UCSF UC San Francisco Previously Published Works

Title

Vulnerable Patients' Psychosocial Experiences in a Group-Based, Integrative Pain Management Program

Permalink https://escholarship.org/uc/item/0rk7p3n3

Journal Journal of Alternative and Complementary Medicine, 25(7)

ISSN 1075-5535

Authors

Bruns, Elizabeth B Befus, Deanna Wismer, Barbara <u>et al.</u>

Publication Date

2019-07-01

DOI

10.1089/acm.2019.0074

Peer reviewed

JACM

Vulnerable Patients' Psychosocial Experiences in a Group-Based, Integrative Pain Management Program

Elizabeth B. Bruns, MD, MS¹, Deanna Befus, PhD, RN², Barbara Wismer, MD, MPH^{3,4}, Kelly Knight, PhD⁵, Shelley R. Adler, PhD^{4,6}, Kristina Leonoudakis-Watts, BS³, Ariana Thompson-Lastad, PhD⁶, and Maria T. Chao, DrPH, MPA^{6,7}

Abstract

Objectives: To use a psychosocial framework to examine the pain experiences of low-income, ethnically diverse patients before and after an Integrative Pain Management Program (IPMP).

Design and methods: IPMP is a 12-week, multimodal pain group incorporating mindfulness, acupuncture, massage, education, movement, and health coaching. The authors conducted semistructured interviews at the beginning, end, and 3 months following completion of IPMP. Interviews were digitally recorded and transcribed and analyzed using inductive coding methods.

Setting: A primary care clinic in San Francisco, CA, serving low-income, ethnically diverse patients, many of whom are marginally housed and living with disabilities.

Subjects: Forty-one patients with a diagnosis of chronic pain, currently receiving prescription opioids and referred by their primary care provider, who participated in IPMP.

Results: Authors thematically analyzed 104 individual interviews with 41 IPMP participants, including 41 baseline, 35 three-month follow-up, and 28 six-month follow-up. Before IPMP, participants described a psychologic "vicious cycle" of pain symptoms that worsened with movement and anxiety, while increasing their sense of disempowerment and social isolation. Following IPMP, patients reported using new strategies to manage pain, including lowering medication use, resulting in an emerging sense of psychologic resilience, and more social connections.

Conclusions: IPMP offers an accessible model for addressing psychosocial aspects of chronic pain. Vulnerable patients engaged with integrative medicine groups and developed new perspectives and tools for managing their pain; they emerged feeling hopeful and resilient. These results support the use of integrative medicine groups for targeting psychosocial aspects of chronic pain within primary care.

Keywords: chronic pain, integrative medicine, multidisciplinary pain management, primary care, underserved populations, vulnerable populations, biopsychosocial

¹Department of Psychiatry, University of California, San Francisco, San Francisco, CA.

²Arthur Labatt Family School of Nursing, Western University, London, Ontario, Canada.

³San Francisco Department of Public Health, San Francisco, CA.

Departments of ⁴Family & Community Medicine and ⁵Anthropology, History, and Social Medicine, University of California, San Francisco, San Francisco, CA.

⁶Osher Center for Integrative Medicine, University of California, San Francisco, San Francisco, CA.

⁷Division of General Internal Medicine at Zuckerberg San Francisco General Hospital and Trauma Center, University of California, San Francisco, San Francisco, CA.

720

N EARLY HALF OF ALL ADULTS are estimated to suffer from chronic pain, yet primary care clinics struggle to find effective treatments.¹ Conventional approaches treat pain primarily through medications, an approach with well-documented risks and limited benefit.^{2–4} Missing from this approach is an attempt to address the complex emotional, social, and structural costs of life with pain.⁵

The psychosocial lens offers clinicians a more complete understanding of these costs, by clarifying the effects of chronic pain and treatment. This model originates in Engel's "biopsychosocial" model, in which all disease is understood by considering a patient's biologic, psychologic, and social experiences.⁶ The psychosocial lens focuses on the psychologic and social experience to augment the clinical picture.

