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### Permalink

<https://escholarship.org/uc/item/2qm755jh>

### Journal

Pain, 162(11)

### ISSN

0304-3959

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### Publication Date

2021-11-01

### DOI

10.1097/j.pain.0000000000002260

Peer reviewed



Published in final edited form as:

*Pain*. 2021 November 01; 162(11): 2769–2779. doi:10.1097/j.pain.0000000000002260.

## Barriers and facilitators to older adults' use of nonpharmacologic approaches for chronic pain: a person-focused model

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### INTRODUCTION

A growing population of older adults in the United States live with chronic pain. Common pain conditions in older adults include osteoarthritis, chronic neuropathic pain, and vertebral compression fractures. Chronic pain tends to be more complex in older adults, with two-thirds describing pain at multiple sites and over 60% describing multiple types of pain [16,20]. Chronic pain negatively impacts function and quality of life and increases social isolation and health care costs [15,26,29].

Clinicians and researchers are increasingly seeking alternatives to pharmacologic approaches for pain management with older adults [17,34,40]. Most pharmacologic treatments for pain incur increased risks for older adults, especially those with multiple chronic conditions (MCC), because of age-related changes in renal function, drug-drug and drug-disease interactions, and increased rates of other adverse effects (e.g., falls)[9]. Moreover, the opioid epidemic in the United States (US) has highlighted the need for nonpharmacologic pain management approaches that are accessible and that provide patients with strategies that do not require ongoing supervision from clinicians [33,36]. National survey data indicate higher rates of complementary and alternative medicine (CAM) use among adults with MCC

than those without [18] and increasing use of nonpharmacologic approaches among older US adults [39]. For musculoskeletal pain in particular, practitioner-based nonpharmacologic approaches are among the most commonly used (e.g., chiropractic, massage), followed by natural products (e.g., dietary supplements), mind-body approaches (e.g., yoga, meditation) and whole medical system approaches (e.g. acupuncture, Ayurveda)[14].

Compared to younger adults, older adults use nonpharmacologic approaches to manage pain at lower rates [13,19,28]. In addition, individuals with MCC use certain approaches, like mind-body and movement therapy, less often than do those with fewer chronic conditions[18]. Factors such as cost, lack of availability, and lack of clinician recommendation appear to function as barriers to older adults' pain self-management in general [2,7,19,27,31]. However, less is known about factors that influence older adults' decisions to use nonpharmacologic approaches, [12,37,38], particularly for approaches other than exercise [3,45] or among those with MCC. Of note, we identified no studies that addressed the use of nonpharmacologic approaches by older adults with MCC since the onset of the US opioid epidemic.

Understanding older adults' use of nonpharmacologic approaches for pain is important foundational work to be able to improve older adults' pain management. What factors influence older adults' decisions to consider, initiate, sustain, or stop using nonpharmacologic approaches for managing their chronic pain? Such information may highlight potential targets for patient-centered communication, clinical management, and research. We used qualitative methods to elicit and characterize the range of factors that hinder or support the use of nonpharmacologic approaches by older adults with chronic pain and MCC.

## METHODS

### Data collection

We conducted one-time semi-structured qualitative interviews with 25 English-speaking older adults, age 65 and older, with three or more self-reported chronic medical conditions, who experienced persistent pain for 6 or more months. A study coordinator recruited candidates from senior centers, senior health fairs, and primary care clinics affiliated with a large academic medical center. All potential participants were screened for cognitive impairment either by phone (Brief Screen for Cognitive Impairment, [23]) or in-person (Mini-Cog, [8]). Individuals who did not pass the cognitive screen were excluded. We employed purposive sampling to ensure the inclusion of individuals of both low and high socioeconomic status.

Interviews lasted approximately 45 – 120 minutes and took place at a location of the participants' choosing, typically the research office or the participant's home. Interviewers addressed several topics related to the experience of chronic pain. They elicited participants' current and past experiences with nonpharmacologic approaches for pain management through semi-structured questions about 10 common approaches (drawn from the literature and pilot testing: acupuncture, massage, chiropractic, physical therapy, mindfulness/breathing exercises, working with a psychologist or therapist, exercise, yoga,

tai chi, ice; [5,13,14]) and through open-ended questions about other “non-medication” approaches used to manage chronic pain. We consider all nonpharmacologic approaches discussed by our participants because this method allowed us to capture a broader range of what older adults are using to manage chronic pain beyond our prespecified list. The interviewer asked participants how they came to use various approaches and their reasons for non-use of approaches recommended by their clinician (see Appendix A).

Participants provided written informed consent and received a \$30 gift card for participation. Interviews were audio-recorded and professionally transcribed. The UC San Francisco Institutional Review Board Study approved all study activities.

## Analyses

A co-PI (CR), the researcher who conducted the interviews (NT), and a sociologist with substantial expertise in qualitative methods (SBG) independently read through all of the transcripts to familiarize themselves with the corpus of data. Coding proceeded in two phases in ATLAS.ti. First, two authors (SBG, NT) used two broad codes to identify factors that appeared to support or hinder participants’ efforts to manage their pain. They double-coded five transcripts and reached a high level of inter-coder reliability (>90%; [11]). They independently coded the remainder of the data, which were reviewed by all of the authors. Guided by the constant comparative method [6], team members wrote analytic memos and discussed the data during multiple meetings. The goal of these discussions was to identify factors that participants suggested had shaped their use or consideration of various nonpharmacological approaches. Through this iterative process, the team identified domains that encompassed the range of barriers and facilitators represented in the data. They then used these domains to develop and refine a preliminary conceptual model of barriers and facilitators that influenced participants’ use of nonpharmacologic approaches for chronic pain management.

In the second phase of analysis, one author (SBG) developed a set of codes based on the components of the proposed model and applied these codes to all interview data that addressed participants’ use or non-use of nonpharmacologic approaches. To evaluate consistency, two authors (SBG, CR) then double-coded four transcripts and achieved high intercoder reliability (~90%). All discrepancies were resolved through discussion, during which we refined code definitions and reached nearly 100% intercoder agreement [11]. SBG coded and synthesized the remaining data into code-based tables to be able to explore patterns within and across the domains of our conceptual model. This phase of the analysis enabled the team to deductively evaluate the fit between the preliminary model and participants’ experiences. Coded data and tables were discussed with other members of the interdisciplinary team (FN, CM), who affirmed the fit between the model and the data.

## RESULTS

### Sample description

Twenty-five of forty-nine potential participants completed interviews. Fourteen were ineligible due to lack of persistent chronic pain or having fewer than three chronic medical

conditions. Ten declined or did not respond to requests to participate. One person lived too far away to complete an in-person interview. Participants ranged in age from 66 to 90 years old (mean = 72 years) and over half were women. On average, participants had six chronic conditions (SD = 2.04; range 3 – 12). All participants reported regularly experiencing pain and pain interfering with daily activities. Regarding average pain intensity over the past seven days, approximately one-quarter of the sample reported “mild,” half reported “moderate,” and one-fifth reported “severe” or “very severe.” Four of five participants were white and over half had at least a college degree. Four out of five had “enough finances to meet daily needs” (Table 1).

