

Patient satisfaction at the Chronic Pain Management Clinic at Groote Schuur Hospital

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Background: Chronic pain is a costly and debilitating ailment with an estimated global prevalence of 20%. The evaluation of patients' satisfaction with pain management is crucial both to ensure that care provided remains fit for purpose and to identify opportunities for improvement. Groote Schuur Hospital (GSH) has one of the few functional interdisciplinary pain clinics in South Africa with more than 900 patients seen per year. To date, there had been no data informing us about patient satisfaction at the clinic. The aim of our study was to survey patients who are being treated at the Chronic Pain Management Clinic to determine their level of satisfaction with the service.

Methods: A descriptive cross-sectional study was conducted with a sample of 67 patients who had been attending the Chronic Pain Management Clinic for more than three months. Data were collected telephonically using the patient demographics form and the internationally validated pain treatment satisfaction scale (PTSS). The data were then analysed using descriptive statistics.

Results: The mean age of the 67 participants was 56.5 years (SD 12.9; age range: 18–83). In this sample, 81% of the participants are female while 70% of the participants had not completed 12 years of schooling. Most of the participants were referrals from orthopaedics (48%), followed by referrals from day clinics (13.5%). The median pain severity score was 7.5 (IQR 7–9) a week prior to data collection. The majority of participants (70%) reported that they could ask the staff questions and were provided with adequate support and care. Results indicate that six in every ten patients are satisfied with their pain management at the GSH Chronic Pain Management Clinic. One aspect of care which was less than satisfactory related to patients receiving information about their condition and the treatment thereof. In general, participants would have appreciated more information about their illness or injury (51%), causes and treatments of the pain, as well as side effects of the pain medication (60%).

Conclusion: Most participants were either somewhat satisfied or very satisfied with all aspects of care they were asked about. It is clear that patient satisfaction is not only driven by pain relief but can also be enhanced by good patient-provider relationships and shared decision-making. It is, therefore, important to continually train healthcare providers to improve their communication skills.

Keywords: chronic pain, Chronic Pain Management Clinic, patient satisfaction, Cape Town

Introduction

The global prevalence of chronic pain is estimated at 20% and it accounts for nearly one fifth of physician visits.^{1,2} The figures are similar in South Africa, with one in five South Africans reporting chronic pain.³ This high prevalence translates into a large societal burden as chronic pain is a costly and debilitating ailment.² Chronic pain has a negative impact on multiple aspects of patient health, including mental health, work, sleep, relations with other people and overall quality of life.⁴ It is estimated that the societal burden of chronic pain may be larger in the developing world than in the developed world, with chronic musculoskeletal pain being the most common pain condition in developing communities.^{5,6}

Current treatment guidelines for chronic pain recommend multidimensional management of pain by an interdisciplinary team of healthcare professionals.⁷ Chronic pain is a complex pathology involving maladaptive changes at multiple levels of the peripheral and central nervous system. These changes can be upregulated by the interaction of various biological, psychological and social factors.⁸ Targeting these factors using an interdisciplinary approach has shown a greater effect than

biomedical interventions alone in improving pain, depression, anxiety and psychosocial functioning, including return to work.⁹ Given the complex mechanisms and the promising evidence, it is not surprising that evidence-based guidelines recommend the use of a combination of pharmacological and non-pharmacological treatments delivered by teams of healthcare professionals to effectively manage pain.¹⁰

An association between patient satisfaction and the comprehensive assessment and management of pain has been shown in recent years.¹¹ Patient satisfaction is defined as the extent to which patients are happy with the healthcare service they are receiving. This evidence-based outcome is dependent on many variables, including improvement in pain outcomes, attitude of medical staff, clear communication and patient's expectations being met or exceeded.¹² Moreover, improved patient satisfaction has been shown to positively affect clinical outcomes, patient trust levels, adherence to treatment, patient-carer relations and the quality of healthcare delivery.¹³

To date, there are no official data informing us about patient satisfaction with the Chronic Pain Management Clinic at Groote Schuur Hospital (GSH). The Commission on Patient Safety and

Quality Assurance recommends that clinical audits and other quality improvement processes, including evaluations of patient satisfaction with received care, be undertaken regularly with the aim of improving patient care and outcomes.¹⁴ These processes are crucial to ensure that care provided remains fit for purpose and to identify opportunities for improvement.¹⁵ In keeping with this principle, the aim of this study was to survey patients being treated in the GSH Chronic Pain Management Clinic to determine their level of satisfaction with the service.

