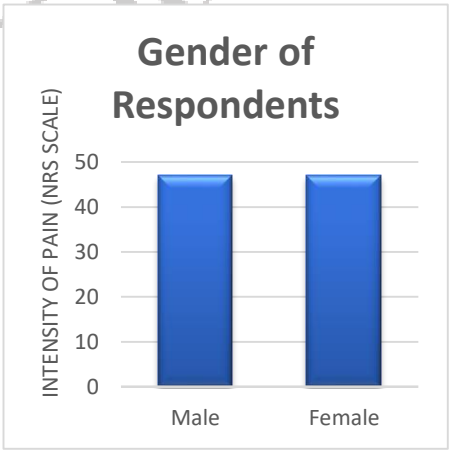


Figure 2. The intensity of pain in different age groups and genders across India

Main Sites of Pain

Knees (35%), back (39%), and joints (22%) were the most prevalent sites of pain among all respondents across India. Fewer respondents reported hip pain.

The women were more affected with pain at these sites (knee: 36%; back: 42%; and joints: 15%) as compared with men (knee: 34%; back: 36%).

A higher prevalence of pain in the knee, back, and joints was reported in the older age group. Respondents above the age of 80 years (knee: 53%; back: 35%; joints: 32%) experienced more pain as compared with respondents of 70 to 79 years (knee: 43%; leg: 26%; joints: 22%) and 60 to 69 years (knee: 18%; leg: 23%; joints: 15%) age groups.

Causes of Pain

Most of the respondents mentioned that joints and back were the main causes of pain. More female respondents experienced joint pains than male respondents. Older respondents (above 80 years: 27%) experienced joint pain to a greater extent as compared with the younger old (60 to 69 years:25%).

More female respondents (13%) revealed arthritis as a cause of pain than male respondents (8%). Arthritis was a cause of pain among the respondents above 80 years and 70 to 79 years age group to the same extent as compared with respondents of the 60 to 69 years age group.

The majority of respondents (53%) had limited daily activities due to pain. Older people (54% over 60 years old) had more difficulty than the younger elderly group. The daily activities of men and women were equally affected by pain (53% each). However, more men (44%) could perform daily chores without pain as compared with women (42%).

Loss of Work

A total of 32% of respondents have lost more than 4 hours of work due to pain in the last 3 months. However, many respondents (37%) refused to disclose the number of hours lost due to pain. A high percentage of female respondents (41%) refused to disclose absenteeism compared to male respondents (36%), but both suffered equally (32% each). Most respondents said their current employment status and working hours were unaffected by pain (61%). But; 34% said their employment status and working hours were affected. The majority of young respondents (36%) were more affected than older respondents (31%). Male respondents (39%) felt that pain was affecting their current employment situation more than female respondents (29%). It reports that the pain was suppressed). Male respondents (76%) felt pain under control within 6 months compared to female respondents (66%).

Main Treatments

A higher percentage of respondents received prescription analgesics (56%) compared to over-the-counter analgesics (42%). The tendency to take prescription drugs increased between the ages of 60 and 69: 51%. 45-59 years: 59%; and over 80 years: 63%). More women (62%) received prescription medication than men (50%). Overall, more respondents switched from their doctor's recommended prescription to another prescription (40%), and some respondents needed more powerful analgesics (24%). Most respondents were on NSAIDs for their pain (55%), and others were prescribed antiepileptic drugs (17%), muscle relaxants (8%), beta-blockers/calcium channel blockers (6%), or narcotic analgesics (5%) for their pain (Figure 6). The use of NSAIDs increased with age.

Most respondents (81%) say that current painkillers are somewhat effective (male: 85%, female: 79%). Age did not show an association with the efficacy of prescription analgesics. Thirty-five percent of respondents felt that current painkillers were ineffective, and the other 42% refused to clarify whether current painkillers were sufficient to control the pain. A higher percentage of older respondents (> 80 years: 42%) reported that analgesics did not control pain compared to respondents in the younger age group. About 18% of men and 17% of women have taken at least one over-the-counter painkiller in the last three months. Overall, the majority (95%) were taking non-prescription NSAIDs to treat chronic pain

at the time of the study. Similar results were observed for genders of all age groups. Over-the-counter drugs and other oral analgesics were somewhat effective in reducing pain in respondents (48%). Other alternatives included ointments (36%), herbal preparations (11%), massages (29%), exercise (27%), and dietary changes / special foods (11%).

Physician Consultation

Overall, 37% of respondents have not consulted a doctor in the last three months, 24% of respondents have had one consultation and 19% have consulted a doctor twice. In the last three months, more men (41%) have not seen a doctor than women (32%). A total of 47% of respondents visited one doctor, 20% of respondents visited two doctors, and 12% did not provide this information. The majority of older respondents (60+: 24%) experienced more doctor pain than younger respondents (30-44: 18%; 45-59: 21%). rice field.

