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Conventional and non-conventional pain treatment utilization among opioid dependent individuals with pain seeking methadone maintenance treatment: A needs assessment study

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Abstract

Objective and Methods—We surveyed 293 individuals seeking methadone maintenance treatment (MMT) for opioid dependence about pain, pain treatment utilization, perceived efficacy of prior pain treatment, and interest in pursuing pain treatment while in MMT.

Results—Among the 213 respondents reporting recent pain of at least moderate typical pain intensity, those with and those without a lifetime history of chronic pain endorsed similar rates of conventional (with the exception of past-week medical use of non-opiate medication), complementary, and alternative medicine utilization for pain reduction and a numerically smaller proportion endorsed last-week utilization of complementary and alternative medicine as compared to conventional medicine. The most frequently endorsed lifetime conventional pain treatments included opiate and over-the-counter medications, whereas the most frequently endorsed lifetime complementary and alternative medicine pain treatments included stretching, physical exercise, physical therapy, heat therapy, and prayer. Perceived efficacy of prior pain treatment but not interest in pain treatment was associated with chronic pain history status.

Conclusion—These findings may have implications for resource and program planning in MMT programs.

Keywords

Pain; complementary therapies; opioid-related disorders

INTRODUCTION

Unrelieved pain is common in methadone maintenance treatment programs (MMTPs) and is generally associated with greater psychiatric distress, poorer psychosocial functioning, and increased clinician frustration (1–5). Although the need for onsite pain management services has been emphasized, few MMTPs in the U.S. have dedicated pain treatment programs. As MMTPs consider developing pain management programs, they may benefit from an increased understanding of extant pain treatment utilization patterns and interest in pursuing pain treatment among opioid dependent individuals seeking methadone maintenance treatment (MMT).

While some studies have examined pain-related treatment issues in patients currently enrolled in MMT, there is a surprising paucity of such research on opioid dependent individuals seeking entry to methadone maintenance (6,7). Research findings point to the importance of assessing recent pain (i.e., pain experienced in the past week) in addition to chronic pain among opioid dependent patients (8,9) and suggest that providers should examine the utilization of complementary and alternative medicine (CAM) treatments as well as conventional or allopathic treatments among patients with chronic medical conditions (10). CAM therapy use is particularly common among American adults with chronic pain conditions (11,12).

Complementary medicine refers to non-conventional medical treatment that is used in conjunction with standard medical interventions, whereas alternative medicine comprises treatment interventions that are used in place of standard medical care (13). Findings from nationally representative phone surveys indicate that CAM use among adults in the U.S. increased from 34% in 1991 to 42% in 1997 (11,12) and that this trend is not a temporary fad and, instead, represents a steadily increasing and continuing pattern of treatment utilization (14,15). Data concerning the efficacy and safety of different CAM pain treatments are mixed and are a source of ongoing debate in the literature (6).

Recently, a unique opportunity for examining the pain treatment utilization patterns of opioid dependent individuals seeking MMT was identified. This occurred from the interest of a longstanding MMTP at the APT Foundation Inc. (hereafter referred to as APT), a not-for-profit community-based organization located in New Haven, CT, that operates 3 opioid agonist clinics with a census of 1,500 patients, to develop pain management services. While we previously reported on the pain experiences (intensity, frequency, duration, interference, location, and genesis), and self-reported non-medical use of prescription opioids, non-opioids, and benzodiazepines, illicit drug use (e.g., heroin, cocaine, cannabis) and alcohol for pain relief among the study sample (7), we did not report on their utilization of conventional and unconventional treatments for pain relief. Consequently, the aim of this needs assessment study was to examine: (a) prior pain treatment utilization with a particular focus on CAM treatments, (b) perceived efficacy of pain treatment received, and (c) interest in receiving pain treatment at the MMTP among opioid dependent individuals seeking MMT. Such information might be useful for MMTP resource and program planning.

