Pain Medicine, 23(8), 2022, 1401–1408
https://doi.org/10.1093/pm/pnac055
Advance Access Publication Date: 6 April 2022
Original Research Article

PAIN & AGING SECTION

Which Pain Treatment Goals Are Important to Community-Dwelling Older Adults?

Clara Scher, MSc,* Charles R. Henderson, Jr., MS,† Karl Pillemer, PhD,‡ Patricia Kim, MSW,§ and M. C. Reid, MD, PhD§

*Rutgers School of Social Work, New Brunswick, New Jersey, USA; †Human Development and Psychology, Cornell University, Ithaca, New York, USA; ‡College of Human Ecology, Cornell University, Ithaca, New York, USA; and §Division of Geriatrics and Palliative Medicine, Weill Cornell Medical Center, New York, New York, USA

Correspondence to: M. C. Reid, MD, PhD, Division of Geriatrics & Palliative Medicine, Weill Cornell Medical Center, New York, NY 10065, USA. Tel: 212-746-1378; Fax: 212-746-4888; E-mail: mcr2004@med.cornell.edu.

Conflicts of interest: The authors have no conflicts of interest to declare.

Received on 8 February 2022; revised on 23 March 2022; Accepted on 26 March 2022

Abstract

Objective. In this cross-sectional study of 237 older adults, we ascertained the importance of seven pain treatment goals and identified factors associated with their perceived importance. **Methods.** Participants (mean age = 72 years) ranked each goal (e.g., pain reduction; finding a cure) on a 1 (not at all important) to 10 (extremely important) scale. We used general linear models to identify sociodemographic and pain factors independently associated with the perceived importance of each goal and repeated measures mixed models to examine their relative importance. **Results.** The goal with the lowest adjusted score was “minimize harmful side effects from pain medications” with a mean (standard error [SE]) of 6.75 (0.239), while the highest ranked goals, “finding a cure,” and “reducing my pain” had mean scores of 8.06 (0.237) and 7.89 (0.235), respectively. Pain reduction did not differ significantly from the average of the other 6 goals ($P = .072$) but was significantly different when compared with the goals of minimizing side effects ($P < .0001$) and finding a cause for the pain ($P = .047$), and different from the average of the five other goals excluding finding a cure ($P = .021$). We did not identify differences in the importance of the seven goals by gender or race/ethnicity. Age was inversely associated with the goals of minimizing harmful side effects and decreasing pain’s effects on everyday activities. Pain reduction was rated more important than all other goals but finding a cure. **Conclusions.** Future research is needed to establish the benefits of eliciting treatment goals when delivering pain care to older adults.

Key Words: Treatment Goals; Pain; Older adults

Introduction

The Institute of Medicine defines patient-centered care as a type of care that “is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions” [1]. Central tenets of patient-centered care include eliciting patients’ treatment preferences and goals, working to ensure that patients participate in treatment decisions, and developing customized care plans that reflect patients’ individual preferences and values [2]. There have been increasing calls for providers to adopt a patient-centered approach when providing pain care [3–5]. Preliminary results suggest there may be benefits associated with patient-centered pain care, but more research is needed to establish the value of this approach [6, 7].

The need to determine the benefits of patient-centered pain care among older adults is particularly great, because treatment trade-offs are often very difficult to navigate. Treatment-related risks increase as a function of age, particularly for pharmacologic and surgical interventions, and efficacy data underlying many customary treatments are often lacking [8]. However, little is known about older adults' pain management preferences and goals. Prior research employed either qualitative methods to ascertain patient preferences [6, 9] or a pilot study design to establish the feasibility of a goal-setting intervention for use by older adults with arthritis [7].

To the best of our knowledge, no study has employed quantitative methods to characterize the pain treatment goals of a racially and ethnically diverse sample of community-dwelling older adults. Accordingly, the current study sought to determine the relative importance of seven specific goals (e.g., pain reduction, minimize treatment side effects, find a cure for pain, determine a cause for the pain) among older adults experiencing pain. Given the attention paid to reducing pain intensity over the past two decades that includes efforts such as the "Pain as the Fifth Vital Sign" initiative [10, 11], prior research demonstrating that pain intensity reduction was rated as the most highly ranked goal in studies of non-older adults with pain [5, 12] and our own clinical experience delivering pain care to older adults, we hypothesized that participants would rate reducing pain intensity more highly than the other treatment goals.

