

PRACTITIONER PERCEPTIONS OF EMOTIONS ASSOCIATED WITH PAIN: A SURVEY

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ABSTRACT

Objective: To discover whether chiropractors consider that emotional factors are associated with pain presentations in their patients and if so, what methods they use to investigate these factors and what strategies they use to manage them.

Design: A telephone survey of chiropractors in Australasia (Australia and New Zealand) and North America (America and Canada). A database of practitioners was obtained for each region. A phoning protocol was established in each region to standardize the survey approach.

Setting: Private practice of chiropractic.

Method: Chiropractic centers were telephoned and the attending chiropractor(s) were asked to complete a phone survey. The survey consisted of a series of short questions designed to establish the main techniques used in the practice. Questions focused on whether emotional factors of the patient were recognized and addressed and what role emotional factors play in the management of the patient.

Sample: Subjects were registered/licensed chiropractors listed in a publication of the largest association of practitioners in their region.

Results: In Australasia and North America just under half of practitioners surveyed (45.8% and 50.5% respectively) used a technique to evaluate any impacting emotions on the presenting condition. Additionally, 36.3% of Australasia and 33.3% of North America practitioners had a technique to treat emotional factors in the patient. The study also suggests that over 90% of Australasian

chiropractors and 80% of North America chiropractors consider emotional factors important in pain presentations.

Conclusion: This study found that a substantial number (80–90%) of the chiropractors surveyed believe that emotional factors influence pain syndromes. However, less than half of these practitioners report that they are able to evaluate emotional factors and approximately only a third report that they are able to treat them. This study shows there is a need for further research of chiropractors to be able to evaluate emotional factors and techniques that can be used to rectify emotional components of their patients' pain syndromes. (*J Chiropr Med* 2005;4:11–18)

Key Indexing Terms: Chiropractic; Psychology; Emotion; Biopsychosocial Model

INTRODUCTION

Patients often ask the chiropractor "what is causing my pain?" According to the biomedical model of disease, only physical factors can produce physical conditions.¹ However, according to the biopsychosocial model of disease, first postulated by Engel, both physical and psychosocial factors can manifest as physical symptoms.^{1,2} According to Hemingway,³ "a psychosocial factor may be defined as a measurement that potentially relates psychological phenomena to the social environment and to pathophysiological changes."

The biopsychosocial model is increasingly accepted in medicine to explain the role psychology and social interaction have on organic conditions such as myocardial infarction and gastrointestinal conditions.^{2,4–7} The model has also been shown to be effective in describing chronic pain syndromes,⁸ the transition from acute to chronic low back pain⁹ and the recovery rates after surgical procedures.¹⁰ Of these psychosocial factors, emotions and their effect

on the psyche are a large component of how the individual is affected.¹¹ It has been postulated that emotions can play a large role in the laying down of memory and its modification, thereby possibly distorting the recollections of the very events that are said to cause the pain.

In an unpublished study, myself and colleagues recently examined new patients presenting to chiropractic clinics with spinal pain syndrome. Despite its low statistical power and methodological shortcomings, we found that new patients had more psychosocial factors when compared to age and sex matched controls. While the generalizability of the results is limited, they do support the observation that emotion is a commonly associated feature of patients presenting to chiropractors. It was the purpose of this study to follow up on this observation by investigating whether practitioners view emotion as a compounding factor in their patients' pain presentations, and secondly, to determine whether chiropractors perceive that they possess tools that are viable or efficacious to effectively deal with emotional factors.

METHODS

Design

A telephone survey of practicing chiropractors in North America (United States and Canada) and Australasia (Australia and New Zealand) was conducted by trained telephonists. The telephonists were unfamiliar with the background of the practitioners they were calling. The practitioners were selected on the basis that they were located in their respective national association directory. The largest association directory that was available was used for participation in the survey. The directory was chosen as it represented a large mix of practitioners in a list that could be accessed easily by the trained telephonists. The list did not contain data on the type of practitioner and thus represented a list of practitioners with unknown backgrounds to the telephonists. In Australasia, every 5th practitioner was called. The first name on the directory was contacted followed by the 6th one and so on. This continued down the directory until the bottom was reached. The telephonist then returned to the top of the list and started with the second person and then every fifth person thereafter.