METHODS AND MATERIALS

Participants were 293 adults who were consecutively evaluated for enrollment to methadone maintenance treatment (MMT) at APT from September 2006 to March 2007 (100% compliance). Participants were seeking MMT for opioid dependence/addiction (and not for pain management), and they completed the study survey as part of the screening process at their initial intake appointment. Participants' answers were anonymous and were not linked to their medical charts. Participants were informed that their survey answers would not affect their treatment at APT. This study received appropriate institutional Human Investigation Committee approval.

Data Collection

The needs assessment study questionnaire was developed by the authors and pilot tested on 3 experienced research assistants, 5 seasoned intake workers, and 10 MMT seekers using established guidelines (16). The needs assessment survey was deliberately designed to be brief (< 10 minutes), self-administered, and easy to understand in order to increase compliance and to minimize burden on participants and staff. Survey questions assessed multiple domains, including: (a) the prevalence of pain types (i.e., recent pain, lifetime history of chronic pain), (b) the utilization of conventional, complementary and alternative

medical pain treatments (recent and lifetime), (c) perceived efficacy of pain treatment received, (d) interest in pain treatment at the MMTP, and (e) demographics (age, gender, and race).

Recent pain and lifetime history of chronic pain were assessed by asking participants whether they had experienced physical pain in the last week (yes/no) and whether they had ever experienced physical pain lasting at least three months (yes/no). Typical pain intensity in the last 7 days was assessed by an item that asked participants to rate the typical level of physical pain experienced in the last 7 days (on an ordinal scale between 1 [minimal] to 5 [unbearable]).

With respect to utilization of conventional, complementary, and alternative pain treatments, participants were provided with a list of interventions and were asked, “Which of the following treatments for ongoing physical pain have you used in the last 7 days [recent] and ever in your life [lifetime]?” The list included: (a) “Opiate medication as prescribed by a doctor (e.g., Demerol, Fentanyl, Morphine, OxyContin, Percocet, Percodan, Tylenol with Codeine),” (b) “Non-opiate medication as prescribed by a doctor (e.g., Celebrex, Celexa, Clonidine, Depakote, Elavil, Fiorinal, Ketalar, Ketaset, Neurontin, Prozac, Soma, Tegretol, Topamax),” (c) “Benzodiazepine as prescribed by a doctor (e.g., Ativan, Halcion, Klonopin, Valium, Xanax),” (d) Over the counter pain reliever (e.g., Advil, Aleve, Aspirin, Ibuprofen, Motrin, Orudis KT, Prilosec, Tylenol), (e) Acupuncture, (f) Prayer, (g) Counseling/ Psychotherapy, (h) Meditation, (i) Self-help support group, (j) Yoga, (k) Hypnosis, (l) Herbs/Herbal medicine, (m) Stretching, (n) Physical exercise, (o) Heat therapy, (p) Massage, (q) Physical therapy, (r) Ice therapy, (s) Chiropractor, and (t) “Other.” The list of conventional, complementary, and alternative medical interventions was generated by the authors based on our experience treating patients in our MMT programs and was revised based on the feedback of selected research assistants, intake workers, and MMT seekers, as described above.

For data analytic purposes, we classified CAM use according to the taxonomy employed by the National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health: (1) Alternative Medical Systems, which often predate conventional medicine used in the U.S. and are based on complete systems of theory and practice, some of which were developed in Eastern cultures (e.g., ayurveda), and others in Western cultures (e.g., naturopathic medicine); (2) Mind-Body Interventions, which consist of various techniques that attempt to magnify the mind’s capacity to control bodily function and symptoms; (3) Biologically-Based Therapies, which refer to treatments using biological agents found in nature, including herbs, foods, and vitamins; and (4) Manipulative and Body-Based Methods, which include methods that systematically manipulate or alter movement in one of more body parts (NCCAM, 2002). We did not assess Energy Therapies—biofield therapies and bioelectromagnetic-based therapies—the fifth NCAAM CAM classification (e.g., Reiki, Qi Gong), because of their infrequent use among individuals in our MMTP programs (see above).