Methods

Ethical approval was obtained from the University of Cape Town, Faculty of Health Sciences Human Research Ethics Committee (Ref: 715/2018). Following the approval, we conducted a descriptive cross-sectional study to determine the level of satisfaction with pain management among patients who had been receiving treatment at the GSH Chronic Pain Management Clinic for a minimum of three months.

The interdisciplinary team at the GSH Chronic Pain Management Clinic comprises anaesthetists, nurses, physiotherapists, psychiatrists and clinical psychologists. The pain clinic sees more than 900 patients per year, of which one fifth are new presentations. Patients seen at the clinic range in age from 18 to 90 years with the most common presenting age being 40 to 65 years (Dr Janieke van Nugteren, personal communication, 17 June 2018). Since January 2018, the clinic has been receiving 15–20 referrals per week. Although a triage system is implemented to prioritise patients requiring urgent medical care, some patients may await treatment for four to nine months. Many of the patients seen at the GSH Chronic Pain Management Clinic have been using the service for several years, with numerous barriers encountered when discharging back to primary care contributing to long waiting lists.

We excluded participants from this study who (i) had recorded cognitive impairment or dementia, (ii) were not able to verbally communicate in English, Afrikaans or isiXhosa, or (iii) had ongoing legal proceedings or complaints against GSH. To minimise selection bias, patients meeting the eligibility criteria were randomly identified from the registry of patients attending the clinic. The eligible patients were contacted telephonically by a trilingual research assistant (competent in English, Afrikaans and isiXhosa) to invite them to participate in the study and to screen the consenting participants according to the eligibility criteria. Eligible patients who consented to participating then completed a telephonic interview using the validated pain treatment satisfaction scale (PTSS).¹⁶ The PTSS has shown good validity and reliability in patients with various chronic pain conditions and has been widely used in research involving pain treatment satisfaction and pain management programmes.^{16,17} We were particularly interested in the following subsections of the PTSS: (i) satisfaction with current medication and care, (ii) satisfaction with information about pain and its treatment, (iii) medication side effects, and (iv) general health. On completion of the telephonic interview, further information was obtained from

the patients' files and collated onto a data collection sheet. This information included demographics such as age, sex, education and employment status, medical history and chronic pain history. Pain severity and pain interference scores on admission and at the most recent consultation were extracted from the Brief Pain Inventory (BPI) which is routinely used at the clinic. The BPI scores were classified as either mild (1–4), moderate (5–6) or severe (7–10).¹⁰

Statistical analysis

The sample size (n) was calculated using the Yamane formula ($n = \frac{N}{1 + N(e)^2}$) for calculating a sample size in cross-sectional studies¹⁸ where n represents the patient population and e is the level of precision for a 95% confidence interval (CI). Using a population size of 82 (based on the number of patients seen during a one-month period at the Chronic Pain Management Clinic) and a precision of 0.05 (based on a 95% CI), the formula indicated that a sample of 68 participants with chronic pain were needed for the results to be generalisable to the sampling frame of all patients seen during a one-month period. This timeframe was chosen because the effect of the treatment is evaluated over the following one-month period. Descriptive statistics (median [interquartile range – IQR] or mean [standard deviation – SD]) were used according to the distribution of data to summarise demographic, health, chronic pain profile and treatment information. Categorical data are presented as frequencies (n) and percentages. Sections of the PTSS were analysed individually.

Results

The recruitment process is illustrated in Figure 1 and indicates that participant recruitment continued until the sample size of 68 participants was achieved. On analysis of the participants, one was found not eligible, resulting in a final sample of 67 participants.

