

Prevalence of chronic pain in Pakistan – a national survey

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Abstract

Objective: To assess the prevalence of chronic pain, its physical and psychosocial impact on daily life, and the various therapies adopted to alleviate pain.

Method: The cross-sectional population-based telephonic survey was conducted from May to July 2021 at Shaukat Khanum Memorial Cancer Hospital, Lahore, Pakistan, and comprised patients of either gender aged at least 18 years suffering from chronic pain who visited the institutional laboratory collection centres. In the first phase, people who were suffering from chronic pain were screened, while in the second phase, data was collected using a detailed questionnaire exploring pain history, treatment and its effects.

The data was compiled and analysed using Antlere's AI based software.

Results: Of the 4,801 patients contacted, 757(15.75%) were suffering from chronic pain. A total of 201(20%) subjects reported that their pain score was 5/10 on the numerical rating scale. Back pain was the major complaint (183, 18%) among the subjects. Of the total, 335(44.25%) were having active treatment, and 226 (67%) of them said the medication was effective. Overall, 706 (93%) patients had never visited a pain management specialist. Furthermore, 252 (33%) participants were diagnosed with depression, and 106 (14%) patients said that they were suicidal at some point in life.

Conclusion: The survey observed that a high percentage of unawareness existed on pain management among the Pakistani citizens.

Key Words: Chronic, Pain, Pakistan, Survey, Prevalence, Back Pain.

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Introduction

Pain is the most common reason for which patients seek medical help¹. According to the International Association for the Study of Pain (IASP), chronic pain is defined as pain persisting for >3 months². Pain is a global issue and is regarded as the fifth vital sign¹. All over the world, almost 20% of adults suffer from chronic pain³. Not only does it cause severe discomfort, pain has also been implicated to cause disability and mental health disorders⁴. Despite all these facts, pain, whether acute or chronic, has not been given much attention by researchers in the past⁵.

Different pain studies in the West have looked at the burden of disease as well as the impact of chronic pain on one's quality of life (QOL), the ability to perform activities of daily living (ADLs), treatment and satisfaction level, attitudes of individuals towards their pain and their experiences of pain, perception of individuals with chronic pain towards the attitude of their families, friends

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and doctors⁶. Although there have been studies about chronic back pain on a smaller scale in Pakistan⁶, there is a lack of large-scale data regarding the prevalence of chronic pain and the impact it has on people's lives.

The current study was planned to fill the gap by assessing the prevalence of chronic pain, its physical and psychosocial impact on ADLs, and the various therapies adopted to alleviate pain.

Subjects and Methods

The cross-sectional population-based telephonic survey was conducted from May to July 2021 at Shaukat Khanum Memorial Cancer Hospital, Lahore, Pakistan. After approval from the institutional ethics review committee, the sample size was calculated using Raosoft calculator⁷ with margin of error 5%, confidence interval (CI) 99% and response distribution 50%. The sample was inflated to account for a possible refusal rate of 15%.

The sample was raised using convenience sampling technique. Those included were patients of either gender aged at least 18 years suffering from chronic pain who visited the institutional laboratory collection centres across the country. A total of 182 collection centres were targeted in more than 80 cities.

In the first phase of the survey, a short questionnaire was used to screen the subjects. A research company was hired to collect this data via telephonic interviews. The demographic data was shared with the company after a legal contract was signed along with a non-disclosure agreement. The staff of company who were to do the interviews were carefully selected having a healthcare background and were given formal training thrice before starting the project. They then dialled the participants as per the geographic distribution to ensure representation from every part of the country. Those who were not willing to participate in the survey were excluded. The screening phase continued until the target sample size for second phase was achieved.

In the second phase, people who had been suffering from pain for at least 6 months were interviewed by the staff of the same company to further determine treatment, the effect of pain on ADLs, different aspects of pain management and patient satisfaction. The technique of 12-15-minute personal telephonic interviewing was employed. Numerical rating scale was used to measure pain scores. Antlere's AI based software was used to design and analyse the survey⁸.