Complementary medicine refers to nontraditional treatment, which is used in conjunction with standard medical interventions, whereas alternative medicine is comprised of treatment interventions that are used in place of standard medical care (13). Alternative or unconventional medicine has also been defined as “medical interventions not taught widely at US medical schools, not generally available at US hospitals, and not generally reimbursable by health insurance” (12). Conventional medicine operates on two key principles: safety and efficacy (10). In the current study, we adopted a conservative approach to the designation of interventions as conventional or CAM: Those with demonstrated efficacy and safety and which are generally available in MMTPs were

designated as conventional; otherwise, they were classified as CAM. As more data regarding safety, efficacy, and availability of these interventions for opioid dependent patients with chronic pain in MMTPs become available, some of the interventions listed as CAM in this study will likely be viewed as conventional (e.g., physical therapy). We elected to classify counseling/psychotherapy as a Mind-Body Intervention (and not as a conventional treatment) since it was unclear whether respondents who endorsed this item had received a psychosocial intervention with demonstrated efficacy and safety—essential components of conventional or allopathic medicine (10)—for pain management (e.g., cognitive-behavioral therapy). In the current study, conventional pain treatment utilization included: over-the-counter pain medication and prescribed opiate, non-opiate, and benzodiazepine medications, while nonconventional pain treatment utilization included: acupuncture, prayer, counseling/psychotherapy, meditation, self-help support group, yoga, hypnosis, herbs/herbal medicine, stretching, physical exercise, heat therapy, massage, physical therapy, ice therapy and chiropractic.

Perceived efficacy of pain treatment received was assessed by an item that asked participants to rate the degree to which medical treatment received for ongoing pain was helpful (on an ordinal scale between 1 [did not help] to 5 [helped completely]). Medical treatment was defined as treatment provided by a trained medical professional. Interest in pain treatment was assessed by an item that asked participants whether they were interested in receiving pain treatment in addition to drug treatment at the MMTP (yes/no).

Pain Groups and Pain Subgroups

Respondents' answers to pain-related items were used to classify them into one of two pain groups: a) "no recent pain" (i.e., no pain reported in the past week) and b) "recent pain" (i.e., pain reported in the past week). Given that methadone clinics that are considering offering pain management services are likely to be interested in targeting those who endorse at least moderate (as opposed to mild or minimal) levels of recent pain intensity or a history of chronic pain, we focused our data analyses on respondents reporting recent pain of at least moderate typical pain intensity in the past week. We further divided the group who reported recent pain of at least moderate typical pain intensity into two pain subgroups: those with and without a lifetime history of chronic pain.

Data Analysis

Pain group and subgroup differences on pain, treatment-related and demographic variables were examined using t-tests for continuous data and Pearson chi-square tests for frequency data. Since the two pain subgroups (i.e., those with and those without a lifetime history of chronic pain)—after controlling for multiple comparisons involving demographic variables—differed significantly on age, we performed an analysis of covariance (ANCOVA) to control for age on the comparison involving pain continuous data (i.e., perceived efficacy of pain treatment received). Statistical significance was set at $p < 0.05$. Statistical analyses were performed using SPSS Version 15.0 for Windows (SPSS, Inc., Chicago, IL).

RESULTS

Demographic Characteristics

As reported previously (7), of the 293 respondents, 80% were white, 60% were male, and 88% reported recent pain. Whereas sex and race did not vary by pain group (i.e., no recent pain, recent pain), participants with recent pain were older (mean (SD) = 35.7 (10.7) years) than those with no recent pain (mean (SD) = 29.6 (8.3) years ($t = 4.01$, $df = 53$, $p < .001$). Among the 257 respondents with recent pain, 17% ($n = 44$) characterized their typical pain

intensity as minimal or mild, 44% (n = 114) as moderate, and 39% (n = 99) as severe or unbearable.