Every participant had used a nonpharmacologic approach for chronic pain management at some point in their lives (mean = 9.9 unique approaches, SD = 4.0, range 4 – 18). All were using at least one nonpharmacologic approach at the time of the interview (mean = 5.6, SD = 3.2, range 1 – 12; Table 1, Appendix B). Many of these approaches were explicitly probed by the interviewer. However, participants also reported a wide range of additional nonpharmacologic approaches. Many of these approaches were patient-led and home-based (e.g., walking, applying ice or heat, resting, home-based exercise, walking, use of orthopedics). Others were prescribed by clinicians or facilitated by practitioners (e.g., osteopathy, cupping, energy healing; Table 2, Appx. B). Some participants reported approaches considered pharmacologic (e.g., capsaicin cream), which we excluded from analyses. Compared to what participants had used in the past, their current approaches were generally more self-directed and home-based (Table 2, Appendix B).

### **Barriers and facilitators to the use of nonpharmacologic approaches to manage chronic pain**

Participants described a wide range of factors that hindered or supported their use of nonpharmacologic approaches for chronic pain management. We categorized these barriers and facilitators into three broad domains: those that influenced their *awareness of an approach* as an option relevant to them; those that influenced the *appeal of the approach*; and those that influenced their *access to the approach*. Based on these findings, we propose a “3A” model of barriers and facilitators to nonpharmacologic use that integrates these person-focused domains (Figure 1).

**Awareness**—Patient *awareness* captures individuals’ familiarity with an approach and their recognition that the intervention may be germane or relevant to their chronic pain condition. Factors that influenced participants’ nonpharmacologic use were sometimes those that hindered or supported patient’s awareness of a nonpharmacologic approach (Table 3). Multiple participants, for example, reported not being familiar with common nonpharmacologic approaches that the interviewer raised. In other cases, participants knew about a given approach but did not see it as relevant to managing chronic pain or for their specific case. Multiple participants, for example, thought movement like yoga might help chronic pain, but were familiar only with styles of yoga that they felt they could not perform because of physical limitations. They had therefore not considered yoga for their own pain management (e.g., participant #11 [P11]). A couple of participants indicated that they were

going to look into approaches the interviewer asked about, because they had either not heard about the approach or had not considered it relevant for their own use (e.g., P02, P24).

In contrast, individuals who were using a nonpharmacologic approach were necessarily familiar with it and appreciated its relevance to their pain management. The ways that they learned about an approach they had or were currently using varied substantially. Clinicians were a major source of participants' awareness of nonpharmacologic approaches. For example, many participants described using physical therapy, which was prescribed by their clinicians. Others credited pain specialists or pain management programs for information about new nonpharmacologic approaches and how they could help their pain (e.g., P12 learned about stretching exercises, acupuncture, tai chi in this setting). Many ideas regarding nonpharmacologic approaches came from diverse non-medical sources (e.g., family and friends, the participant's own research/reading, past experiences, support groups, integrative medicine communities). P14, for example, had tried multiple approaches that she had learned about through her social network (e.g., chiropractic, mindfulness, medical marijuana cream, electrode therapy) or reading (e.g., acupuncture, yoga). An approach she identified as among the most impactful on her chronic pain—working with an osteopath—she learned about from her daughter. When participants brought up how they had learned of a nonpharmacologic approach, they most often cited non-medical sources.

**Appeal**—Older adults' experiences with or feelings about a given approach arose repeatedly when describing why they did or did not use a given approach. Participants shared many expressions of negative and positive (Table 4) feelings about nonpharmacologic approaches, reflecting the degree to which various approaches *appealed* to them.

Numerous participants expressed that they did not like or value certain nonpharmacologic approaches and therefore did not initiate them, continue using them, or even consider them in the first place. These decisions were tied to individuals' perception of the approach as ineffective for their pain or to their having negative feelings about the approach. These feelings included discomfort, displeasure, and skepticism (e.g., "I'm pretty skeptical about Eastern medicine" P10); pain from the intervention/approach itself (e.g., PT, acupuncture); or its misalignment with their sense of self (e.g., about yoga and meditation, "I just can't picture myself doing Zen stuff and all of that," P11). Some participants' feelings about an approach were so strong that they reported that they would never consider it. They did not consider it an acceptable option for themselves. P22, for example, did not engage in approaches that required hands-on touch from someone else because she "bristled at just the thought of being touched."

Conversely, many participants expressed that they used a nonpharmacologic approach because they experienced it as beneficial. They expressed appreciation for, and motivation to continue using, approaches that they viewed as effective. Participants also repeatedly invoked emotions when describing why they initiated or continued an approach. For example, they reported positive feelings from an approach's physical sensations (e.g., relaxation from massage, relief from icing), from executing the approach (e.g., enjoyment of being outside on walks), and from the social aspect of some approaches (e.g., group exercise classes).

Participants weighed positive and negative aspects of a specific approach in order to assess whether they wanted to use it. Individuals who found an approach appealing did not necessarily feel exclusively positive about it (e.g., sometimes an approach that helped one source of pain exacerbated another [P13]; sometimes an approach caused temporary discomfort, but the participant considered it largely worthwhile). For example, P19 found the idea of doing low-cost acupuncture distasteful as she did not know if the setting would be as clean as the private clinic she could no longer afford. She wanted to try it, however, because the approach had worked well for her in the past. For other participants, an approach's effectiveness did not outweigh the discomfort or dislike they felt about it. For example, P25 thought that walking more would help her pain, but walking currently is so painful that she "procrastinates" and does not make herself do it.

**Access**—Participants' *access* to desired nonpharmacologic approaches varied greatly and functioned as barriers or facilitators (Table 5) to their use. Participants' narratives revealed three main aspects of accessibility: affordability of the approach; their physical and/or cognitive capacity to use the approach; and logistical factors.

Cost and limited insurance coverage constrained many participants' ability to use an approach they suspected or knew would alleviate their pain (e.g., massage, water therapy, acupuncture [P20]), or to use an approach as often as they wished. In some cases, participants' insurance covered an approach, but the specific clinic or type of practitioner they desired was not accessible (e.g., P07 who could access more junior acupuncturists but not the "traditional" senior practitioners that she had found particularly effective).

Many participants were not able to access a nonpharmacologic approach because real or perceived limitations in their skills or abilities (physical or cognitive) made it difficult or impractical. Participants described physical constraints like limited flexibility, difficulty with balance, or pain (P09) as interfering with their ability to engage in yoga and certain exercises. Some participants' assessments of their physical limitations discouraged them from ever trying an approach (e.g., P11 and yoga). Though discussed less than physical limitations, cognitive limitations (e.g., memory and concentration) created barriers to participants' use of nonpharmacologic approaches as well. Some participants said that they were not able to use approaches like PT exercises (P22) or meditation (P09, P21) at home because they could not remember how to do them. Additionally, some participants cited their being "bad at" something as interfering with their use of an approach (e.g., difficulty adhering to an exercise or mindfulness regimen (P05); difficulty concentrating during mindfulness or meditation [P14]).