Respondents considered seeing multiple doctors because their doctor was a general practitioner (40%). Referral to a general practitioner to another physician (30%); Respondents were not satisfied with the treatment they received (30%). A friend/relative recommended another doctor (18%), or a former doctor couldn't control the pain (16%). Respondents visited or declined responses to general practitioners / family doctors (51%) and orthopedists / orthopedists (18%). Most respondents (89%) have not yet consulted with a pain management specialist.

Table No 2.: Regression statistics of number of family members vs frequency of pain in the sample data

Regression Statistics	
Multiple R	**0.807736671**
R Square	**0.652438529**
Adjusted R Square	**0.651272216**
Standard Error	**0.927307789**
Observations	**300**

An interpretation of table no. 2 makes it clear that the independent variable of the standard model is significantly predictive of the dependent variables. In this studied sample, the multiple R is 0.807736, which indicates a fairly strong linear relationship between the number of family members vs frequency of pain. The R-squared is 0.6524, which indicates that 65.24% of the variance. The standard error is observed well within.

Discussion

A pain prevalence study was conducted to determine the prevalence of chronic pain in Hong Kong, with 31.9% of respondents having severe chronic pain, with headache, low back pain, and arthralgia being the most common pain sites. It turned out to be. Yeo and Tay showed chronic pain in 8.7% of the respondents who responded to the questionnaire, with a high prevalence of chronic pain in females (10.9%). The study showed a prevalence of chronic pain in 13% of respondents across India.

In a large STOPNEP (prevalence study of neuropathic pain) epidemiological study of more than 20,000 French respondents, the pain was prevalent in 31.7% of respondents. Of these, 6.9% of the total study population suffered from pain with neuropathic features. As observed in other studies, the intensity of pain was greater in females than in males. A study by Smith et al. (2001) When assessing the effects of chronic pain, the researchers found that a higher proportion (15.8%) of women experienced "severe chronic pain" compared to men (12.3%). In another study, Borra and Hardy (2023) showed that females

(49.4%) had a higher prevalence of chronic pain than males (22.5%). This study showed the presence of chronic pain in respondents from less than 6 months to more than 3 years. However, a higher percentage of respondents suffered from chronic pain for more than 3 years. Viera et al. (2012) It showed the presence of chronic pain between 6 months and 4 years.

The most important aspect of this study was to determine the impact of pain on the respondents' quality of life. Pain affected almost all quality of life parameters. The greatest effects of chronic pain were observed with quality of life parameters such as sleep, athletic performance, walking, household chores, and participation in social activities. In a previous study, patients with severe chronic pain (23.9%) had lower employment rates compared to patients without severe chronic pain (81.2%), with men (17.6%) more than females (14, 6%). The study showed that poor quality of life caused nearly 32% of respondents to lose more than four hours of work in the last three months due to chronic pain. Similar results were found in a review by Harker et al. Danish respondents lost 9.4 business days in 6 months due to chronic pain. It was found that treatment choices were evenly divided between prescription and non-prescription drugs. The use of NSAIDs was the most common in the Indian region. Similar results were reported by Breivik et al. 91% of Finnish respondents are taking NSAIDs.

One in four respondents in this study found that their analgesics were not sufficient for pain management, and three in four stated that current prescription drugs were negligibly effective. These results suggest the need for alternative options for treating chronic pain. According to a survey conducted in Denmark, 45.9% of people seeking medical assistance were dissatisfied with pain management. Respondents with chronic post-thoracotomy pain were included, and only 3 of the 209 doctors consulted were satisfied with pain management.

Few respondents were not taking painkillers and could manage themselves or use ointments, massages, exercises, herbal supplements, and diets. Sixty-four percent of respondents felt that alternative treatments were somewhat effective. Other studies have shown physical therapy, acupuncture, massage, a combination of medication and massage, and the use of acupuncture to relieve pain. Exercise, along with massage and dietary changes, is the most common way to relieve pain. Breivik et al. Message (30%), physiotherapy (21%), and acupuncture (13%) are the most commonly used non-pharmacological treatments for the management of pain and relaxation, and counseling is the most to relieve pain. Reported to be an unused non-drug treatment option.