Among the 213 respondents reporting recent pain of at least moderate typical pain intensity, those with (67%; n = 142) and those without a lifetime history of chronic pain (33%; n = 71) did not differ on gender but did differ on race ($\chi^2 = 5.32$, df = 1, $p < .05$) and age ($t = 3.05$, df = 210, $p < .01$): those with a lifetime history of chronic pain were more likely to be white, and were, on average, older. After controlling for multiple comparisons using a Bonferroni correction ($.05 \div 3 = 0.017$), the group difference on age (but not race) remained statistically significant.

Conventional Pain Treatment Utilization

Table 1 summarizes past-week and lifetime conventional and CAM pain treatment utilization among those reporting at least moderate typical recent pain intensity with and without a lifetime history of chronic pain. Comparably high proportions of those with and those without a lifetime history of chronic pain endorsed over-the-counter (OTC) pain medication in the last week and in their lifetime. OTC pain medication was the most frequently endorsed past 7-day medical intervention (either conventional or CAM) among those with at least moderate typical recent pain intensity irrespective of lifetime chronic pain history status. While the majority of those with and those without a lifetime history of chronic pain endorsed lifetime utilization of OTC medications for analgesic purposes and medical use of prescription opiate pain medications, more than one-quarter of each group reported taking opiate pain medications as prescribed by a physician (i.e., medical use of opiate medications) in the past week.

Among those without a lifetime history of chronic pain, the least frequently endorsed past 7-day conventional medical intervention was medical use of non-opiate medication whereas, among those with a lifetime history of chronic pain, the least frequently reported past 7-day and lifetime conventional medical intervention was medical use of prescribed benzodiazepine medication (Table 1). In comparison to those without a lifetime history of chronic pain, those with a history of chronic pain were more likely to endorse medical use of a non-opiate pain medication in the past week (21% vs. 7%, $\chi^2 = 6.84$, df = 1, $p < .01$). Approximately, half of those reporting at least moderate typical recent pain intensity endorsed lifetime medical use of non-opiate medication and benzodiazepines for pain relief. Among those with a lifetime history of chronic pain, a numerically greater proportion reported medical use of opiate medication as compared to medical use of OTC medication (74% vs. 72%) for ongoing physical pain; this trend was reversed for those without a lifetime history of chronic pain (65% vs. 75%).

CAM Pain Treatment Utilization

Generally, among those reporting at least moderate typical recent pain intensity, a numerically smaller proportion endorsed CAM use as compared to conventional medicine use in the past week for pain relief (Table 1). With regards to CAM use in the past 7 days, the most frequently endorsed intervention, irrespective of lifetime history of chronic pain, was prayer (more than 20%), the least frequently endorsed intervention among those without a lifetime history of chronic pain was ice therapy (0%), and the least frequently endorsed intervention among those with a lifetime history of chronic pain was hypnosis (1%).

As summarized in Table 1, those with and those without a lifetime history of chronic pain endorsed a large variety of lifetime CAM intervention use for pain relief. Approximately half (irrespective of chronic pain history status) reported prayer, stretching, physical exercise, and heat therapy; more than one-third endorsed counseling/psychotherapy,

massage therapy, and chiropractor use; while approximately one-third endorsed meditation, self-help support group, and ice therapy. The most frequently endorsed lifetime CAM intervention for pain relief was heat therapy among those without a lifetime history of chronic pain (51%) and stretching among those with a lifetime history of chronic pain (54%). Conversely, the least frequently endorsed lifetime CAM intervention for pain relief among those without (18%) and those with a lifetime history of chronic pain (11%) was hypnosis.

With respect to “Other” CAM interventions used, those with and those without a lifetime history of chronic pain did not differ on other CAM use in the past 7 days (0.7% vs. 1.4%) or lifetime (6.3% vs. 12.7%).