Multiple participants cited logistical barriers to nonpharmacologic use, for whom getting to a desired service was inconvenient, burdensome or impossible (e.g., transport to massage [P09]; paratransit [P22]; acupuncture unavailable at their medical center [P18]). For others, practical aspects of the approach itself—e.g., the rhythm and format of PT (P17); restrictions on number of visits [P22]; the closure of a clinic (P20) or class (P25); the departure of a preferred practitioner/instructor (P08)—hindered their access to a nonpharmacologic approach.

Conversely, factors like insurance coverage and low copays for services facilitated many participants' access to services like PT and acupuncture. For others, disposable income or family members' financial help made a nonpharmacologic approach accessible (e.g., osteopathy [P14], acupuncture [P19]). Physical and cognitive factors (e.g., the ability to concentrate, to remember details about exercises) enabled participants to successfully engage in selected nonpharmacologic approaches, as did participants' efforts to modify nonpharmacologic approaches so they better aligned with their abilities (e.g., modifying yoga poses, P06, P10, P23; using hiking poles to maintain walking exercise, P10; snorkel to maintain swimming exercise, P08; working with clinicians to modify home-based PT exercises, P18). Finally, logistical factors such as living near a nonpharmacologic clinic/ service and having a family member who could drive the participant to an appointment helped to facilitate access. Indeed, nonpharmacologic approaches that participants could do at home and on their own schedule were the most commonly-used approaches at the time of interview (e.g., applying heat, walking, icing.).

**Summary of the 3A model**—Awareness, appeal and access (3A domains) together influenced whether participants considered, initiated, and continued using a nonpharmacologic approach to manage their chronic pain. Individuals who were using a nonpharmacologic approach had identified that approach as relevant to them and their chronic pain; wished to use it; and were able to use it (logistically, financially and according to their capacities). Each of the 3A domains had to be realized for the individual to initiate and sustain their use of an approach. In contrast, for participants who were not using a particular nonpharmacologic approach for pain management, not all domains had been realized. In Figure 2 we illustrate the role of the 3A factors in three participants' use of a nonpharmacologic approach.

For some participants, key reasons they did or did not use a nonpharmacologic approach fell clearly within one domain (e.g., P06 and P23 in Figure 2). For others, their reasons for use or non-use crossed domains. For example, sometimes problems with accessing an approach (the difficulty of a certain stretch, or the hassle of getting to a class) also made the approach less appealing. Similarly, recommendations, from family, friends, and especially clinicians, simultaneously brought an approach to some participants' awareness and made the approach more appealing or acceptable to them.

## DISCUSSION

We found that older adults with chronic pain and MCC used a wide range of nonpharmacologic approaches to try to manage their pain. These approaches ranged from formal, practitioner-led approaches like acupuncture, PT, and massage, to informal, home-based, patient-led approaches (e.g., exercise, icing). Nearly all of the participants were using multiple approaches at the time of interview and had tried many in the past. Compared to prior approaches, the approaches participants were using at the time of interview were more self-directed and home-based, like walking, home-based exercises, and using ice and heat. These patterns may reflect the dynamic and challenging nature of chronic pain management among older adults with MCC [18].



We identified a wide range of factors that hindered or supported individuals' nonpharmacologic use, which fall under three broad domains: awareness, appeal, and access. We used these domains to develop a novel person-focused "3A" model of barriers and facilitators. For older adults with chronic pain to routinely use a nonpharmacologic approach, all three factors had to be aligned: the individual had to be aware of the approach and its applicability to their pain; the approach had to be sufficiently appealing to them; and they had to have access to the approach financially, logistically, and with regard to their abilities. These dynamics were relevant for both formal approaches and informal approaches, which may be less familiar to clinicians [46].

These results illuminate numerous factors that influence older adults' use of nonpharmacologic approaches to manage chronic pain. They complement work by Park et al., who investigated barriers and facilitators to the use of nonpharmacologic approaches in a sample of diverse older adults [37,38]. Like our study, they found previously-identified barriers (e.g., inadequate knowledge about or inadequate resources to access certain treatments) and facilitators (e.g., individuals' enjoyment of nonpharmacologic approaches) [2,4,45]. They additionally reported novel factors, such as embarrassment, self-consciousness, and lack of faith in the effectiveness of an approach, all of which we identify as part of the 3A "appeal" domain. Our analysis identified additional new barriers to the use of nonpharmacologic approaches such as deeply-felt discomfort, the misalignment between an approach and the individual's sense of self, and lack of appreciation that an approach may be well-suited for the individual's particular type of pain. Our study also complements Booker et al's investigation of older African Americans' perceptions of and approaches to managing chronic osteoarthritis pain [7]. Similar to our study, they found that participants used a large number of pain management strategies, many of which were nonpharmacological and "inexpensive, easy to use and access," and effective. The consonance between our findings and others' [7,37] suggests that older adults with and without comorbidities may face similar types of challenges to chronic pain management.

Our study differs most significantly from prior studies in our characterizing granular barriers and facilitators in terms of *how* they influence older adults' use of nonpharmacologic approaches. Awareness, appeal, and access are the individual-level mechanisms that connect barriers and facilitators we and others identified with individuals' pain management behaviors. For example, multiple studies identified reduced pain intensity as a facilitator to the use of exercise [3,45], but this factor does not directly impel a person to start or continue exercising. Instead, the effect of reduced pain operates through an individual's feelings about exercise being effective or worthwhile (appeal). Similarly, the effect of social support [37], may operate through an individual's ability to get a ride to a desired therapy (access); through the individual's learning about an approach (awareness); or through whether they believe an approach is acceptable (appeal). Because these influences would each require different kinds of interventions or clinic conversations, it is important for researchers and clinicians to identify how these barriers and facilitators are operating for each patient.

In its comprehensiveness, the 3A model captures many components represented in models of health behavior and behavior change. For example, the 3A "appeal" domain captures the attitudes, norms, and motivations central to theories such as the Health Belief model

[24,41] and the Theory of Planned Behavior [1,22]. In the “access” domain, issues related to individuals’ capacities are echoed in the Theory of Planned Behavior [1,22], the PRIME theory [44], and others. Issues of cost and coverage, which are driven by macro-level forces (e.g., poor health infrastructure, economic inequality) but experienced at the individual level, are highlighted in the social ecological model [21,30]. The COM-B model addresses many of these factors as well as exposure to ideas [32], which evokes the 3A domain of “awareness.” However, the 3A model differs from these models in many regards: it is focused specifically on barriers and facilitators to nonpharmacologic use in older adults; it is conceptually streamlined; and it is profoundly person-focused, developed inductively from older adults’ own descriptions of their nonpharmacologic experiences. As such, the 3A model may be uniquely well-suited to support patient-clinician communication and nonpharmacologic interventions for chronic pain management.