Results

Of the 15,447 subjects contacted in the first phase, 4,801(31%) agreed to participate. Of them, 757(15.7%) had chronic pain (Table 1). Also, 412(54%) subjects were

Table-1: The number of people contacted and included in the study.

Dialing Summary	Count
Total calls made	38,521
Unable to contact	23,074
Subjects contacted	15,447
Subjects shared the feedback (Phase-1)	4,801
Subjects shared the feedback (Phase-2)	757

unemployed at the time of the survey.

Although 500 (69%) of the participants were males, differential analysis showed that females had a higher (287 out of 990, 29%) prevalence of chronic pain compared to the males (685 out of 4568, 15%). Majority of the subjects were suffering from chronic back pain 183(18%) followed by pain in the leg 136(13%). However, in people aged 64 years and over, chronic knee pain (24, 21%) was the dominant cause. Besides, 306(40%) subjects complained of constant pain, while 451(60%) reported intermittent pain.

Average pain scores depicted that 455 (46%) participants had pain score between 4 and 6. When asked to score

their pain at its worst, 262(34.6%) subjects reported it to be 8 or more on the numerical rating scale (NRS). In terms of pain characteristics, there were multiple responses in many cases, with 365(44%) reporting sharp pain, 242(29%) suffering from dull pain and 114(14%) having stabbing pain. When asked about whom they discussed their pain with, 615(79%) replied that they discussed it with their doctor, while 49(6.5 %) discussed it with a family member.

Among the 325(43%) subjects who had visited a doctor in the preceding 6 months, 51(15.7%) had seen a pain management specialist. Of them, 26(51%) had been referred by a doctor, 15(29.4%) by a family member and 8(15.7%) by a friend. Those who had visited the doctor <5 times in the preceding 6 months were 254(78%) and 30(9%) had more than 10 visits. Those who were comfortable discussing their pain with the doctor were 99% (322 out of 325 positive responses), with 35(11%) subjects reporting that the doctor used a scale to measure their pain. Also, 245(75%) people said they were satisfied with their doctor. The leading causes cited for dissatisfaction were ineffective medication (44 out of 81 responses, 54%) and unsatisfactory examination (23 out of 81 responses, 28%). Further, 306 out of 335 (91%) subjects were taking medication prescribed by the doctor, while 29 (9%) were taking medication without prescription. The number of pills consumed per day was 1-2 for 198(70%), 3-4 for 52 (18%) and >4 pills per day for 32(11%). Of the total 335 who were on treatment for their pain, 125(37%) respondents were taking an alternative to medication to deal with their pain, which included physical exercise or walk (61, 48%). When asked if the pain relief medications were effective, 226(67%) said 'yes', 78 (23%) said 'partially' and 31 (9%) said they were 'not effective'. Besides, 372(49%) admitted to avoiding pain medication out of fear of their side effects. Of the total, 119(16%) said their pain was completely controlled at the time of the survey, and 43(41%) suffered from pain for at least one year before it was completely controlled. Pain was affecting ADLs in 424(56%) cases.

Table-2: The psycho-social impact of chronic pain.

Psychosocial impact of chronic pain	Affected subjects
Physical dependence	309 (41%)
Low mood	484 (64%)
Insomnia	441 (58%)
Depression	252 (33%)
Effect on daily functioning	424 (56%)
Avoided analgesics due to fear of side effects	372 (49%)
Unemployed	345 (54%)
Suicidal thoughts	106 (14%)

In terms of the impact of chronic pain on mental health, 252(33%) responders had been diagnosed with depression by a clinician, 484(64%) suffered from low mood and 441(58%) were suffering from insomnia. When asked if they ever felt so much pain that they wanted to die, 106(14%) subjects said 'yes' (Table 2). When asked if they would be willing to spend all their wealth to relieve the pain, 455(60%) participants said they would.