Perceived Efficacy of Prior Pain Treatment

As summarized in Table 2, after controlling for age, among respondents reporting recent pain of at least moderate typical pain intensity, those without a history of chronic pain (mean = 1.5, SD = 0.9) endorsed lower perceived efficacy of pain treatment received than those with a lifetime history of chronic pain (mean = 2.5, SD = 1.3), $F(1, 199) = 23.8$, $p < .001$.

Interest in Pain Treatment

As summarized in Table 2, whereas among respondents reporting recent pain of at least moderate typical pain intensity, a numerically greater proportion of those with a history of chronic pain as compared to those without a lifetime history of chronic pain endorsed interest in receiving pain treatment in addition to drug treatment at the MMTP, this difference did not reach statistical significance (67% vs. 54%, $\chi^2 = 2.72$, $df = 1$, $p = .09$).

DISCUSSION

This study is among the first to examine the utilization of conventional, complementary and alternative medicine (CAM) treatments for pain among individuals seeking MMT. Overall, among those reporting recent pain of at least moderate typical pain intensity, past-week CAM utilization rates were generally lower than those for conventional medicine, and lifetime utilization of conventional and CAM interventions—with the exception of the medical use of non-opiate medication—did not differ among those with and those without a lifetime history of chronic pain.

Given that patients with co-occurring chronic pain and opioid addiction often encounter obstacles accessing opiate-based medical treatments for pain relief (17), a surprisingly high proportion of those with (28%) and those without (30%) a lifetime history of chronic pain endorsed past-week medical use of opiate medications for analgesic purposes. This finding suggests that MMTP medical providers should consider routinely assessing and addressing the medical use of opiate analgesics among those with recent pain seeking MMT—and not solely among those reporting a lifetime history of chronic pain. Furthermore, given the possible risks of drug-drug interactions in MMT (18), including respiratory depression associated with the interaction of opioids and benzodiazepines, the finding that approximately 20% of those reporting at least moderate typical recent pain intensity with a lifetime history of chronic pain endorsed past-week medical use of benzodiazepines medications suggests that routine assessment of these medications among those seeking MMT may be warranted. The finding that more than half of respondents with moderate or greater typical recent pain who had a lifetime history of chronic pain endorsed lifetime medical use of prescription non-opioids analgesics suggests that when prescribed, opioid dependent patients with chronic pain who present at MMTPs may be willing to try, and in turn, take as instructed by their prescribing provider, prescription non-opioid medications for

pain relief. However, the extent to which these medications (as well as other prescribed pain analgesics) are viewed as beneficial or efficacious by opioid dependent patients with chronic pain in MMTPs is-to out knowledge-unknown and deserves further research attention.

In contrast to the relatively small proportion of American adults endorsing lifetime use of acupuncture (4.1%) in the 2002 National Health Interview Survey (19,20), over 20% of study participants with recent pain of at least moderate typical pain intensity endorsed lifetime utilization of acupuncture, a branch of traditional Chinese medicine. Given acupuncture's demonstrated efficacy in managing chronic pain (21) and in alleviating symptoms during detoxification treatment (22), an examination of its potential role in managing pain in MMTPs is warranted.

The most frequently endorsed lifetime mind-body interventions used among those with recent pain of at least moderate typical pain intensity were prayer, counseling or psychotherapy, and support group participation. While certain types of psychotherapy such as cognitive-behavioral therapy and support groups have demonstrated efficacy in clinical practice and are often used in behavioral pain medicine (23), the role of prayer/spiritual healing in managing pain and promoting abstinence from illicit drugs has received less rigorous research attention and is thus unknown. Given the importance of prayer and spirituality in 12-step self-help groups in MMT (e.g., Narcotics Anonymous), the extension of this self-help approach to address co-occurring pain and addiction in MMT represents a potentially important treatment approach and research topic. In the present study, the content, duration, and frequency of participants' use of prayer is unclear and merits further research investigation. Whereas respondents reported comparable lifetime utilization rates of yoga and hypnosis, the latter is more generally accepted in behavioral medicine since it has—unlike the former—been well-studied and has shown efficacy in clinical practice (23).