### Clinical implications

Inductively derived from older adults’ narratives, the 3A model is consonant with and supportive of patient-centered and person-focused care [42]. Drawing on first-hand knowledge, patients can inform their clinician about what is or is not working for them. Clinicians need to understand “the social and emotional context” of older adults’ openness or resistance to a particular nonpharmacologic intervention in order to provide person-centered, high-quality care [35]. The 3A model offers a framework and “conversational roadmap” to elicit these highly-impactful nonclinical factors (Table 6).

First, the clinician can assess the patient’s knowledge or *awareness* about a particular nonpharmacologic intervention. What do they understand about the intervention? If the patient is unfamiliar with an approach, the clinician can provide information about it and evidence for its effectiveness. If the patient has some awareness of an intervention but does not understand its applicability to their chronic pain, clinicians must clarify that connection.

However, awareness, even from a clinician’s recommendation, is not sufficient to assure the individual’s use of a particular nonpharmacologic intervention. If the patient’s experiences, expectations, preferences, or sense of self conflict with a particular approach, they may be unwilling to add a particular intervention to their armamentarium or keep it there. Importantly, individuals may not volunteer this information to their clinician [12,25,46]. It is therefore crucial for clinicians to understand patient’s feelings about an intervention (*appeal*) before prescribing it and in follow-up consultations.

Finally, lack of *access* to nonpharmacologic interventions takes on many forms, including financial, physical, cognitive and logistical. Many clinicians are familiar with financial and transportation barriers and the resources needed to mitigate these (e.g., discounted therapies, paratransit). However, our data suggest that clinicians may not anticipate all access barriers (e.g., cognitive), nor the barriers that arise over time (e.g., limits on discounted services, the inconveniences of relying on paratransit). Again, these barriers vary across patients and over time. Explicit discussions about access in each of these areas, and revisiting the topic, is crucial to ensuring that patients can access the nonpharmacologic approaches they need for effective pain management.

In the context of an ongoing therapeutic relationship, the initial assessment and reassessments of these three domains should help to promote patients' initiation of, ongoing use of, and appropriate modifications to, nonpharmacologic approaches [2]. The 3A model, comprehensive and clinically useful, has the potential to improve patient-clinician communication about pain management care—a key need that is articulated in the literature [2,3,10,37,43,46].

### Limitations

The interviews were not designed to systematically probe for barriers or facilitators to the use of all nonpharmacologic approaches. Though each participant volunteered information on this topic, the range and depth of responses varied. The degree to which the identified factors influenced patient use may be even more extensive than is represented here.

The sample of cognitively intact, mostly white, and mostly “young old” (ages 65 – 74) older adults on the West Coast may use nonpharmacologic therapies differently than in other populations or regions of the country. The specific barriers and facilitators to nonpharmacologic therapies may vary by e.g., region, city, or neighborhood [12]. Nevertheless, the 3A domains may be relevant to care regardless of population or geographic location, as our interpretation of findings from other studies (above) suggests [2–4,7,37,38,45].

Research is needed to see if the 3A model applies as well to other patient populations (e.g., younger, “older old,” rural, those with cognitive impairment) as well as to specific pain conditions (e.g., back pain, neuropathic pain). Future research needs to evaluate if employing the 3A model to assess and resolve barriers to patients' use of a nonpharmacologic approach leads to higher rates of adoption and ongoing use. To contextualize this work, research is also needed to evaluate the relationships between type and number of comorbid conditions and use of nonpharmacologic interventions.

### Conclusion

The 3A model is a simple but comprehensive model of barriers and facilitators that reflects the factors that hinder or support older adults' use of nonpharmacologic approaches for pain management. We believe these qualities may make it particularly useful to employ as a research framework and as a support for patient-clinician consultations about nonpharmacologic approaches to chronic pain management.

### Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

### Acknowledgments

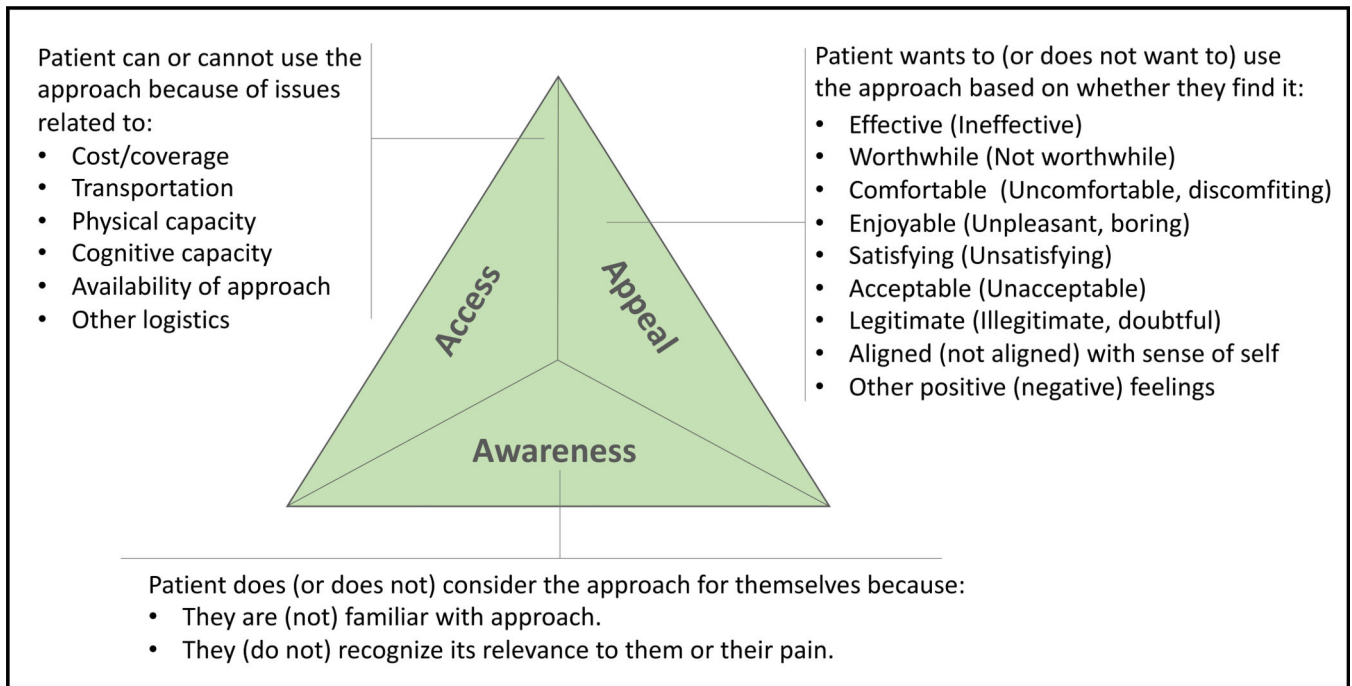
We are grateful to the study participants and to Krista Harrison, PhD, who helped with interview guide development and other foundational aspects of the study. This work was supported by the UCSF Claude D. Pepper Older Americans Independence Center Pilot Program funded by the National Institute on Aging (Grant number P30AG044281), and the Agency for Healthcare Research & Quality (AHRQ T32HS022241, Garrett). The authors have no conflicts of interest to declare.