In the United States (US), as the practitioner numbers are much larger, a pragmatic decision was

taken to control the cost of the study by dividing the alphabetical directory into 5 sections and one trained telephonist made calls from each section. Every 5th person on the list was contacted in a method similar to that described above. The Canadian directory was treated as one booklet and one caller contacted every 5th person on the list.

In the US, due to the time differences between states and varied times of the practitioner being in attendance, there were a large number phone calls that went unanswered and as such were not included in the number of people contacted, only those who either consented to the survey or refused to participate were included to determine the response rate. Practitioners were not selected on the basis of any preconceived characteristic other than their order of appearance on the list. While this is not a random stratified sample and exists as a limitation of the study, it is likely that this sampling procedure adequately randomized the sample.

Study Sample

In Australia and New Zealand, 1072 people were approached out of a potential 1984. There were 496 respondents, which correlated to a response rate of 46.3%. In the United States and Canada, 1170 people were approached out of a potential 44,030. There were 549 respondents, which correlates to a response rate of 46.9%. These response rates only included those practitioners who: 1) answered the phone and 2) provided either consent to or a decline to participate in the survey. In order to expedite the compliance and response rate, office managers were asked to query their practitioners for the answers to the questions. When such responses could not be quickly given, the office managers were given the option to provide the answers via a written version of the same questions (after practitioner consent to do so) that could be sent back to the telephonists via facsimile at the practitioner's convenience. Those that failed to respond after consenting to do so were included in the response rate as non-respondents.

Data Collection

Consent to participate in the survey was sought from the practitioner prior to any further involvement. For those who participated, a response was sought for 5 questions: 1. How long has the chiropractor in your office been in practice? 2. What are the top 3 techniques the chiropractor in your office uses in practice? 3. Does the chiropractor in your

office use a method or technique of evaluating the presence of emotional factors that may be negatively impacting a patient's problem? 4. Does the chiropractor in your office have a technique to treat emotional factors in your patients? 5. Does the chiropractor in your office consider that emotional factors are important in most of the pain syndromes he/she sees?

Outcome Analysis

Practitioner responses were recorded in a spreadsheet and answers for the North American region were compared to the answers from the Australasian region using basic respondent characteristics (percentages).

RESULTS

The average number of years in practice for the Australasian practitioners was 13.8 years (SD 9.66, range 6 weeks–45 years) and 16.3 years (SD 10.2, range 2 months–57 years) for their North American counterparts. Therefore, despite the wide range of years in practice, on average, the respondents had ample experience (greater than 10 years).

Each practitioner was asked for his/her 3 most common treatment techniques. The result was that there were 1272 different responses for techniques used by Australasian practitioners and 1201 different responses for techniques used by North American practitioners (some practitioners solely used one technique). A list of the 15 most common techniques in each region can be seen in Figures 1 and 2. The three most common techniques used by practitioners were the same for both regions, with differences in their usage rates (Fig 3). The most common technique used by Australasian practitioners was Activator (49%, n= 243), followed by Diversified (43.5%, n= 216) and Gonstead (29.4%, n= 146). In North America the most common techniques used were Diversified (56.6%, n= 311), followed by Activator (27.7%, n=152) and Gonstead (16.8%, n= 92).

In response to question 3 regarding the techniques for evaluating the impact of emotions, there was no apparent difference between the two regions in the magnitude of responses (Fig 4). In Australasia, 45.8% and 50.5% of North American respondents reported that they use a technique to evaluate the presence of contributing emotional factors. Interestingly, the three most frequently reported techniques

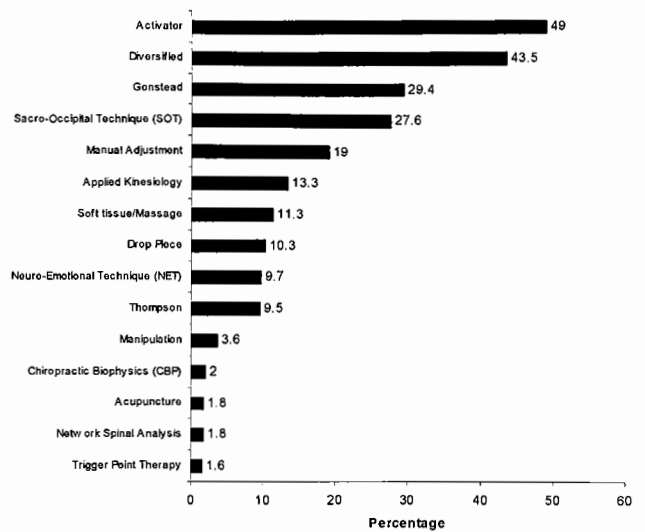


Figure 1. Usage rates of techniques by Australasian Chiropractors (n=496).