This model is particularly relevant for chronic pain, as these patients show higher rates of psychologic distress, including anxiety⁷ and depression,⁸ disorders that can reduce the analgesic effect of pharmacologic treatments.⁵ Pain can negatively affect mental health through social factors such as the inability to work and increased social isolation.⁵ Vulnerable populations, including elderly, low income, and racial/ethnic minorities, have more severe pain, higher rates of work and activity limitations, and limited access to pain management services.^{9–11}

A growing evidence base supports integrative treatments such as acupuncture, massage, and mindfulness as efficacious approaches to pain management that address both biologic and psychosocial aspects of pain.^{12–14} Research suggests that both patients and providers prefer to have complementary and integrative health (CIH) as options for pain management.^{15–17}

Group-based models offer one promising option for increasing access to integrative pain care.^{18,19} CIH modalities, including mindfulness and movement therapies, are often provided in groups and are easily included in group-based models of care. Research on providing CIH in groups shows improvements in chronic disease management and health promotion, especially for patients with complex conditions.^{20,21} Group medical visits, which combine medical care, peer support, and health education, have proven successful in safety-net settings.^{22–26} Few studies have addressed how group models incorporating CIH might improve chronic pain treatment within a primary care setting, especially for lowincome, structurally disadvantaged populations.

Within the primary care clinics operated by the San Francisco Department of Public Health (SFDPH), nearly 10% of patients before 2016 were prescribed long-term opioids for chronic pain. SFDPH launched a 12-week pilot Integrative Pain Management Program (IPMP) to expand the nonpharmacologic options available in primary care. The program was initiated at the Tom Waddell Urban Health Clinic (TWUHC) in the Tenderloin, a clinic with a disproportionately high number of patients with chronic pain and long-term opioid use, in addition to high rates of homelessness, chronic conditions, and substance use.

For this study, the authors examine the pain experience of this high-risk population before and after participating in the IPMP. Their goal is to examine the psychosocial experience of pain and the potential role of integrative pain management groups to expand and improve pain management in primary care.

Methods

Study design

The authors conducted a mixed-methods, quasiexperimental, nonrandomized study in which pre- and postintervention data were collected from program participants and a comparison group.^{27,28} The development and content of the intervention and quantitative patient-reported outcomes have previously been described in detail.^{27,28} Here the authors report findings based on qualitative data from a subset of participants of the larger IPMP. The Institutional Review Board at the University of California San Francisco reviewed and approved all study procedures.

The intervention involved a 12-week program centered on a weekly "Home Group," a 2-h meeting focused on one of four topics: physical movement, medication education, mind/body connection (mindfulness/meditation), or selfcare techniques for pain management (e.g., nutrition, selfmassage, sleep).²⁷ Home Groups were led by the program coordinator, a health educator, and invited specialists based on topic. In addition to the Home Groups, IPMP participants could receive acupuncture, massage, health coaching, or one-on-one appointments with a pharmacist at alternative times throughout the week. After the 12-week program, patients were invited to attend a weekly graduate group, where they could continue to participate in a modified Home Group. Program support included SFDPH funding for staff and philanthropic grants; insurance was not billed.

Participants. Primary care patients at the TWUHC with a diagnosis of chronic pain of 3 months or more and current opioid prescription were eligible for IPMP participation. Patients were referred by their primary care provider and screened by the lead physician (B.W.) and program coordinator (K.L.W.) to confirm eligibility and interest. Current analysis includes 41 program participants (defined as attending at least one Home Group), who completed at least one interview (see Table 1 for participant characteristics). Average attendance was 7 groups; 9 attended 1–4 groups, 16 attended 5–8 groups, and 16 attended 9–12 groups.

Data collection

Data were collected at three time points: before starting the program (baseline or BL), at the completion of the program (3 months following initiation, or 3M), and 3 months following completion (6 months following initiation, or 6M). Interviews were conducted in person at TWUHC by study coordinators, digitally recorded, and then transcribed verbatim. Participants received a \$20 gift card after completing each interview.

Baseline interviews explored patients' experience with pain, current approaches to pain treatment, and experience with nonmedication options, using questions designed for chronic noncancer pain research in safety-net primary care.²⁹ Three-month questions elicited participants' positive and negative experiences with IPMP treatments, including reasons for and barriers to use; preferences for format (i.e., large group or one-on-one); changes since initiating IPMP in