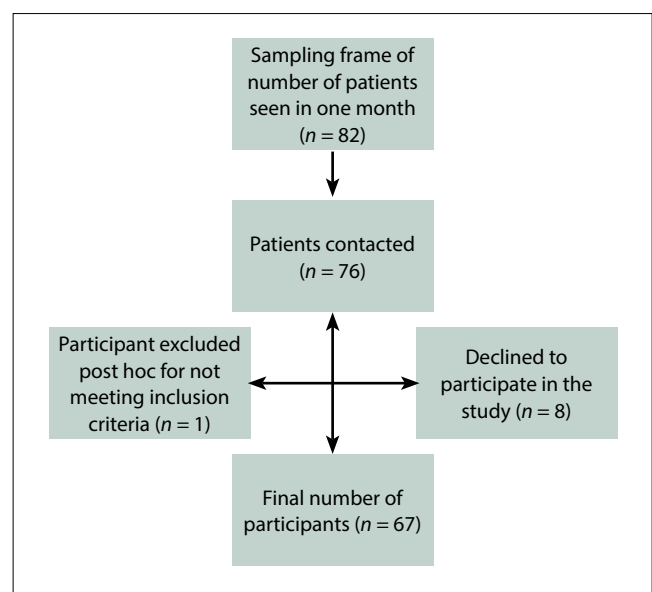


Figure 1: A flow-diagram illustrating the recruitment process

Table I: Demographic characteristics of the participants ($n = 67$)

Characteristics	n (%)
Sex	
Female	54 (81)
Male	13 (19)
Level of education	
No schooling completed	3 (4.5)
Completed Grade 4	3 (4.5)
Completed Grade 7	17 (25)
Completed Grade 10	24 (36)
Completed Grade 12	12 (18)
University/Technikon/College graduate	7 (10.5)
Postgraduate qualification	1 (1.5)
Employment status	
Disability grant	25 (37)
Not employed	6 (9)
Employed, part-time	4 (6)
Employed, full-time	4 (6)
Housewife	1 (1.5)
Retired	26 (39)
Student	1 (1.5)

Table II: Common comorbidities in participants who took part in the study ($n = 67$)

Condition	n (%)*
Hypertension	45 (67)
Diabetes mellitus type 2	18 (27)
Hypercholesterolaemia	12 (18)
Chronic obstructive pulmonary disease/asthma	10 (15)
Depression	9 (13)
Arthritis	9 (13)
Ischaemic heart disease	5 (7)
Chronic kidney disease	4 (6)
Peripheral vascular disease	2 (3)
Retroviral disease	2 (3)

* The numbers do not add up to the total sample size because some participants had more than one comorbidity

Demographic characteristics of participants

The mean age of the 67 participants was 56.5 years (SD 12.9). Most of the participants were female (81%). Of the total number of participants, 70% had not completed 12 years schooling; and were either retired (39%) or receiving a disability grant (37%) (Table I).

Health profile of participants

In addition to having chronic pain, most participants presented with multiple comorbidities, with the most common being hypertension and diabetes (Table II). The majority of participants (72%) were self-reported cigarette smokers.

Table III: Referring departments, year of referral and chronic pain conditions of the participants ($n = 67$)

Referring department	n (%)
Orthopaedics	32 (48)
Day clinic	9 (13.5)
Neurosurgery	7 (10)
Rheumatology	3 (4.5)
Medical outpatients' department	3 (4.5)
General and vascular surgery	3 (4.5)
Physiotherapy/occupational therapy	2 (3)
Psychiatry	2 (3)
Cardiothoracic	2 (3)
Plastic surgery	1 (1.5)
Ophthalmology	1 (1.5)
Dermatology	1 (1.5)
Urology	1 (1.5)
Year of referral to the Chronic Pain Management Clinic	
2005–2014	14 (21)
2015	11 (16)
2016	6 (9)
2017	14 (21)
2018	17 (25)
2019	1 (2)
Not indicated	4 (6)
Condition	
Non-specific back pain	16 (24)
Failed back syndrome	14 (21)
Fibromyalgia	10 (15)
Neuropathic pain	7 (10)
Spinal stenosis	5 (7.5)
Complex regional pain syndrome	5 (7.5)
Spondylolisthesis	2 (3)
Persistent postsurgical pain	2 (3)
Postsurgical neuropathic pain	1 (1.5)
Fibromyalgia and spinal stenosis	1 (1.5)
Fibromyalgia and bilateral carpal tunnel syndrome	1 (1.5)
Cauda equina syndrome	1 (1.5)
Chronic eye pain	1 (1.5)
Phantom limb pain	1 (1.5)

Chronic pain profile of participants

Participants were referred from a variety of primary, secondary and tertiary level clinics with most referrals originating from the department of orthopaedics (Table III). The majority of participants had first been seen in the Chronic Pain Management Clinic within the last four years. The most common conditions presenting were non-specific back pain (24%) and failed back syndrome (21%) (Table III).