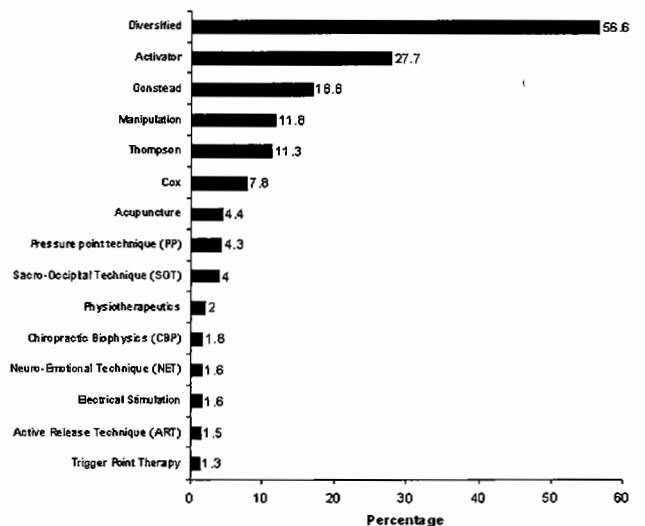


Figure 2. Usage rates of techniques by North American Chiropractors (n=549).

in Australasia accounted for only 39.8% of the total of respondents who answered yes to this question (Fig 5). In North America, this figure was 47.2% (Fig 6).

The fourth question addressed whether the practitioner had a technique (not necessarily brand name techniques) to treat emotional factors in patients. The total affirmative response from Australasian practitioners was 36.3% and 33.3% in North American. For the three main techniques used by practitioners (Figs 1 and 2), the response for this

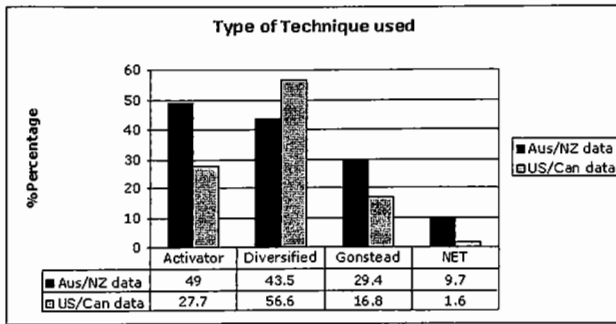


Figure 3. Type of technique used in Australasia and North America

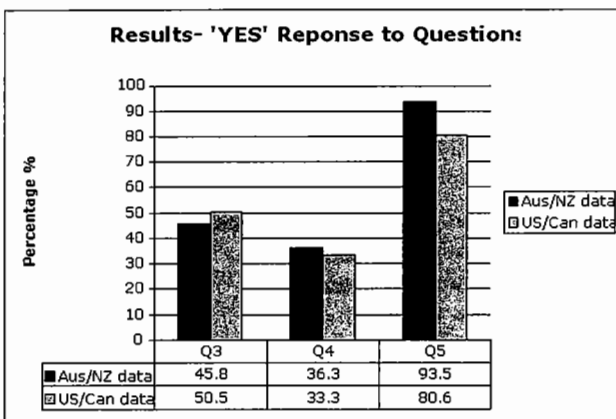


Figure 4. Percentage of 'Yes' responses to questions

question was 30.7% in Australasia and 28.7% in North American.

In response to question 5 querying whether emotional factors were important in the pain syndromes treated, the majority of practitioners responded in the positive. Of the responding practitioners, 93.5% in Australasia thought emotional factors were important in pain syndromes and 80.6% of North American practitioners similarly agreed. Of the three most common techniques used, 93.2% of Australasian practitioners responded in the affirmative, with 79.3% North American practitioners also responding positively.