TABLE 1. CHARACTERISTICS OF STUDY PARTICIPANTS (N=41)

	n (%)
Age, years, mean±standard deviation	56.0 ± 7.9
Gender	
Male	17 (42)
Female	21 (51)
Transgender, genderqueer	3 (7)
Race/ethnicity ^a	
African American/black	8 (21)
Asian or Pacific Islander	1 (3)
Hispanic/Latino	6 (16)
White or Caucasian	14 (37)
Other or more than one race	9 (23)
Educational attainment	
High school or less	19 (46)
Some college or more	22 (54)
Employment status	
Employed	1(2)
Unemployed	3 (7)
Retired	5 (12)
Disabled	31 (76)
Annual household income <\$35,000	41 (100)
Relationship status	02 (5()
Single	23 (56)
Married or in a relationship	10 (24)
Divorce, separated, widowed	8 (20)
Housing status	5 (12)
Unstable or transitional housing	5(12)
Renting a room	14(34)
Renting an apartment or house	22 (54)
Type of pain ^b Musculoskeletal	27(00)
	37 (90) 20 (49)
Neuropathic Other	7 (17)
Duration of pain, ^b months	7 (17)
3-12	1 (2)
>12	40(98)
Substance use ^b	40 (98)
Yes—active or past use	28 (68)
No	13 (32)
Mental health condition (at least one) ^b	34 (83)
Depression	21 (51)
Anxiety	11(27)
PTSD	11(27) 15(37)
	15 (57)

^aPercentages may total more than 100% because participants can be included in >1 category.

^bBased on data from primary care providers referring patients to the program.

PTSD, Post Traumatic Stress Disorder.

treatment, emotions, health behaviors, and communication with providers; and impact on life with pain. Six-month interviews combined baseline and 3-month questions. Interview guides are available on request.

Data analysis

A total of 104 interviews from 41 participants were reviewed and analyzed, including 41 BL, 35 3M, and 28 6M interviews (26 participants completed all 3 interviews). Two authors (E.B.B. and D.B.) selected 4 participants with baseline and follow-up interviews, independently coded 11 transcripts (4 BL, 4 3M, and 3 6M), and then met to discuss

initial themes. Thematic analysis using an inductive approach was used to explore respondent viewpoints, experiences, beliefs, and perceptions before and after IPMP.³⁰ E.B.B. and D.B. refined their individual codes and developed a preliminary codebook.

E.B.B., D.B., and A.T.L. then applied these initial codes to additional interviews, refining the coding structure and adding codes as needed, discussing all newly introduced codes and themes until reaching consensus. The resulting codebook was presented to all authors, who compared codes to themes within the text, discussed alternative explanations, and vetted or refuted conclusions. Investigator bias was minimized by including authors with no programmatic role in IPMP (E.B.B., D.B., A.T.L., S.R.A., and K.K.), including multiple reviewers to ensure consistency, and examining these results alongside quantitative findings.²⁸ Codes were assigned using Dedoose, a software program for managing and analyzing qualitative and mixed-methods data.

Results

Themes were classified into pre-IPMP and post-IPMP findings. Participant demographics are available in Table 1, which displays the high rate of disability, racial/ethnic and gender diversity, poverty, and mental health comorbidity of this population.

The authors identified two primary themes from baseline interviews (Table 2): (1) the "vicious cycle" of pain worsening due to movement, anxiety, and the limits of medication; and (2) disempowerment and social isolation following reduced activity and social interaction as a consequence of pain.

They identified three primary themes from interviews conducted after IPMP (Table 3): (1) managing pain with movement and mindfulness; (2) increased resilience despite ongoing pain; and (3) the therapeutic role of community within IPMP. These findings were reported at completion of IPMP and at 3-month follow-up.

Before IPMP

The vicious cycle of pain. Participants consistently described a "vicious cycle" when explaining their pain experience during baseline interviews. (Illustrative quotes are provided in Table 2.) Participants described discomfort from too much, too little, or particular types of movement. Too much activity or "overdoing it" initiated the "vicious cycle" of pain, often leading to reduced activity and increased discomfort. Others described a movement paradox, in which pain would improve with activity at first and then later worsen. This was particularly relevant for individuals with multiple sites of pain, for whom improvement in one area led to worsening in another. Anxiety also incited a "vicious cycle," with increased anxiety worsening pain. "Bad pain" could occur at any time, derailing plans and responsibilities, and perpetuating anxiety; worsening anxiety would lead to hyperfocusing on pain, which tended to increase the severity and duration of an episode.