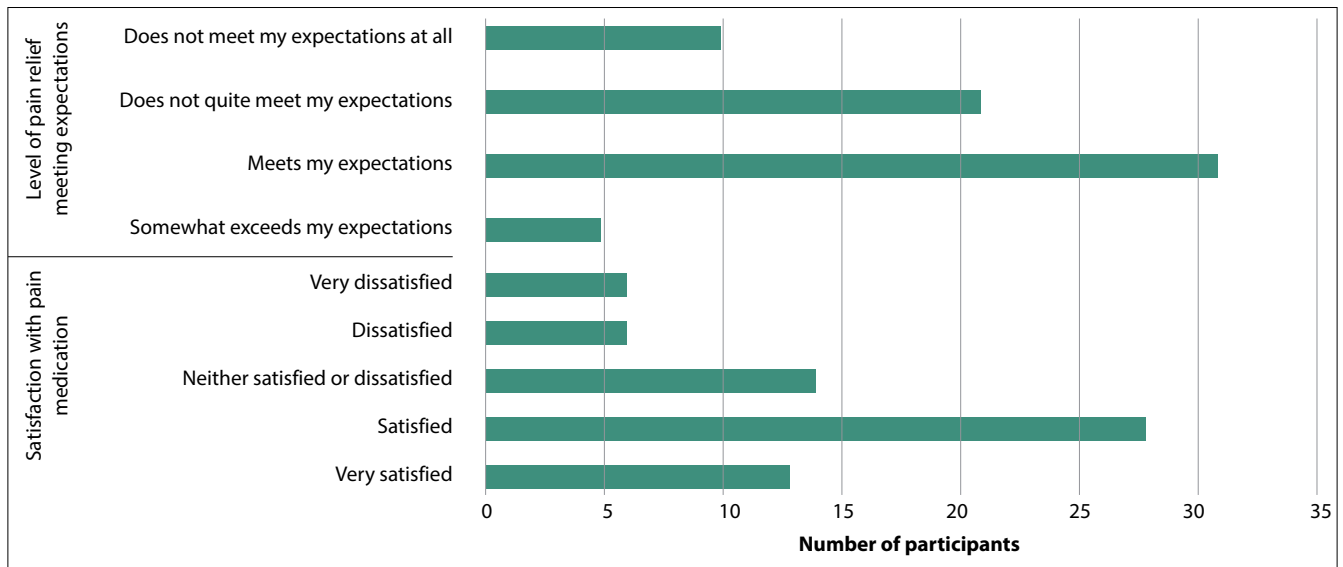


Figure 2: Overall satisfaction of participants with medication and level of pain relief

Pain treatment

Participants were prescribed a range of pharmacological and non-pharmacological treatments for their pain conditions. Multimodal analgesia was common with more than 50% of participants on a combination of paracetamol, tramadol, pregabalin and antidepressants. Six participants had received regional nerve blockade in the form of caudal blocks. Seventy-two per cent of the participants were referred to the chronic pain management programme (Pain Education Empowerment Programme – PEEP) incorporating pain education, exercise and mindfulness training. Participants were also referred for one-on-one physiotherapy, psychiatry, psychology and acupuncture.

Brief Pain Inventory

The scores for the BPI on admission to the Chronic Pain Management Clinic were available for 61 participants. All the participants had severe pain severity scores (median: 8.1; IQR: 7.5–9) and pain interference scores (median: 8.5; IQR: 6.7–9.2) on admission. Pain scores on their most recent visit to the clinic were 6.5 (IQR: 4.5–8.5) for pain severity and 4.84 (IQR: 2.4–7.28) for pain interference with function. During the survey, participants reported that their median pain scores in the last week were 7 (IQR: 7–9) with similar scores reported for their pain in the last 24 hours and their current pain. Participants reported that they waited until they had a pain severity of 6 (out of 10 on a 0–10 visual analogue scale [VAS]) before asking for medication and 9 before taking medication.

Pain treatment satisfaction scale

The results for each of the subsections of the PTSS are presented in Figure 2, Figure 3 and Table IV.

Satisfaction with current pain medication and care

Overall, most participants (61%) were either satisfied or very satisfied with their current pain management. In addition, 54%

of the participants reported that the level of pain relief met or exceeded their expectations (Figure 2).