DISCUSSION

On analysis of the data set, responses of practitioners who used certain techniques were more responsive than the average respondent. One such technique was Neuro-Emotional Technique (NET), which is said to evaluate emotions associated with presenting pain syndromes. For Australasian practi-

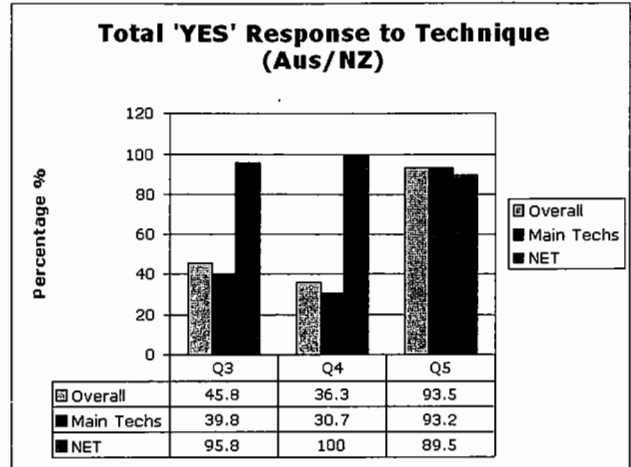


Figure 5. Percentage of 'Yes' response to question in regards to technique used (Australasia)

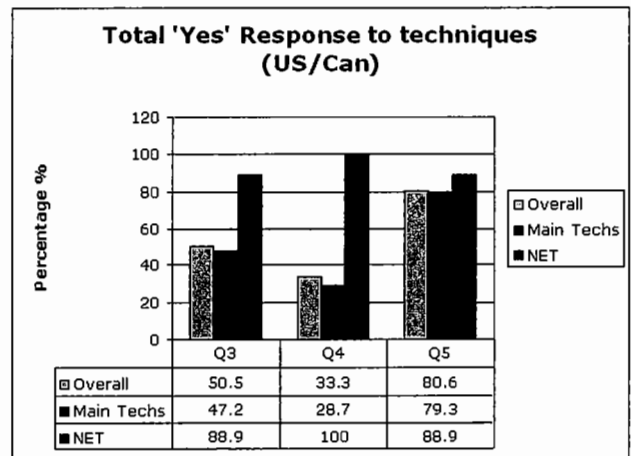


Figure 6. Percentage of 'Yes' response to question in regards to technique used (North America)

tioners who used NET (N=48), 95.8% said they evaluated the influence of emotions on the presenting conditions (Fig 5), while North American practitioners recorded an 88.9% positive response to this question (Fig 6). All NET practitioners in Australasia and North America responded yes to question 4, that they had a technique for treating emotional factors. For question 5, whether the practitioner thought that emotional factors were important in pain presentations, 89.5% and 88.9% of NET practitioner in Australasia and North American respectively responded yes.

The data do not suggest that only a particular group of practitioners evaluate psychosocial variables on a regular basis, rather, that practitioners reported that

they used a regular approach to the issue of psychosocial variables. It is likely that practitioners consider such variables in their assessment and treatment prescriptions, but many respondents did not report the need to state that an organized and consistent approach to such factors was undertaken.

The study found that just under half of the practitioners surveyed used a technique to evaluate emotions in their patients because they were a compounding factor in their patients' pain conditions. However, only a third of those surveyed had a specific technique to treat emotional factors present in the patient. Of interest was that only one practitioner (who was also a psychologist) reported that he would refer patients for treatment.

It is noteworthy that very few practitioners reported that they would refer for treatment (concurrent or subsequent) of the psychosocial components of the presenting pain syndromes. This result appears at odds with what chiropractors are taught at colleges around the world. An explanation of these findings include that the surveyed chiropractors did not understand that the referral option was a possible answer to the question on management, as it was implied rather than stated. Alternatively, perhaps chiropractors do not refer patients as often as they could, or thirdly, it is possible that they felt that the spinal manipulation and other therapies may have effects that go beyond the musculoskeletal realm to affect supraspinal central nervous system centers associated with the psychosocial issues.

When analyzing the design and methodology of the present study, the use of the member list from the national associations of the region allowed a large number of practitioners to be contacted in a short period of time. The list provided a convenient access to a large number of practitioners. The list provided no information on the type of practitioner that may have skewed the selection of practitioners. The selection of practitioners from the list was systematic, the type of practitioner was unknown to the telephonists, and the sample large enough to likely avoid any selection bias. The sample was not randomized due to the alphabetical nature of the list, but with the use of a method selecting every 5th person on the list, and by using a telephonist with no previous knowledge of the personal contents/ characteristics of the list, the risk of selection bias was reduced.