## References

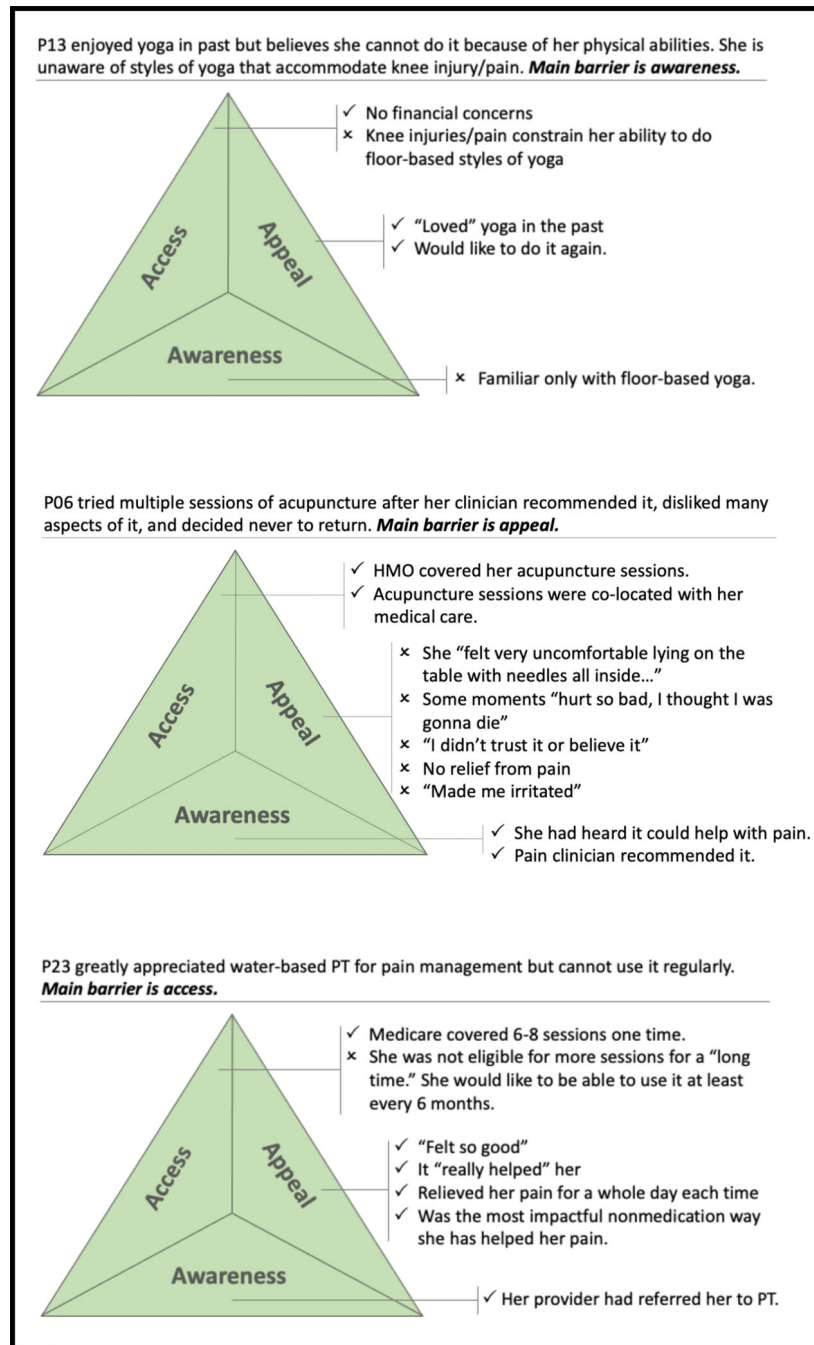
- [1]. Ajzen I The theory of planned behavior. *Organ Behav Hum Decis Process* 1991;50:179–211.
- [2]. Austrian JS, Kerns RD, Reid MC. Perceived Barriers to Trying Self-Management Approaches for Chronic Pain in Older Persons. *J Am Geriatr Soc* 2005;53:856–861. [PubMed: 15877564]
- [3]. Baert V, Gorus E, Mets T, Bautmans I. Motivators and Barriers for Physical Activity in Older Adults With Osteoporosis. *J Geriatr Phys Ther* 2015;38:105–114. [PubMed: 25594524]
- [4]. Bair MJ, Matthias MS, Nyland KA, Huffman MA, Stubbs DL, Kroenke K, Damush TM. Barriers and Facilitators to Chronic Pain Self-Management: A Qualitative Study of Primary Care Patients with Comorbid Musculoskeletal Pain and Depression. *Pain Med* 2009;10:1280–1290. [PubMed: 19818038]
- [5]. Barnes PM, Bloom B, Nahin RL. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007: (623942009–001). 2008. doi:10.1037/e623942009-001.
- [6]. Boeije H A Purposeful Approach to the Constant Comparative Method in the Analysis of Qualitative Interviews. *Qual Quant* 2002;36:391–409.
- [7]. Booker S, Herr K, Tripp-Reimer T. Patterns and Perceptions of Self-Management for Osteoarthritis Pain in African American Older Adults. *Pain Med* 2019;20:1489–1499. [PubMed: 30541043]
- [8]. Borson S, Scanlan J, Brush M, Vitaliano P, Dokmak A. The mini-cog: A cognitive “vital signs” measure for dementia screening in multi-lingual elderly. *Int J Geriatr Psychiatry* 2000;15:1021–1027. [PubMed: 11113982]
- [9]. Butchart A, Kerr EA, Heisler M, Piette JD, Krein SL. Experience and management of chronic pain among patients with other complex chronic conditions. *Clin J Pain* 2009;25:293–298. [PubMed: 19590477]
- [10]. Butow P, Sharpe L. The impact of communication on adherence in pain management. *PAIN@* 2013;154:S101–S107. [PubMed: 23928026]
- [11]. Campbell JL, Quincy C, Osserman J, Pedersen OK. Coding In-depth Semistructured Interviews: Problems of Unitization and Intercoder Reliability and Agreement. *Sociol Methods Res* 2013;42:294–320.
- [12]. Cheung CK, Wyman JF, Halcon LL. Use of Complementary and Alternative Therapies in Community-Dwelling Older Adults. *J Altern Complement Med* 2007;13:997–1006. [PubMed: 18047447]
- [13]. Clarke TC, Black LI, Stussman BJ, Barnes PM, Nahin RL. Trends in the Use of Complementary Health Approaches Among Adults: United States, 2002–2012. *Natl Health Stat Rep* 2015:1–16.
- [14]. Clarke TC, Nahin RL, Barnes PM. Use of complementary health approaches for musculoskeletal pain disorders among adults: United States, 2012. Hyattsville, MD: National Center for Health Statistics, 2016 1–12 pp.
- [15]. Cruz-Almeida Y, Rosso A, Marcum Z, Harris T, Newman AB, Nevitt M, Satterfield S, Yaffe K, Rosano C, Study for the HA. Associations of Musculoskeletal Pain With Mobility in Older Adults: Potential Cerebral Mechanisms. *J Gerontol Ser A* 2017;72:1270–1276.
- [16]. Dahlhamer J, Lucas J, Zelaya C, Nahin R, Mackey S, DeBar L, Kerns R, Korff MV, Porter L, Helmick C. Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults — United States, 2016. *Morb Mortal Wkly Rep* 2018;67:1001.
- [17]. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. *JAMA* 2016;315:1624. [PubMed: 26977696]
- [18]. Falci L, Shi Z, Greenlee H. Multiple Chronic Conditions and Use of Complementary and Alternative Medicine Among US Adults: Results From the 2012 National Health Interview Survey. *Prev Chronic Dis* 2016;13. doi:10.5888/pcd13.150501.
- [19]. Ghildayal N, Johnson PJ, Evans RL, Kreitzer MJ. Complementary and Alternative Medicine Use in the US Adult Low Back Pain Population: *Glob Adv Health Med* 2016. doi:10.7453/gahmj.2015.104.
- [20]. Gibson SJ, Lussier D. Prevalence and Relevance of Pain in Older Persons. *Pain Med* 2012;13:S23–S26. [PubMed: 22497744]