Discussion

The current chronic pain survey is the first of its kind in Pakistan. The total number of calls made (38,521) and the number of successful calls (15,447) during the study also make it one of the largest, if not the largest, telephonic surveys done in the field of medicine in the country. The sample stratification was done as per the latest census data⁹ that was available at the time. The huge number that was reached out provided a fair sample of the initial burden of disease that is chronic pain.

The prevalence of chronic pain was 15.7% which is consistent with the regional and international data^{6,10-14}. This figure, when applied to the national population, shows that approximately 34.5 million people are suffering from this ailment. Large-scale studies in Europe and Australia have shown the prevalence of chronic pain to be 19%⁶ and 16.8%¹⁰. In the United States, the number is even higher at 20.4%¹¹. In neighbouring India, the prevalence was reported to be 19.3%¹². There was a steep increase in the prevalence of chronic pain in the older age groups, which was not seen in the current survey. This change can be attributed to the fact that the current study was done via telephonic interviews compared to the face-to-face technique in the other study¹².

Back pain and leg pains were among the commonest complains among the respondents in the current study. The global prevalence of low back pain (LBP) is 9.4% and it is thought to be one of the commonest conditions responsible for the most years lived with disability worldwide¹³. A regional study looked into the relationship between back pain and physical activity,¹⁴ but did not find any direct relationship. More than half of the population was suffering from constant pain, and sharp pain was reported to be the top most characteristic among both male and female subjects.

Jackson et al. attempted to assess the burden of chronic pain that did not have a clear aetiology in individuals living in low- and middle-income countries (LMICs), and their meta-analysis confirmed 34% prevalence of unspecified persistent pain in the general population in LMICs¹⁵.

In the current study, almost three-fifth of the phase 2 subjects never consulted a doctor for chronic pain. Only 7% consulted a pain management specialist, which is a damning evidence of the lack of education and awareness about the specialty among the general population in Pakistan. Although 75% of the respondents reported that they were satisfied with their doctor, only 11% said their doctor had used a pain scale to measure their pain, and, even then, it was not done on every visit. Passive mode of treatment was the dominant therapy adopted as 84% were using medication for pain control and only 9% reported active mode of therapy, like exercise, physiotherapy and massage therapy. Mixed numbers were reported when it came to effectiveness of pain management therapy, and this reflected in 84% of the participants revealing that their chronic pain was still not controlled completely. This figure, when compared to data from the developed countries, shows that we are still a long way behind as a pan-European survey showed that almost 60% patients thought their pain was adequately controlled⁵.

When we focus on the personal and social effects of chronic pain, only then can we begin to see the catastrophic burden of chronic pain. Around 56% subjects in the current study reported that the chronic pain interfered with their ADLs. Almost one-third were suffering from depression and two-third had low mood. The psychosocial effects of pain were studied in the US and concluded that chronic pain patients had higher odds of low friendship quality, high loneliness and high perceived rejection¹⁶. A majority of those suffering from chronic pain were jobless at the time of the current survey. It has also been shown that they are usually devoid of the enjoyment of any social experiences¹⁷. The fact that these patients suffered from insomnia and were usually dependent on others also shows the lack of psychosocial support in the country. A comprehensive review on suicide proved that chronic pain was an independent risk factor for suicide, and it almost doubles the risk, with the biggest sociodemographic indicators being disability and unemployment¹⁸. In the current survey, 14% had suicidal ideation, and 60% said they would spend all their wealth if it meant that their pain would go away completely.

The response rate for the survey was around 31% which is an encouraging number for researchers who want to conduct telephone-based interviews. This, however, might be skewed by the nationwide lockdowns that were implemented during the coronavirus disease-2019 (COVID-19) era which might have led to an increased tendency to agree to a telephonic survey. Although we

can reach a higher number of participants via a telephone-assisted interview technique, it does come with certain biases. Those with an extremely lower socioeconomic status and who do not have access to phones are automatically filtered out of the sample.

Conclusion

Every 9th Pakistani is currently suffering from chronic pain. There is a serious lack of education and awareness regarding pain management in the country. The findings may encourage the allocation of due resources by the relevant stakeholders.

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