The participants were either somewhat satisfied or very satisfied with all aspects of care that they were asked about (Figure 3). Most participants agreed with all the statements about pain medication improving their health, function, participation, mood and cognition (Supplement 2). However, fewer participants were somewhat satisfied with the duration of pain relief, suggesting they would have been more satisfied with longer durations of pain relief. Despite the appearance of satisfaction with the pain management as indicated above, 51% of the participants indicated that their current pain medication could probably be more effective in relieving their pain. Also, 30% were not sure whether the medication could be more effective, and 19% believed it probably could not be more effective. Of the 67 participants, 36 (54%) had previously used other pain medication, and 21 (31%) of these participants indicated that their current pain medication was better than the previous medication, while eight (12%) indicated that it was the same as their previous medication. Seven (10%) indicated that their current medication was somewhat worse, or much worse than their previous medication.

Medical care

The summary of participants' responses to questions about current medical care is presented in Table IV. The main factor contributing to patient satisfaction was good patient-provider relationships. The majority of participants agreed that they were able to ask the staff questions and were provided with adequate support and care.

General health

Despite the satisfaction as indicated above, most of the participants still reported that they were currently either only in fair (46%) or poor (27%) health. Only (3%) reported excellent health.

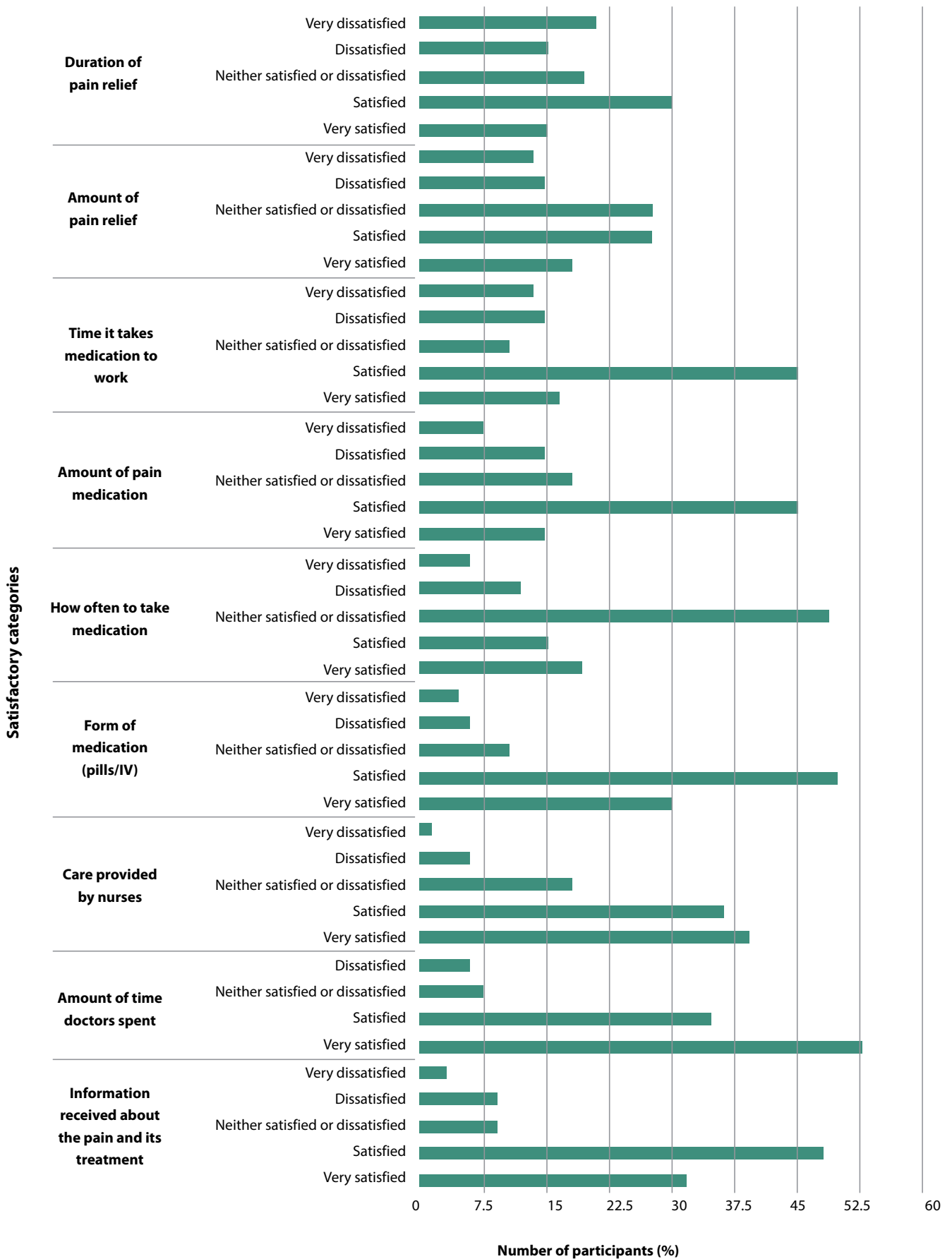


Figure 3: Participants' satisfaction with current pain medication and care

Table IV: Summary of participant responses to questions about current medical care

Statement	Strongly agree n (%)	Somewhat agree n (%)	Neither agree nor disagree n (%)	Somewhat disagree n (%)	Strongly disagree n (%)
It is easy to ask the medical staff questions	47 (70)	14 (21)	2 (3)	2 (3)	2 (3)
The medical staff always do their best to keep me from worrying	44 (66)	12 (18)	8 (12)	1 (1.5)	2 (3)
The medical staff is willing to provide me with the pain medication that I feel I need	41 (61)	17 (25)	3 (5)	3 (5)	3 (5)
The medical staff provide adequate follow-up care	36 (54)	19 (28)	4 (6)	6 (9)	2 (3)
The medical staff does not ask me about the pain I experience	4 (6)	4 (6)	5 (7)	12 (18)	42 (63)

The remainder reported that they were in good (19%) or very good (5%) health.

Information about pain and its treatment

In general, participants wanted more information about their illness or injury, causes and treatments for pain as well as pain medications (Supplement 1). Sixty per cent of the participants would have liked much more information about the possible side effects of the pain medication.

Side effects of medication