- [21]. Glanz K, Rimer BK, Viswanath K. Health Behavior: Theory, Research, and Practice. Corrected: San Francisco, CA: Jossey-Bass, 2015 p.
- [22]. Godin G, Kok G. The Theory of Planned Behavior: A Review of its Applications to Health-Related Behaviors. *Am J Health Promot* 1996;11:87–98. [PubMed: 10163601]
- [23]. Hill J, McVay JM, Walter-Ginzburg A, Mills CS, Lewis J, Lewis BE, Fillit H. Validation of a Brief Screen for Cognitive Impairment (BSCI) Administered by Telephone for Use in the Medicare Population. *Dis Manag* 2005;8:223–234. [PubMed: 16117717]
- [24]. Janz NK, Becker MH. The Health Belief Model: A Decade Later. *Health Educ Q* 1984;11:1–47. [PubMed: 6392204]
- [25]. Jou J, Johnson PJ. Nondisclosure of Complementary and Alternative Medicine Use to Primary Care Physicians: Findings From the 2012 National Health Interview Survey. 2016:2.
- [26]. Lalonde L, Choinière M, Martin É, Berbiche D, Perreault S, Lussier D. Costs of moderate to severe chronic pain in primary care patients – a study of the ACCORD Program. *J Pain Res* 2014;7:389–403. [PubMed: 25045282]
- [27]. Lansbury G Chronic pain management: a qualitative study of elderly people’s preferred coping strategies and barriers to management. *Disabil Rehabil* 2000;22:2–14. [PubMed: 10661753]
- [28]. Licciardone JC, Pandya V. Use of Complementary Health Approaches for Chronic Low-Back Pain: A Pain Research Registry-Based Study. *J Altern Complement Med* 2020;26:369–375. [PubMed: 32167785]
- [29]. Lohman MC, Whiteman KL, Greenberg RL, Bruce ML. Incorporating Persistent Pain in Phenotypic Frailty Measurement and Prediction of Adverse Health Outcomes. *J Gerontol Ser A* 2017;72:216–222.
- [30]. McLeroy KR, Bibeau D, Steckler A, Glanz K. An Ecological Perspective on Health Promotion Programs. *Health Educ Q* 1988;15:351–377. [PubMed: 3068205]
- [31]. Medicine I of. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. 2011 p. doi:10.17226/13172.
- [32]. Michie S, van Stralen MM, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implement Sci* 2011;6:42. [PubMed: 21513547]
- [33]. National Pain Strategy Task Force. National Pain Strategy: A Comprehensive Population Health-Level Strategy for Pain. Washington, DC: Interagency Pain Research Coordinating Committee (IPRCC), National Institutes of Health (NIH), 2015 p. Available: [https://iprcc.nih.gov/National\\_Pain\\_Strategy/NPS\\_Main.htm](https://iprcc.nih.gov/National_Pain_Strategy/NPS_Main.htm).
- [34]. NGA: National Governors Association. State Reporting: NGA Compact to Fight Opioid Addiction. Washington, DC: National Governors Association, 2019 p. Available: <https://www.nga.org/wp-content/uploads/2019/01/NGA-Opioid-Compact-State-Reporting-Chart-003.pdf>. Accessed 14 Oct 2019.
- [35]. Nicosia FM, Spar MJ, Stebbins M, Sudore RL, Ritchie CS, Lee KP, Rodondi K, Steinman MA. What Is a Medication-Related Problem? A Qualitative Study of Older Adults and Primary Care Clinicians. *J Gen Intern Med* 2020;35:724–731. [PubMed: 31677102]
- [36]. Ory MG, Ahn S, Jiang L, Smith ML, Ritter PL, Whitelaw N, Lorig K. Successes of a National Study of the Chronic Disease Self-Management Program: Meeting the Triple Aim of Health Care Reform. *Med Care* 2013;51:992–998. [PubMed: 24113813]
- [37]. Park J, Hirz CE, Manotas K, Hooyman N. Nonpharmacological pain management by ethnically diverse older adults with chronic pain: barriers and facilitators. *J Gerontol Soc Work* 2013;56:487–508. [PubMed: 23822640]
- [38]. Park J, Lavin R, Couturier B. Choice of nonpharmacological pain therapies by ethnically diverse older adults. *Pain Manag* 2014;4:389–406. [PubMed: 25494691]
- [39]. Peregoy JA, Clarke TC, Jones LI, Stussman BJ, Nahin RL. Regional Variation in Use of Complementary Health Approaches by U.S. Adults. *NCHS Data Brief* 2014:1–8.
- [40]. Qaseem A, Wilt TJ, McLean RM, Forcica MA. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med* 2017;166:514–530. [PubMed: 28192789]

- [41]. Rosenstock IM. Historical Origins of the Health Belief Model. *Health Educ Monogr* 1974;2:328–335.
- [42]. Starfield B Is Patient-Centered Care the Same As Person-Focused Care? *Perm J* 2011;15:63–69. [PubMed: 21841928]
- [43]. Teh CF, Karp JF, Kleinman A, Reynolds CF, Weiner DK, Cleary PD. Older People’s Experiences of Patient-Centered Treatment for Chronic Pain: A Qualitative Study. *Pain Med* 2009;10:521–530. [PubMed: 19207235]
- [44]. West R The P.R.I.M.E. Theory of Motivation as a Possible Foundation for the Treatment of Addiction. In: Henningfield JE, Santora PB, Bickel WK, editors. *Addiction Treatment: Science and Policy for the Twenty-first Century*. JHU Press, 2007. pp. 24–34.
- [45]. Wilcox S, Ananian CD, Abbott J, Vrazel J, Ramsey C, Sharpe PA, Brady T. Perceived exercise barriers, enablers, and benefits among exercising and nonexercising adults with arthritis: Results from a qualitative study. *Arthritis Care Res* 2006;55:616–627.
- [46]. Zhang Y, Peck K, Spalding M, Jones BG, Cook RL. Discrepancy between patients’ use of and health providers’ familiarity with CAM. *Patient Educ Couns* 2012;89:399–404. [PubMed: 22465482]



**Figure 1.**  
Conceptual “3A” model of barriers and facilitators to use of nonpharmacologic approaches for chronic pain management



**Figure 2.**  
 Overview of barriers and facilitators for three participants  
 "X" indicates barriers; "check" indicates facilitators.