Strategies for disrupting this cycle concentrated on pain medication. Most participants described complicated opioid and other analgesic regimens with variable efficacy; while some described relief with particular combinations of pain medications, others reported the hopelessness of resistant

 TABLE 2. QUALITATIVE THEMES AND ILLUSTRATIVE QUOTES FROM PATIENT INTERVIEWS BEFORE

 PARTICIPATING IN THE INTEGRATIVE PAIN MANAGEMENT PROGRAM

I AKIICII F	ATING IN THE INTEGRATIVE FAIN MANAGEMENT FROOKAM
Primary theme 1: the vicious cycle of	of pain
"Overdoing It"	good day, I do my exercises that's a good day, but bad after I get through because I start hurting I don't know if I overdo it or what. [65-year-old female]
The movement paradox	I can't stand up for very long, I have to lay down most of the time I can only lay on my back for so long, then I turn on one side and [I can only do that] for a little while. I mean it's intense. [59-year-old female]
Anxiety, depression, and sense of helplessness	There's a lot of depression, a lot of anxiety andI get really sort of vicious circle because the more depressed I've gotten even with meditations it's like, c'mon you're just sitting there what's the deal? [54-year-old male]
Reliance on pain medications	[My goals are to] slow down on the pain medication and eventually stop the pain medication because it interferes with my ability to remember and it interferes with my ability to move forward. [52-year-old female]
Interest in nonpharmacologic strategies	[What would help me manage my pain is] Regular body work. Massage, acupuncture. Chiropractic. Being able to afford, you know, good organic fruits and vegetables, and proteinMeditation. My aquatherapy. Being able to do yoga, and Tai chi in water. [39-year-old female]
Primary theme 2: disempowerment and isolation	
Limits to functionality	A good day looks like getting up and getting myself dressed by myself and being able to take my walker and go out and go wherever I need to go and do whatever I need to do and come home and eat and watch a little TV and go to bed A bad day, I can barely get out of bed not being able to stand up very good, can't get myself dressed, can't get my shoes and socks on, can't use my walker, have to use my electric wheelchair, and forget everything I was supposed to get, where I went, or forget some places that I was supposed to go, and coming home and being completely exhausted where I don't even eat and fall asleep in my wheelchair. [52-year-old female]
Loss of meaningful activities and relationships	I'm not even asking for the pain to totally go away, I'm asking for it to get to a point where I feel once again active in all parts of my life especially in particular writing and being out in the country, in the mountains, in the wilderness areas, that's been like a huge part of my life and it's been taken away. [54-year-old male]
Stigma of disability	Yeah because the post-traumatic stress. It's not good to be cooped up you know, the depression and everything. The pain, that causes depression all by itself. Just by the way you look, walk around, you're disabled, people gawk at you. I mean it's a whole lot of stuff. You don't feel right, you don't look right. [59-year-old female]

pain despite increasing dose. Participants described wanting to "relax" and reduce the tension in their bodies as a way to cope with the "vicious cycle," while lacking knowledge on techniques. Some had experience with integrative approaches to chronic pain, such as massage, anti-inflammatory nutrition, and yoga, but were unable to access these consistently for financial reasons. Without accessible alternatives, many participants felt dependent on pain medications.

Disempowerment and isolation. Participants frequently discussed how pain thwarted full lives. Challenges included basic activities such as bathing, dressing, transferring to and from a bed, cleaning, preparing meals, shopping, or obtaining medications. Good days were those in which participants felt able to perform these tasks, while a bad day might be one in which a participant stayed in bed all day, except to "throw meat between two pieces of bread" or "go to the toilet."

For other participants, good days were defined by the ability to engage in meaningful activities or, "things I want to do in life" rather than the "drudgery" of a bad day, which one participant described as "just one foot in front of the other." Meaningful activities spanned from the simple to complex, from walking a couple of blocks to traveling cross-country to visit family. As pain limited physical function and participation in meaningful activities, participants described feeling isolated from friends, family, and community. Said one participant, "my husband really does not understand. I mean he sees me in pain but he doesn't know how to deal with it himself." Participants described feeling antisocial in times of pain, unable to joke around or "be optimistic," which felt like a change from prior social identities and interactions. One participant could no longer play with her grandchildren due to her pain and had started turning down invitations to see her family as a coping strategy. The loss of this time together was central to her sense of disability. Some participants had become so accustomed to isolation and misunderstanding that they feared groups, and voiced these hesitations before attending IPMP.