Most participants (94%) reported that their oral medications were easy to swallow. Regarding oral medication leaving an aftertaste, 54% of the participants strongly disagreed or disagreed with this statement, while 22% agreed that there was an aftertaste. Participants were asked whether they experienced the following side effects from their medication: unintentional weight gain; excessive fatigue; drowsiness; inability to concentrate; nausea; diarrhoea; dizziness; constipation; skin rashes; stomach aches; heartburn; vomiting (Supplement 2 & Supplement 3). The participants were generally not bothered by most of these side effects. However, the most experienced and bothersome side effects were drowsiness (51%), excessive fatigue (49%), constipation (39%) and the inability to concentrate (37%).

Discussion

According to our knowledge, this is the first study to report on satisfaction with pain management among chronic pain patients attending an interdisciplinary pain clinic in South Africa. Our results indicate that 61% of the participants were generally satisfied with their pain management. Furthermore, the treatment expectations of 54% of the participants were either met or exceeded. Overall, the participants experienced moderate to severe pain at the time of the survey and had been receiving a combination of pharmacological and non-pharmacological treatment at the GSH Chronic Pain Management Clinic for an average of four years.

Overall, a high proportion of the participants in this study were either satisfied or very satisfied with their pain management. The positive findings from this study are consistent with another study involving people with chronic pain conducted in the USA.¹⁹ However, the findings were lower than those in mixed samples

of acute and chronic pain patients in Vietnam²⁰ and lower than those of a study showing that 85% of acute pain patients were either satisfied or extremely satisfied with the management of their pain.²¹ The consistently high levels of satisfaction in this study are encouraging and are indicative of the successful delivery of pain management.²² In addition, the results may be a reflection that patients' expectations of ideal care were matched by their perception of the care they received.²²

Met or exceeded expectations regarding pain relief was one of the key determinants of satisfaction with overall treatment in this study. Patients who have their treatment expectations either met or exceeded, have higher satisfaction and improved outcomes.²³⁻²⁵ We found it interesting that the participants' expectations were exceeded because the levels of pain reduction from their most recent clinical visit and the 24 hours preceding data collection were not clinically significant (median difference: 1.6 out of 10 on VAS). This suggests that the participants' expectations went beyond merely reducing pain severity. The primary goal of managing patients with complex pain conditions at the GSH Chronic Management Pain Clinic is moving away from a single focus to reducing pain severity towards a holistic management of the patient to improve function and participation in meaningful life roles. Communication about this holistic strategy with an emphasis on improving function and participation in meaningful life roles by the healthcare professionals may have resulted in shifted expectations about pain relief, to the extent where minimal improvements in pain met or even exceeded the participant's expectations.