**Table 1.**

Self-reported characteristics of participants: Older adults with chronic pain and multiple chronic conditions (n = 25)

	n	%
Gender		
Female	16	64
Age (years)		
66–75	20	80
76–85	3	12
86+	1	4
Race		
White	20	80
Black or African American	3	12
Asian	1	4
Unknown	1	4
Marital status		
Married	3	12
Widowed	5	20
Divorced	7	28
Never married	9	36
Other	1	4
Educational level		
Completed high school or GED	3	12
Some college	5	20
Bachelor's degree	7	28
Graduate degree	10	40
Has sufficient finances to meet daily needs	20	80
Currently has an opioid prescription for chronic pain	11	44
Using 1 nonpharmacologic approaches for chronic pain at time of interview	25	100
Ever used a nonpharmacologic approach for chronic pain	25	100
Regularly experiences pain	25	100
Has been bothered by pain on most days or nights for at least 6 months	25	100
Pain interferes with daily activities (e.g., playing with kids, walking, driving, household work)	25	100
Is bothered by pain every day (7 days/week)	24	96
Is bothered by pain most days (5–6 days/week)	25	100
Average pain intensity over the past 7 days		
Mild	6	24
Moderate	12	48
Severe	3	12
Very severe	2	8
	Mean	SD
Number of chronic conditions	6.1	2.0
Number of non-pharmacological approaches currently using	5.6	3.2

**Table 2.**

The ten most common nonpharmacologic approaches ever used by participants

Nonpharmacologic approach	Ever used		Using at time of interview	
	n	%	n	%
Acupuncture *	21	84	3	12
Physical therapy (PT) *	20	80	4	16
Ice * or heat	19	76	16	64
Exercise * (e.g., walking, swimming)	17	68	14	56
Massage *	15	60	6	24
Mindfulness, *breathing exercises, * meditation	12	48	7	28
Yoga *	11	44	7	28
Chiropractic *	11	44	1	4
Tai chi, *Qigong	10	40	2	8
Orthotics and physical supports	8	32	7	28

\* Research staff routinely asked about this approach by name.

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**Table 3.** AWARENESS-related barriers and facilitators to the use of nonpharmacologic approaches: Example quotations

<b>Barriers</b>	<b>Quotation</b>
Approach was never suggested	<p>INT: Okay. Are there any other forms, any other treatment modalities that you've used to —</p> <p>P02: Not that I'm aware of. They don't tell me of them, the doctors... I don't know of anything that might be helpful, like none of the doctors suggested that I do any other of those [approaches interviewer listed] that might be helpful. What are you thinking of? What do you think might be helpful?</p>
Does not perceive approach as relevant to their pain management	<p>INT: Recent studies have demonstrated the positive effects of pain treatment approaches called cognitive behavioral therapy or self-management. Some people call it acceptance therapy. Has your doctor ever recommended these treatments for you?</p> <p>P03: No, nobody has said, suggested therapy for pain management, no.</p> <p>P09: I've never had a health care provider suggest anything other than the nurse who suggested the acupuncture for the hot flashes. She was the only healthcare provider whose ever suggested anything outside of mainstream medical profession to me, ever, and I've been going to doctors since I was born. I was born sick.</p> <p>P11: [Breathing and meditation] may help with my well-being, or my overall feeling, my spiritual side, my aura, relaxing my brain, breathing. I mean, sure, there's all that sort of stuff... But, I don't see how any of those things could help me with my foot pain or my knee pain.</p>
Does not perceive approach as relevant to their pain management	<p>INT: Working with a psychologist or a therapist?</p> <p>P24: How come — I'm sick or just by myself.</p>
<b>FACILITATORS</b>	
Source: Pain management program	<p>INT: Acupuncture.</p> <p>P12: Oh, yes. That was also part of the chronic pain management program. We did acupuncture three times a week, and that's gonna be part of my plan now to add that again. It's not covered under my health insurance at Kaiser, and so, my finances are such that I had to pull back from working with the acupuncturist that I really like, but now I can do that again.</p>
Source: Clinician	<p>P10: My current orthopedic surgeon encouraged me several years ago to use walking sticks all the time. And I said, "Even when I'm just walking around the neighborhood?" And he said, "Especially when you're walking around the neighborhood"... And that helps a lot. So I am able still to do walking and hiking.</p> <p>P18: Dr. ___ believes in — he believed fully in alternate forms of medicine. He said it was silly for us not to pay full attention to a body of knowledge the rest of the world has been using. Try it. And he goes, "Do it with me right now." It was really sweet, and I did do that. It calmed me, and it made me just — if you're calm, you feel the tiniest bit of elation, and by that I don't mean joyfulness or happiness.</p>
Source: Personal network	<p>INT: Was a provider suggesting that you try [electrode therapy]? Was it a friend?</p> <p>P15: Friends. On that one a good friend was seeing this chiropractor and she was getting positive results from that intervention.</p>

BARRIERS	Quotation
Source: Reading/ research	<p>P20: When they told me I couldn't use aspirin, I used Tylenol. Tylenol does not get all the pain so that's when a friend of mine said, "Smoke a joint." I said, "That only makes me high." He said, "No, just smoke the joint." So I smoked the joint and I began to realize there was no pain.</p>
	<p>INT: What made you try [acupuncture]?                      P24: Why I try it? I found on the internet, online.</p>

Note. INT refers to study interviewer. P# refers to the participant study identification number.