After IPMP

Managing pain with movement and mindfulness. Following IPMP, participants described strategies for managing the "vicious cycle" of pain beyond analgesic medications (see Table 3 for participant quotes). These strategies included tools and treatments that were part of IPMP such as movement therapies, mindfulness, acupuncture, and massage. Several participants reported that after participating in

TABLE 3.	QUALITATIVE THEMES AND ILLUSTRATIVE QUOTES FROM PATIENT INTERVIEWS FOLLOWING	
Participation in the Integrative Pain Management Program		

Primary theme 1: managing pain wi Movement strategies	th movement and mindfulness Well I know that if I consistently lay in bed when I'm in pain, that the pain gets worse. So these exercises—just even if it's two minutes—whenever you can remind yourself to do it, the little bit that you do, just any kind of movement will really, really justyou'll benefit by it. [59-year-old female]
Mindfulness strategies	It just took you out of your own mind and made you think about other things where you weren'tyou know thinking about pain, pain, pain. Taught you how to do that for yourself, like at home. [59-year-old female]
On reducing medication use	It makes you take time in your brain to take a moment when you're getting all that pain. Don't just go popping pills kind of just step back and look at what I have learned in the program. But, that's how it goes. It kind of just makes you think, before you go and take that pill sometimes. [60-year-old female]
Primary theme 2: supporting resilier	
Emerging sense of well-being and hope	I've noticed that, when I come out of [the IPMP groups], my mind is not so much on pain. And when I come out I feel a little different. Even with the mind exercise part, when I come out I can kind of look out at the world a little differently, because I'd be so frustrated when I come and walk around these streets. [60-year- old female]
Separating pain from emotional state and self-worth	I think my outlook has changed a lot, I don't feel as isolated. I feel like a little more self-empowered that I'm not necessarily able to really lessen the pain in my eyes but that I'm able to live with that pain and deal with that pain in a much more positive waythe jury's still out on it but I think actually my actual pain with my eyes might be lessened a little bit because of that. [54-year-old male]
Evolution of pain management strategies	For the first time I've had real hope that I can manage the pain. I've had moments of real happiness and contentment which I hadn't had in years. I'm less stressed thinking about dealing with the pain, I'm less stressed about as far as about self- worth like I'm feeling like I can plug in more to my community now with volunteering, I'm starting to get back into artistic stuff, some writingReally making changes with daily routine of stretching, exercising, meditation, that's really helped a lot with my outlook and my depression has gone down. [54-year- old male]
Primary theme 3: curating communi	ty
Pain relief through friendships and comradery	 Sometimes there'd be days I'd go in there so upset and I was able to just go in there and just lay it all. Just tell them everything that was going on with me and transform that into feeling better and I felt that about the group too, it helped me feel better. Talking about what was going on with me, being around other people that were experiencing pain and hearing other people's experiences, getting treatment, that helped with the pain. [43-year-old male] I was really isolated before, no friends, so now I feel like I'm not alone, that's huge for me. [43-year-old male]
Feeling understood and moving beyond pain identity	[I feel] a little more secure and know that I can get through everything, there's other people that I meet up with in the group therapy are going through a lot also. So it gives me the confidence that I'll be alright. It enables me to deal with the pain, it doesn't really take the world. I'm more at ease with the pain. [61-year-old female]
New capacity for empathy and ease with others	It helps me understand other people because you're not thinking of other people, you only think of yourself. You know "Just get out of my way, I'm in pain. Hurry up, I gotta sit down" or something, you know. So I've been looking at other people and I think I'm being a better person by kinda understanding what they're going through and not being so impatient, I guess. [39-year-old female]

IPMP, Integrative Pain Management Program.

IPMP, they did not experience changes in their pain. However, most mentioned movement and mindfulness practices as beneficial for mitigating ongoing pain, and preventing pain from worsening.

On movement practices, particpants described engaging in daily stretches and more extensive exercise routines, increasing range of motion and engaging new muscle groups. Participants felt the exercises offered in IPMP were accessible and appropriate for their levels of health and disability, which made continued adherence possible. Finally, participants began to recognize "too much" movement, and types of exertion that could worsen pain. Mindfulness practices were described as an integral method for weathering vicious cycles, primarily by allowing participants to "get through" an episode through relaxation or disengagement. The majority of participants described the importance of "grounding" and focusing on something other than the pain during acute exacerbations, and felt that this helped the pain pass. Some participants felt mindfulness techniques helped reduce their medication requirements and described pausing before taking medication, and "getting through" the pain without additional, breakthrough doses. These participants described decreasing not only their analgesics but also medications to manage side effects, such as stool softeners.