Lifetime utilization of herbs/herbal medicine among those reporting recent pain of at least moderate typical pain intensity (>20%) was considerably higher than that reported in a previous study on CAM use among individuals with intravenous drug use (5.3%) (24). While several authors have questioned the efficacy of CAM treatments, concerns about CAM safety have centered on herbal agents and dietary supplements, including the lack of regulation or quality control surrounding their use (25,26), possible interactions with prescribed medications (27), and side effects (28). Our finding on the relatively high lifetime utilization of herbal medicine among those reporting recent pain of at least moderate typical intensity suggests that MMTP providers should assess its use among those enrolling (and possibly those already enrolled) in MMTPs and provide psychoeducation about possible safety risks.

Lifetime utilization rates of manipulative and body-based methods were generally high among respondents endorsing at least moderate typical recent pain intensity. For example, nearly half reported lifetime utilization of passive (e.g., stretching) and active therapeutic exercise (e.g., physical exercise) and passive modalities (e.g., heat) employed by physical and occupational therapists in the promotion of tissue recovery and rehabilitation (29). Clinical trials that have examined the long-term efficacy of manipulative and body-based methods in pain management have demonstrated mixed treatment outcomes (e.g., (30,31))—in part due to variability in diagnostic and treatment methods (32). Thus, the examination of manipulative and body-based methods in pain management for MMT with pain merits further research investigation.

Among respondents reporting recent pain of at least moderate typical pain intensity, in comparison to those without a history of chronic pain, those with a lifetime chronic pain history rated their prior pain treatment as more helpful. While the former pain subgroup, on

average, rated their prior pain treatment between “did not help” and “helped a little,” the latter, on average, rated their prior pain treatment between “helped a little” and “helped somewhat.” In contrast, a similarly high proportion of both pain subgroups endorsed interest in pain treatment at the MMTP. Thus, while neither pain subgroup found their prior treatment to be particularly helpful, the majority of each was still interested in pursuing pain treatment at the MMTP.

Several potential limitations are worth noting. Participants were seeking treatment at three opioid agonist treatment clinics run by the same organization in a particular geographic location; thus, our findings may or may not generalize to other MMT programs in different geographic regions. Although the data were collected anonymously and participants were informed that their answers would not affect their treatment at APT, the questionnaire was completed at the treatment facility and this may have affected the responses of participants concerned about how staff might react to their responses. Since the study questionnaire was designed to be brief and not to incur undue burden on the intake admissions process, data regarding psychiatric status and drug treatment history (including MMT) were not assessed. However, given the importance of psychiatric status in pain management and CAM utilization (33), future research on treatment utilization among MMT seekers might benefit from an examination of psychiatric comorbidity.

The survey was cross-sectional and thus limits statements regarding causation between study variables. No independent assessments of participants’ self-reported responses—including pain status and use of conventional and CAM interventions—were conducted. Given the absence of validated pain treatment utilization measures for MMT, we developed our own instrument which, although face-valid, has not been formally validated. Future research investigations might benefit from a more systematic examination of pain types (e.g., current chronic severe pain, recent pain but not meeting criteria for chronic severe pain), a more detailed assessment of pain-related conventional medicine and CAM (e.g., electrical stimulation, aquatic therapy) interventions, and further investigation of the association of age, pain types and conventional and non-conventional pain treatment utilization. Further research on pain in MMTP settings is particularly important given the high prevalence of pain among the current study sample of opioid dependent individuals seeking entry into a MMTP as well as the documented high prevalence of pain among those already enrolled in MMTPs (3–5,8).