The study is limited by the selection criteria used in the collection of the North American region. A smaller overall percentage of practitioners was selected in the North American region than in the Australasian region. Solutions for these limitations in future studies include: the spacing between those that are called in the North American region to be increased to approximately every 40th practitioner on the list and secondly that a randomly selected name could be assigned the start point of the phoning process as opposed to the start of the list to truly randomize the selection process. Assigning numbers to all the names, and then use a random number generator to select the names to be called could also randomize the selection of participants.

All the results of this study are the self-report of practitioners and as a result are opinion driven. Thus, these findings may be limited if the participants only give answers that they think the investigators want to hear.

In terms of years in practice and techniques used, there was a large range of practitioners who responded to the survey. Although the response rate achieved was average (48.2%), there was a possibility of a non-response bias due to this achieved rate. However, analysis of the age range and techniques used by responders compared to the target population of chiropractors showed no major differences. In addition, the number of practitioners surveyed was a significant sample size, particularly in the Australasian region. Hence the results obtained should be considered to be representative of the chiropractic population. We conclude that this sample can be used to give a reasonable indication of what is occurring in the private practice of chiropractors regarding the issue of practitioners beliefs associated with emotions and their role in the management of pain syndromes.

The two groups were selected on the basis that they represented two mature chiropractic professions with comparable Anglo-Saxon heritage. Due to the similarities of these groups the data collected could be reasonably compared. However, other groups of non-Anglo-Saxon heritage or professional developmental history may differ in profile and the results of this research may not be generalizable to those groups. Most of the data reveals similar distributions between the Australasian and North American groups in the top three techniques used by practitioners (Figs 5 and 6). Those commonly used by

practitioners in Australasia, included Sacro-Occipital Technique, Applied Kinesiology and NET. These were less commonly used in North American practice. NET has been described as being associated with an apparent increased awareness of emotional effects on pain presentations by practitioners, and its use was almost 5 times greater in Australasia than in North America. As a result, this technique was investigated further to determine if these findings were an aberration. Personal communication with the founder of the technique was established to obtain feedback on the relative rates of participation in the two regions. He reported that (based on seminar attendees and certified practitioners), the use of NET in Australasia was far greater than its use in the North American region as a percentage of overall use. Therefore, the results of the survey may accurately reflect the use of this technique by these practitioners.

The Biopsychosocial Model

The biopsychosocial model postulated by Engel outlined that pain syndromes are multidimensional.¹ That is, pain syndromes are a combination of physical, psychological and social factors (including emotional characteristics) that integrate and manifest themselves as a pain response to alter behavior.¹ Linton conducted a review of psychological factors and their involvement in neck and back pain and found that psychological variables, in particular emotions such as depression, anxiety and distress are factors in pain and disability in these anatomical regions.¹² Psychosocial factors have also been linked both to the onset of back and neck pain and to the transition of acute to chronic pain states.^{13,14} Linton concluded that psychological factors are but a portion of the multidimensional entity that is pain.¹² While the knowledge that pain is associated with such multidimensional components^{15,16} is not new, the implementation of this knowledge in the practical day-to-day functioning of the chiropractor has yet to be explored. Our survey attempted to review the 'real world' use of such knowledge, and the impact it had on diagnosis and treatment.

In a review of the current status of the psychosocial factors and their relationship to low back pain, Pincus et al,¹³ concluded that psychosocial factors impact on non-specific low back pain and its progression to chronicity. In the review, the authors also examined the role of the primary health care provider in the management of these conditions. The

reviewers concluded that the identification of the psychosocial factors was important and there was a need for the practitioner to know what to do once these factors were identified. Two options were suggested: reassurance and advice (information on the condition and how to manage the condition),¹⁷ and cognitive behavior therapy (combination of altering behavior and an individuals appraisal and thinking patterns to reduce dysfunctional emotions and behavior).¹⁸ These two strategies are well established in the literature.¹⁷⁻²²

It is recognized by chiropractors and manual therapists that these methods are important, however, they appear to be seldom integrated into the research trials conducted by these groups or into the management approaches employed by the practitioners. This creates a void between the theoretical and clinical aspects of therapy of psychosocial factors by these groups, a finding this study has shown.