Supporting resilience. Following IPMP, the vast majority of participants described an emerging sense of wellbeing and resilience, using words such as "hope" and "refreshed," alongside decreased frustration and anxiety. A few participants found IPMP participation "exhausting" or "overwhelming," due to the length or complexity of the sessions. Many others credited IPMP with alleviating "negative" thought patterns, and supporting "positive" hopeful mindsets that ultimately improved pain, "releasing" emotions previously tied to their pain, such as feelings of worthlessness and despair. Relatedly, participants described a sense of self-efficacy, using words such as "manageable" and "coping" to describe their relationships with ongoing pain. Moreover, participants voiced new ways of engaging with their primary care providers, placing these relationships within the context of maintenance, rather than as a "cure all" for their pain.

Curating community. The sense of misunderstanding and isolation voiced by many participants before IPMP was directly addressed in follow-up interviews. Most patients described feeling seen, heard, and respected for their experience with pain in new and important ways. A small number found group dynamics challenging: they reported that other participants talked for too long, spoke disrespectfully, or had unhygienic eating habits. These participants suggested making programmatic changes such as staff serving food or using a timer during group check-ins.

Peer support developed within the groups, and participants described the benefits of comradery. The community that formed within the cohorts offered a shared identity of people suffering from chronic pain, coming together weekly as part of IPMP. The group's shared experience of chronic pain and associated disability created a foundation of respect and understanding from which participants could explore aspects of their identities unrelated to pain. These feelings of community and identity were commonly credited as direct sources of pain relief. In addition, sharing pain narratives offered a weekly opportunity to share best practices and tips for pain management.

Participants also emphasized feelings of empathy after learning about, comparing, and identifying with other participant experiences of pain. This lens was associated with new intention to deisolate and engage others with patience, honesty, and kindness, feelings that had been unattainable during "bad days" of pain. Furthermore, many participants were eager to continue their involvement in the group after the pilot, citing their new sense of connection with others in IPMP.

Discussion

While psychosocial influences have been appreciated by chronic pain organizations and treatment guidelines, they have been slow to diffuse into clinical practice. Patients' psychosocial experience of living with pain is still too often seen as separate from their "real," or physical pain even though this assumption has been disavowed by patients, health care providers, and the general public.^{5,6} Including multimodal management options in primary care is critical to addressing chronic pain. The themes that emerged from these longitudinal, qualitative data offer insights on the

impact of integrative medicine groups, contributing to the understanding of the psychosocial impact of IPMPs in primary care.

Specifically, these responses illustrate the interrelatedness of mind, body, and social context. At baseline, participants articulated how their psychologic and social experiences interplayed with the vicious cycle of worsening pain severity, primarily through movement and anxiety. Pain was deeply tied to frustration, depression, and worry, and was seen as unmanageable with pharmacologic treatment alone, ultimately leading to social isolation and disempowerment.

After IPMP, participants described new psychologic and social methods for managing pain cycles, including therapeutic movement, mindfulness, and relationship building. The movement and mindfulness tools taught in IPMP groups were used in critical moments to weather the "vicious cycle" of pain, offering patients increased agency to support meaningful lives. By creating an environment in which socially isolated individuals were able to come together in community to identify shared and individual experience, participants were able to access previously hidden emotions while changing how they thought about pain. This shift in focus, from limitations to abilities, helped participants reframe their personal power and lives. In addition, patients overwhelmingly described improved mood following groups, feeling refreshed and a "part of something."

These shifts in outlook following the program are notable when considering the challenges many participants faced in addition to chronic pain, including substance use, homelessness, disability, and inadequate income while living in an impoverished neighborhood in a city with an exceedingly high cost of living. These factors are known to negatively impact resilience, hope, identity, and pain.^{31,32} IPMP was able to impact vulnerable patients despite ongoing structural challenges. As one participant noted, "It's hard to be part of a group when all the members are broken." For these participants to experience shifts toward resilience and social engagement lends strength to the case for IPMP-like programs.