It is of interest that the participants reported high overall satisfaction scores despite reporting severe pain⁷ (IQR: 4–9) in the preceding 24 hours. It may be logical to assume that high pain scores will have a negative correlation with patient satisfaction scores. This notion is however not supported by the results of this and earlier studies.^{19,26} The paradoxical relationship between satisfaction and pain scores has previously been well described.²⁶⁻²⁸ The role of the patient-provider relationship appears to be pivotal in understanding this paradox. In our study, most participants reported being satisfied with their relationships with staff members, finding it easy to interact with them and to ask questions. Where relationships are good, patient satisfaction is likely to be high, despite continued pain.^{19,27} This is an encouraging result and reflects positively

on the interdisciplinary team approach and ability of the team members to develop therapeutic relationships with patients.

Another important consideration is that overall satisfaction may have been positively influenced by the achievement of the primary treatment goal – improved function and participation in meaningful life roles despite pain.²⁹ This is supported by the clinically significant improvement in the scores for pain interference with function (median difference: 3.6 out of 10 on a 0–10 VAS) between the most recent clinical visit and for the 24 hours preceding data collection. According to the Patient-Reported Outcomes Measurement Information System (PROMIS)[®] guidelines, an improvement of three points or more (on a 0–10 VAS) is clinically meaningful.³⁰ The global measure of pain interference with function incorporates general activity, mood, walking ability, work, relations with other people, sleep and enjoyment of life.^{30,31} Improvement in these affective and functional domains has been associated with greater levels of satisfaction with treatment.³² This evidence further highlights the importance of pain management which focuses beyond merely the reduction of pain severity to equipping chronic pain patients with the tools to help them participate in meaningful life roles and to reduce pain interfering with function. The one area that participants were less satisfied with in their pain management related to the amount of information received. Most participants indicated that they wanted more information on pain and its treatment. This is despite many patients having been referred for either Pain Neuroscience Education or to participate in the chronic pain management programme (PEEP) which includes a large educational component including a workbook.³³ This finding illustrates that even in a group of patients who are generally satisfied with their treatment, there is a need to continually engage in strategies to improve patient-provider communication in order to facilitate information giving. Many studies have shown the importance of information giving and patient education using effective communication and shared decision-making in chronic pain management.^{27,28} Shared decision-making results in improved patient compliance and participation with their treatment.²⁸ In chronic disease management, information giving is often a focus at the initiation of treatment. As many of the participants in this survey had been receiving treatment at the clinic for several years, it is possible that the emphasis on information giving had decreased over time.

There are several limitations to this study. Firstly, a cross-sectional survey provides limited insight into mechanisms as exploration of causation is not possible. There may also be a strong selection bias in the study with many patients not being contactable. There is also a bias towards chronic pain associated with orthopaedic conditions, as most of the participants had been referred from the orthopaedics department with non-specific back pain and failed back syndrome being the most common conditions. While this predominance of back pain is similar to that reported elsewhere it may be of value for future studies to subgroup patients according to condition.³⁴

Conclusion

The results of this study indicate that 6 out of 10 patients with chronic pain are satisfied with their pain management at the GSH Chronic Pain Management Clinic. This is encouraging and reveals the positive impact on chronic pain management made by the interdisciplinary Chronic Pain Management Clinic in Cape Town, South Africa. The findings of this study also show that patient satisfaction is not only driven by pain relief, but can be augmented by good patient-provider relationships and shared decision-making. This highlights the importance of continuous training of healthcare providers to improve their clinical communication skills. While this study provides valuable insight into patients' satisfaction with pain management, we recommend that further studies explore healthcare providers' views on managing and improving patient satisfaction with chronic pain management.

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Conflict of interest

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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Ethical approval

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Supplementary files available online:

Supplement 1: *Summary of participant responses regarding receiving information about their pain and its treatment*

Supplement 2: *Summary of participants' responses to statements about their current pain medication*

Supplement 3: *Participants' responses to side effects from pain medication*