CONCLUSIONS

Despite these limitations, this exploratory study represents an important investigation of pain-related treatment utilization among opioid dependent individuals seeking MMT. The findings highlight the importance of assessing recent pain in conjunction with chronic pain among opioid dependent individuals seeking MMT. Among those reporting at least moderate typical recent pain intensity, conventional and CAM utilization for pain management was common and did not vary as a function of a lifetime history of chronic pain. Finally, these findings may have implications for resource and program planning in MMTPs. Specifically, MMT programs might consider assessing and addressing (1) recent pain in addition to chronic pain and (2) conventional and CAM pain treatment utilization among those seeking MMT, especially given the reluctance of some patients to spontaneously disclose CAM use to their providers (11,12,34).

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Table 1

Comparison of NHCP and LHCP Groups on Conventional, Complementary, and Alternative Medical Treatment Utilization in the Last 7 Days and Lifetime¹.

	Last 7 Days		Lifetime	
	NHCP (n = 71) %	LHCP (n = 142) %	NHCP (n = 71) %	LHCP (n = 142) %
Conventional Medicine				
OTC Pain Medication	43.7	46.5	74.6	71.8
Opiate Medication	29.6	27.5	64.8	73.9
Non-Opiate Medication ²	7.0	21.1	47.9	54.9
Benzodiazepine Medication	12.7	19.7	49.3	49.3
Complementary and Alternative Medicine				
Alternative Medical Systems				
Acupuncture	2.8	2.1	31.0	21.8
Mind-Body Interventions				
Prayer	23.9	22.5	49.3	47.2
Counseling/Psychotherapy	4.2	8.5	49.3	39.4
Meditation	2.8	9.2	33.8	31.0
Self-Help Support Group	7.0	4.2	35.2	33.8
Yoga	2.8	2.8	22.5	12.7
Hypnosis	2.8	1.4	18.3	11.3
Biologically Based Therapies				
Herbs/Herbal Medicine	2.8	6.3	22.5	21.1
Manipulative and Body-Based Methods				
Stretching	12.7	21.8	49.3	54.2
Physical Exercise	9.9	15.5	46.5	52.1
Heat Therapy	11.3	14.1	50.7	45.8
Massage	8.5	9.9	45.1	40.8
Physical Therapy	5.6	7.7	40.8	51.4
Ice Therapy	0.0	7.0	33.8	33.1
Chiropractor	4.2	3.5	43.7	35.2

Note: Respondents were 213 patients reporting at least moderate typical pain intensity in the past week.

NHCP = No history of chronic pain, LHCP = Lifetime history of chronic pain.

²Last 7 Days *p* value significant to < 0.05 after application of a Bonferroni correction for multiple comparisons.

Table 2Comparison of NHCP and LHCP Groups on Demographics and Treatment Related Variables.¹

	Total (n = 213)	NHCP (n = 71)	LHCP (n = 142)	Statistical test
Demographics				
Age (mean years, $\pm$ SD)	36.1 $\pm$ 10.7	32.9 $\pm$ 10.5	37.8 $\pm$ 10.4	$t = 3.05^{**}$
Race (% white)	79.7	71.4	84.1	$\chi^2 = 5.32^*$
Sex (% male)	60.4	68.8	57.7	$\chi^2 = 2.59$
Treatment related variables				
Perceived efficacy of prior pain treatment (mean efficacy, $\pm$ SD)	2.2 $\pm$ 1.2	1.5 $\pm$ 0.9	2.5 $\pm$ 1.3	$2F = 23.79^{***}$
Interest in pain treatment (% yes)	62.4	54.1	66.7	$\chi^2 = 2.72$

¹ Among individuals reporting recent pain of at least moderate typical pain intensity.² Controlling for age.

Note: NHCP = No history of chronic pain, LHCP = Lifetime history of chronic pain.

* $p < 0.05$,** $p < 0.01$,*** $p < 0.001$.