Patients with moderate to severe chronic pain have shown that they have tried exercise, herbal supplements, heat treatment, or relaxation to relieve the pain. A review conducted by IASP to identify problems in pain education in developing countries showed significant differences between the required and actual pain relief interventions. This treatment gap is believed to exist due to the lack of awareness of health professionals and the limited availability of facilities. Recognizing this gap, IASP has launched a training initiative focused on training pain management health professionals and conducting clinical training in pain management. This study showed that most respondents are taking NSAIDs to treat chronic pain. Other studies have also reported that NSAIDs are the most commonly used class of drugs for chronic pain. According to the United Kingdom National Health Service (NHS), NSAIDs are prescribed for short-term pain relief. However, NSAIDs are not safe and may be unsuitable for use in the elderly, patients receiving antiplatelet therapy for long-term use. In a consensus statement, Adebaja stated that the use of NSAIDs can lead to gastrointestinal, liver, and heart-to-kidney toxicity. Further research is needed to assess NSAID-induced complications in Indian patients to ensure proper use of NSAIDs.

NSAIDs are more common analgesics, but other classes of analgesics prescribed for moderate to severe chronic pain and used for palliative care are opioids / topical analgesics / anticonvulsants / antidepressants / it is an antidepressants. Careful evaluation by a clinician is required to ensure the proper and safe use of opioids.

Conclusion

This study showed that a significant population suffers from chronic pain that leads to an impaired overall quality of life. Most patients received NSAIDs from pharmacies and continued to take the drug without consulting a doctor. The percentage of respondents who received pain treatment from pain management specialists was significantly lower. Patients who use NSAIDs without being aware of the harmful effects

face some health problems for indiscriminate use. Considering there are few pain consultants in India, most respondents consulted a general practitioner or orthopedist about pain management. This study can be used to design personalized patient care and improve understanding of treatment goals for patients with chronic pain. The study also points to the need for appropriate treatment recommendations for patients with chronic pain. As a continuation of this study, another study will be conducted to assess the side effects of NSAIDs and the potential for renal, gastrointestinal, and cardiovascular complications.

References

1. Bond M. 2011. Pain education issues in developing countries and responses to them by the International Association for the Study of Pain. *Pain Res Manag. ;16:404–406.*

*2. Borra, C., & Hardy, R. (2023). Differences in chronic pain prevalence between men and women at mid-life: A systematic review protocol. *BMJ Open, 13*(4), e065497. https://doi.org/10.1136/bmjopen-2022-065497*

3. Bjorklund M, Hamberg J, Heiden M, Barnekow- Bergkvist M. 2007. The assessment of symptoms and functional limitations in low back pain patients: validity and reliability of a new questionnaire. *Eur Spine J.;16:1799–1811.*

4. Bouhassira D, Lanteri-Minet M, Attal N, Laurent B, Touboul C. 2008. Prevalence of chronic pain with neuropathic char- acteristics in the general population. *Pain;136:380–387.*

5. Breivik H, Collett B, Ventafridda V, Cohen R, Gall- acher D. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. Eur J Pain. 2006;10:287–333.. Bekkering GE, Bala MM, Reid K, et al. Epidemiology of chronic pain and its treatment in The Netherlands. Neth J Med. 2011;69:141–153.

6. Cho SH, Kim YR, Lee JH, et al. A questionnaire study investigating the prevalence of chronic postoperative pain. Korean J Anesthesiol. 2012;62:40–46.

7. Craig K. D., Epidemiology of Musculoskeletal Pain. Global Year Against Musculoskeletal Pain Oct 2009–2010. Available at: http://www.iasp-pain.org/AM/AMTemplate.cfm?Section=Home &TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID= 9280 (accessed January 11, 2013).

8. Gupta S, Gupta M, Nath S, Hess GM. Survey of European pain medicine practice. Pain Physician. 2012;15: E983–E994.

9. Gureje O, Von Korff M, Simon GE, Gater R. Persistent pain and well-being: a World Health Organization Study in Primary Care. JAMA. 1998;280:147–151.

10. Lambert M. ICSI releases guideline on chronic pain assessment and management. Am Fam Physician. 2010;82: 434–439.

11. Ng KF, Tsui SL, Chan WS. Prevalence of chronic pain in Hong Kong adults. Hong Kong Med J. 2007;13:28–29.

12. Persisting pain in children package. In: WHO, ed. WHO Guidelines on the Pharmacological Treatment of Persisting Pain in Children With Medical Illnesses. France; 2012.

13. Smith BH, Elliott AM, Chambers WA, Smith WC, Hannaford PC, Penny K. The impact of chronic pain in the community. Fam Pract. 2001;18:292–299.

14. Souza CA, Oliveira LM, Scheffel C, et al. Quality of life associated to chronic pelvic pain is independent of endometriosis diagnosis-a cross-sectional survey. Health Qual Life Outcomes. 2011;9:41.

15. Yeo SN, Tay KH. (2009) Pain prevalence in Singapore. Ann Acad Med Singapore. 2009;38:937–942.