**Table 4.** APPEAL-related barriers and facilitators to the use of nonpharmacologic approaches: Example quotations

BARRIERS	Quotation
Dislike/discomfort	P07: At one point when I was getting better, the [physical] therapist...kind of started stretching my body. And I would say, "It really hurts." Because, you know, pulling a leg, pulling here and there. And she said, "No, that's normal." You know, you have to go through pain in order to – you know, no pain no gain or whatever they say. But that pain was so severe that for two weeks I can hardly move because it's just too much stretching. So I said no, I'm not going back.
Does not fit with self-concept	INT: What about mindfulness or breathing exercises? Have you tried anything like that for your chronic pain? P11: No. I don't go much for those sorts of things... I've just never been able to be that kind of person to do that. I just don't seem to have what it takes to do meditation and to do breathing exercises, and to do yoga, and to do Zen stuff, and all that. Oomm, oomm. I just can't picture myself doing those things.
Doubts about effectiveness	P10: I guess I'm pretty skeptical about eastern medicine. And so again, [acupuncture] was not covered by insurance. You really have to believe in things if you're going to put out a hundred dollars a week of your own money for something. I'm just not willing to do that... If I did that for half a year, how much money would that be? \$2,600. I wasn't willing to invest that much money on an experiment.
Negative feelings, not acceptable	P17 about acupuncture: A couple things I don't like. I don't like needles. Get off my case, leave me alone, unless it's meant for me to live, okay? And, two, I do not like any pain coming to me. Like if anybody wanted to stick needles in me or whatever – no, you're not. Uh-uh. I wouldn't, I wouldn't. No. P22: I have never been a very physical person... So it's been a lifelong avoidance of movement and being touched. With yoga, the teacher touches you. And I don't do well with being touched... I'm sure that I've been recommended to do [other pain management approaches], because I remember bristling at certain things that would have to do with – like I know something would bristle at just the thought of being touched.
FACILITATORS	
Effectiveness	P14: Since I've had the really bad pain I've had physical therapy, chiropractic again which didn't really help, acupuncture which didn't really help, and now I'm doing the osteopath and PT which seems to be helping slightly. Not enough that I'm really happy about it, but it's worth continuing because I see a little improvement.
Effectiveness, enjoyment	P16: Yeah, so I imagine that [calcium supplements] too is helping my – lubricating the oil in my bones and joints... You know, I'm gonna keep doing that 'cause I want to, like I say, keep going.
Enjoyment, positive feelings	P23: I tried the pool, in the swimming pool at [site] and – 'cause it's located in the basement and that really helped me... That water was nice and warm, and oh, it felt so good to be in there for that hour... It relieved it the whole day.
Positive feelings, effectiveness	P06: Most of the time, when I go to my chiro – the one I have now, it's a really gentle woman, so I look forward to it, because she measures me, she talks to me, and then we get on the table, and she manipulates my body, and then she turns me over, and she cracks my neck, and she always does it very – she never hurts me, it's always really satisfying. And then, she pulls on my neck and massages all in here so it's like when you leave there, you feel like someone loved you back. That's my experience with my chiropractor right now. P01 told his neighbor: "One of my problems with PT is that there's no apparent improvement, but there really is, but it's just subtle." He said, "No, think of it the other way. Think of what it would be like if you didn't do the PT." Perfect. I couldn't agree more. I'd be in constant pain. So, PT is great.

Note. INT refers to study interviewer. P# refers to the participant study identification number.

**Table 5.** ACCESS-related barriers and facilitators to the use of nonpharmacologic approaches: Example quotations

<b>BARRIERS</b>	<b>Quotation</b>
Ability (cognitive)	P22: What I find difficult with physical therapy is that you go in and they try and teach you things. But for me, I can only absorb one thing... Physical therapy for me would work if they taught one thing and it was done every day for two weeks and the action was repeated, not one appointment a week and that every week they tried a new thing. My brain doesn't work that way.
Ability (motivation)	P21: They only allowed you a total of six visits of physical therapy. I always went to Davies. That's all they allow you. Without the coaching I just can't make myself do it alone.
Ability (pain)	P09: No I haven't done [running]. I used to, like I said, the things that I like to do that would have taken care of the pain: fibromyalgia and all these other things that they say, "Keep moving". How the hell am I keep moving when I'm in such dire straits? Just pain and agony. How the hell am I going to walk when my feet hurt every time I take a step? I don't want anybody tell me to walk, move. I can't move, dammit. I can't. It hurts. When something hurts it hurts. It's hard to do stuff.
Ability (physical)	INT: Yoga? Have you tried yoga? P24: I don't know how I can do yoga at my age... It's - I feel like yoga it's great idea, but first of all I'm so fat, obesity, and I don't know how to I might yoga like this.
Logistics	P05: I liked [acupuncture] very much, and I probably should go again. I'm sure it would help me... But it's just too much trouble for me to go there and ask my son or somebody to take me. And like I said, I don't wanna be a burden on my son. He takes me to enough things, like the doctor and the theater and all that, and I don't wanna ask him acupuncture. But it did help me.
Cost & logistics	P18: I would like to try [acupuncture], because it isn't invasive. It is non-toxic... [Dr: ___] goes, "There are a couple of places. They have sliding scale." And at my end of the scale, they didn't have any openings. I left my name, and "We'll get back to you when we can, but you have to know, we're got, like, 58 people ahead of you."
Cost/ coverage	P04: Physical therapy I was doing until my allotment ran out. INT: Would you go back to physical therapy if you had more bills paid for? P04: Absolutely, yeah.
<b>FACILITATORS</b>	
Ability (cognitive)	P22: For me, I can only absorb one thing... So my take on physical therapy now is I will go for the evaluation and one appointment. And I just work and focus on one thing. Otherwise I'm overwhelmed. And I draw pictures when I go to therapy. I have them. I draw pictures from what I've learned. And I show them the pictures. And they correct if I have the idea wrong. I need visual more than words.
Ability (physical)	P08: I can't walk or run very far, especially with my ankle and my knee and my hips. But I can swim. I found also because of my arms - I found that swimming, the front crawl or just swimming with your arms was tiring. So I bought a full facemask with a snorkel, and I could swim with my face in the water and breathe through the snorkel for the entire length of the pool. I could go back and forth maybe - I was up to 12 laps before I stopped. That was good.  (Regarding using techniques so she can walk to help her pain) P13: After my knee and my hip, I had to relearn how to walk, and so I worked with somebody who... it was really, really helpful. He worked with me a lot on what my pace was, on how I was holding my body... And so, I will forget that, and then if my ankle starts to hurt, I'll remember and I will take shorter steps, and I will lean forward, and I will make sure that my thighs relax with each step.
Cost, logistics	INT: What instigated you going to do exercise for chronic pain for your knees? P25: Well, as I said, I used to take a dance or stretch class every morning, so I was looking for something. And then when I moved to [East Bay city], I was looking for something free, 'cause I couldn't afford anything. And I discovered the senior center and the classes that they offer. So I started taking at least what I could find which fit to my schedule and that I could do that wasn't gonna be so hard that I couldn't do it.
Cost, coverage	P19: [Acupuncture] was very good. My daughter was paying for it, and it was \$30.00 a week. And she started to have to pay back her financial aid loan, so I stopped going. But I found a place that's only \$15.00 a week, so she said to go back to that, and she would start paying.

Note. INT refers to study interviewer. P# refers to the participant study identification number.

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**Table 6.**

Examples of a “conversational roadmap” for clinic non-pharmacologic consultations mapped onto the 3A model

3A Domain	Question example	Next steps
Awareness	Do you know that ___ is something that may be able to help with your pain?	If yes, move on. If no, give information about what it is and how it may help the person with their specific pain condition.
Appeal	Would you be willing to try ___? Can you think of anything you may not like about doing ___? Does anything make you think ___ would not help with your pain?	Acknowledge and troubleshoot identified barriers. Consider alternatives if barriers cannot be overcome.
Access	Can you think of anything that would make it difficult for you to... Acquire ___? Use ___? Get to ___?	Acknowledge and troubleshoot identified barriers. Consider alternatives if barriers cannot be overcome.

*Note.* These questions should be revisited over time and with the introduction of any new nonpharmacologic approaches.