Pincus et al¹⁴ reviewed research that implicated psychosocial factors in the development of low back pain. They found that distress, depression and somatization (the process where psychological needs are expressed in physical symptoms)²³ were the psychosocial factors that accompanied the transition of low back pain from acute to chronic. The evidence for other factors however, was weak or not accepted. The review concluded there was a need for the development of clinical intervention strategies to target psychosocial factors. Nearly 30% of patients to a primary care setting suffer from depression,²⁴ while 20-30% of patients consulting their family physician suffered from somatization, depending on definitions and exclusion criteria.²⁵

Unpublished results of a recent pilot study report the responses new patients from chiropractic centers completing the Health Status Questionnaire (HSQ). Under the HSQ 2.0 guidelines,^{26,27} these patients may have been suffering from depression and should be further evaluated by an appropriately qualified practitioner. In this study patients might have had a high suspicion of possible mental illness as a co-morbidity to their spinal pain syndrome. This combination of mental disorder and chronic pain could be classified as a somatoform disorder (characterized by chronic, often body or region-wide, pain syndromes that by definition, have a large emotional component)^{28,29} under the DSM-IV classification system (American Psychiatric Association 1994).³⁰ This information data raises the point

that a number of patients who present to chiropractors potentially have a psychosocial factor(s) affecting or accompanying their pain presentation, confirming the conclusion of the studies reviewed by Pincus and others.¹³⁻¹⁵

Previous research has shown that psychosocial factors, emotions in particular, are one portion of the multi-factorial entity that is pain.^{16,31} Despite this fact, issues of whether the primary care practitioner has the appropriate assessment and management techniques to identify and treat psychosocial factors/emotions in presenting patients remain. This study showed that half of those surveyed evaluate for emotions in patients presenting for pain syndromes, while just over a third use a specific technique to treat these emotional factors. The surveyed chiropractors used 'cognitive-type' therapies (such as NET) and some behavioral therapies (such as rehabilitation protocols) as an adjunct to the standard manipulative/adjustment therapy used by the majority of chiropractors. To date, there is no validation of combined forms of therapy. This shortcoming will require attention in future research.

The final aim of this study was to examine how important practitioners believe emotional factors to be in pain syndromes. Given that the awareness and acceptance of the biopsychosocial model is widespread in manual and orthodox medicine, it is important to determine if the knowledge established through research into this model is actively applied in daily practice.

This survey reports that 9 out of 10 Australasian chiropractors and 4 out of 5 North American chiropractors consider emotional factors to be important in pain presentations. This finding suggests that practitioners are aware of the importance of psychosocial issues, but is at odds with the other question responses regarding the evaluation and treatment of emotional factors associated with the pain syndromes. Our study determined that the surveyed group of chiropractors were aware that emotional factors affect patients and their outcomes, but that many did not evaluate these factors at the time of examination and even more did not have a specific technique/method (including referral) to rectify the emotional factors.

There are several possible management implications of these findings. Firstly, it is possible that only the physical requirements of patient conditions are be-

ing addressed, while the psychosocial issues are being missed, or that the conditions are possibly not being communicated to the practitioners. Secondly, it is possible that the psychosocial issues impacting on the physical condition are being evaluated, but not addressed. Thirdly, it is possible that the psychosocial issues impacting on the physical condition are being evaluated, and the patient is being referred for co-management (even if not mentioned in the survey). Finally, it is also possible that the psychosocial and physical components of the condition are being both assessed and managed by the chiropractic practitioner.

Each of these possibilities has implications for scope of practice issues. Practitioners should therefore be mindful of any scope of practice issues that are raised by any attempt to add 'extra' treatment to patient management. Finally, it is important that new forms of manual therapy that include aspects of cognitive/behavioral therapy be scientifically validated by acceptable clinical protocols.

CONCLUSIONS

This study shows that a majority (90%) of chiropractors in this survey believe that emotional factors are important in the pain syndromes of patients, but that only half of those surveyed regularly assess the emotional factors in patients, and only a third feel that they have techniques that they feel are capable of rectifying these factors. Further research is required into the recognition and management by chiropractors of psychosocial factors associated with patients' pain presentations.

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