This study has several limitations. The interviews did not include questions specifically exploring participants' experience with poverty, substance use, and other aspects of structural vulnerability, which could have enhanced the understanding of how IPMP participation interacted with these lived experiences. Reducing necessary pain medication was mentioned as a primary goal by participants and some participants self-reported using fewer medications after participating in IPMP. However, the authors cannot directly attribute lower medications to IPMP given the numerous factors that influence prescription changes. Similarly, they cannot determine the role time might have played in contributing to shifts in pain experience among patients. Finally, while the authors saw psychosocial benefits even among participants who did not attend IPMP consistently, they are more likely to have follow-up data from participants who benefited from the program.

Future studies could optimize implementation of integrative medicine group programs for vulnerable populations. IPMP was conducted within a primary care clinc in San Francisco, an area known for widespread use of CIH; in addition, it was funded by the San Francisco Health Network rather than structured as a reimbursable group medical visit model.¹⁸ The authors were not able to untangle the role of specific CIH modalities nor the minimal effective exposure, both of which may offer further insight on how to structure multimodal pain management programs. Finally, studies focused on the cost of like programs, as well as provider experiences, would offer important data on resources needed to develop similar programs.

Conclusion

Chronic pain and overreliance on analgesics remain pressing problems for millions of U.S. adults, and primary care providers need accessible ways to address psychosocial aspects of pain. Integrative medicine groups offer opportunities for addressing the complex social and psychologic needs of patients with chronic pain. These findings suggest that vulnerable patients with chronic pain experience profound challenges that access to integrative medicine groups may help address. The IPMP is a promising model for increasing access to CIH in combination with group support, one that can support shifts from isolation and frustration to resilience and social engagement.

Acknowledgments

The authors thank Joseph Pace, MD, and Blue Walcer, MPH, for involvement with program development and implementation; Jimmy He and Trilce Santana for conducting interviews, and monitoring and collecting data. Funding for the study and the program was provided through the Mount Zion Health Fund and the San Francisco Health Network. A.T.L. received support from NIH/NCCIH (T32AT003997). The funding sources had no involvement in the design and conduct of the study; the collection, management, analysis, or interpretation of the data; or in the preparation, review, or approval of the article. Contents are solely the responsibility of the authors and do not necessarily represent the official views of the funders.

Author Disclosure Statement

No competing financial interests exist.

References

- Institute of Medicine. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Washington, DC: The National Academies Press, 2011.
- Boscarino JA, Rukstalis M, Hoffman SN, et al. Risk factors for drug dependence among out-patients on opioid therapy in a large US health-care system. Addiction 2010;105:1776–1782.
- Highlights of the 2011 Drug Abuse Warning Network (DAWN) Findings on Drug-Related Emergency Department Visits [Internet]. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2013. Online document at: https://www.samhsa.gov/data/sites/default/ files/DAWN127/DAWN127/sr127-DAWN-highlights.htm accessed, January 25, 2018.
- Hedegaard H, Warner M, Minino AM. Drug Overdose Deaths in the United States, 1999–2016. NCHS Data Brief 2017;1–8.

- Edwards RR, Dworkin RH, Sullivan MD, et al. The role of psychosocial processes in the development and maintenance of chronic pain. J Pain 2016;17:T70–T92.
- 6. Engel GL. The need for a new medical model: A challenge for biomedicine. Science 1977;196:129–136.
- Asmundson GJG, Katz J. Understanding the co-occurrence of anxiety disorders and chronic pain: State-of-the-art. Depress Anxiety 2009;26:888–901.
- Bair MJ, Robinson RL, Katon W, Kroenke K. Depression and pain comorbidity: A literature review. Arch Intern Med 2003;163:2433–2445.
- Bolen J, Schieb L, Hootman JM, et al. Differences in the prevalence and impact of arthritis among racial/ethnic groups in the United States, National Health Interview Survey, 2002, 2003, and 2006. Prev Chronic Dis 2010;7:A64.
- Azari S, Zevin B, Potter MB. Chronic pain management in vulnerable populations. In: King TE, Wheeler MB, eds. Medical Management of Vulnerable and Underserved Patients: Principles, Practice, and Populations, 2 ed. New York, NY: McGraw-Hill Education, 2016.
- 11. Green CR, Anderson KO, Baker TA, et al. The unequal burden of pain: confronting racial and ethnic disparities in pain. Pain Med 2003;4:277–294.
- MacPherson H, Vickers A, Bland JM, et al. Acupuncture for Chronic Pain and Depression in Primary Care: A Programme of Research. Southampton: NIHR Journals Library, 2017.
- Matos M, Bernardes SF, Goubert L, Carvalho H. The Revised Formal Social Support for Autonomy and Dependence in Pain Inventory (FSSADI_PAIN): Confirmatory factor analysis and validity. J Pain 2015;16:508–517.
- 14. Cramer H, Mehling WE, Saha FJ, et al. Postural awareness and its relation to pain: Validation of an innovative instrument measuring awareness of body posture in patients with chronic pain. BMC Musculoskelet Disord 2018;19:9.
- Chen L, Houghton M, Seefeld L, et al. A survey of selected physician views on acupuncture in pain management. Pain Med 2010;11:530–534.
- 16. Wahner-Roedler DL, Lee MC, Chon TY, et al. Physicians' attitudes toward complementary and alternative medicine and their knowledge of specific therapies: 8-year follow-up at an academic medical center. Complement Ther Clin Pract 2014;20:54–60.
- Hall H, Leach M, Brosnan C, Collins M. Nurses' attitudes towards complementary therapies: A systematic review and meta-synthesis. Int J Nurs Stud 2017;69:47–56.
- Gardiner P, Dresner D, Barnett KG, et al. Medical group visits: A feasibility study to manage patients with chronic pain in an underserved urban clinic. Glob Adv Health Med 2014;3:20–26.
- Luo M, D'Amico S, Gardiner PM, et al. Integrative medical group visits: A randomized controlled trial in patients with chronic pain and depression in a diverse urban setting. Glob Adv Health Med 2018;7. doi:10.1177/2164956118773837.
- 20. Thompson-Lastad A, Gardiner P, Chao MT. Integrative group medical visits: A National Scoping survey of safetynet clinics. Health Equity 2019;3:1–8.
- 21. Chao MT, Abercrombie PD, Santana T, Duncan LG. Applying the RE-AIM framework to evaluate integrative medicine group visits among diverse women with chronic pelvic pain. Pain Manag Nurs 2015;16:920–929.
- 22. Dresner D, Resnick K, Gardiner P, et al. Qualitative evaluation of an integrative medicine group visits program for

patients with chronic pain and associated comorbidities. J Altern Complement Med 2014;20:A56.

- 23. Jaber R, Braksmajer A, Trilling JS. Group visits: A qualitative review of current research. J Am Board Fam Med 2006;19:276–290.
- 24. Lavoie JG, Wong ST, Chongo M, et al. Group medical visits can deliver on patient-centred care objectives: Results from a qualitative study. BMC Health Serv Res 2013; 13:155.
- 25. Noffsinger EB. The ABCs of Group Visits, 1st ed. New York, NY: Springer-Verlag, 2013.
- 26. Scott JC, Conner DA, Venohr I, et al. Effectiveness of a group outpatient visit model for chronically ill older health maintenance organization members: A 2-year randomized trial of the cooperative health care clinic. J Am Geriatr Soc 2004;52:1463–1470.
- 27. Hurstak E, Chao MT, Leonoudakis-Watts K, et al. Design, implementation, and evaluation of an integrative pain management program in a primary care safety-net clinic. J Altern Complement Med 2019;25:S78–S85.
- Chao MT, Hurstak E, Leonoudakis-Watts K, et al. Patientreported outcomes of an integrative pain management program in a primary care safety net clinic: A quasi-experimental

study. J Gen Intern Med 2019. [Epub ahead of print]; DOI: 10.1007/s11606-019-04868-0.

- 29. Hurstak EE, Kushel M, Chang J, et al. The risks of opioid treatment: Perspectives of primary care practitioners and patients from safety-net clinics. Subst Abus 2017;38:213–221.
- Boyatzis RE. Transforming Qualitative Information: Thematic Analysis and Code Development. Thousand Oaks, CA: Sage Publications, Inc., 1998.
- 31. Smedley B, Syme SL. Promoting health: Intervention strategies from social and behavioral research. Am J Health Promot 2001;15:149–166.
- Wilson N, Syme SL, Boyce WT, et al. Adolescent alcohol, tobacco, and marijuana use: The influence of neighborhood disorder and hope. Am J Health Promot 2005;20:11–19.

Address correspondence to: Maria T. Chao, DrPH, MPA Osher Center for Integrative Medicine University of California, San Francisco Box #1726 San Francisco, CA 94143

E-mail: maria.chao@ucsf.edu