As a secondary objective, we assessed for associations between participants' sociodemographic (e.g., age, gender) and pain status (e.g., intensity) and the perceived importance of the seven goals. An improved understanding of pain treatment goals among older adults and factors associated with them could inform the development of strategies to enhance delivery of patient-centered pain care.

Methods

Sites and Methods of Recruitment

Participants were recruited using multiple sites and approaches. We recruited participants from one ambulatory care practice serving older adults in New York City located in the borough of Manhattan. This practice provides care to over 5,000 older adults who are mostly of non-Hispanic origin. Trained co-investigators approached prospective participants prior to a scheduled medical appointment and described the study in detail before asking if they were interested in enrolling in the study. We also recruited participants from 6 senior centers located in New York City. Of the six centers, one serves a predominantly Hispanic clientele, one serves a diverse clientele with predominantly African Americans and Hispanics, another provides services mostly to African Americans, while the remaining three centers provide services to older adults from no predominant race/ethnicity group. Recruitment at the senior centers involved having the senior author (M.C.R.) give a talk on pain self-management to clients that typically lasted between 20 and 30 minutes. The talk did not include any discussion about the importance of identifying individual treatment goals. At the end of the talk, members of the audience were informed of the study; interested persons were then asked to answer the screening questions and those eligible were asked to complete the self-administered survey.

Additional methods of recruitment included posting flyers in Weill Cornell offices, social media posts in specialty Facebook groups (e.g., Practical Pain Management, Geriatric Pain, Surviving Chronic Pain), and direct contact through leveraging an existing list of individuals who agreed to be contacted for future studies on the topic of pain. Flyers and social media postings contained a link for participants to complete the survey. The number of participants recruited using each method is shown below (see *Sample Assembly*).

Eligibility Criteria

Prospective participants were first asked whether they had experienced any pain condition in the past 6 months that was bothersome or interfered with their enjoyment of life or interfered with their general activity level. Individuals who answered yes to one or more of these questions were then asked if they were between the ages of 55 and 89. The upper age restriction was required by the local institutional review board so that the study would be compliant with HIPAA privacy rules for deidentified data, since ages 90 and above are considered a HIPAA identifier. Participants who answered yes to both eligibility questions were invited to participate.

Survey Development and Administration

The survey tool was developed in collaboration with four experts in pain management and 4 in geriatric medicine, as well as a review of the literature [12, 13]. We piloted the survey on a convenience sample of older adults ($n = 10$). We purposefully sampled participants in the pilot to ensure diversity with respect to age, sex, and race/ethnicity. Based on the feedback received from pilot participants, we modified the wording of several questions to enhance the survey's readability.

Due to the anonymous nature of the study, consent language was included in the survey, and by completing the survey, subjects voluntarily agreed to participate. Surveys took approximately 10 minutes to complete and were available in either English or Spanish with bilingual research staff available to answer questions as needed. The Spanish survey was translated by the in-lingua metro New York language school, which provided an IRB approved affidavit of accuracy. Surveys were conducted from June 2019 to January 2020, and the Weill Cornell IRB approved the study. Individuals recruited from the senior centers were entered into a raffle to receive 10-dollar gift cards, and 10 cards were distributed at each center.

Data Collection

Participants rated their average pain severity level over the past week on a three-item response scale that ranged from "mild" to "severe." Participants were asked to average the pain they experienced across all sites. We did not ascertain the number or location of participants' pain sites. Participants were also asked if they discussed a pain problem with their provider in the past 12 months. If they answered yes, they were asked how many times they saw their healthcare provider over the past year for a pain concern. Response items for this question included "1 to 2," "3 to 4," or "5 or more visits."

We asked participants to rank the importance of all 7 goals using a 1–10 numeric rating scale, where 1 represented, "not at all important" and 10 represented "extremely important." The seven goals included: 1) "reduce my pain," 2) "decrease the effects of pain on my ability to do everyday activities," 3) "minimize harmful side effects from my pain medicines," 4) "decrease the effect of pain on my ability to enjoy life," 5) "determine what is causing my pain," 6) "find a cure for my pain," and 7) "help to decrease the effects of pain on my ability to relate, connect, or spend time with loved ones." We included an "other" category that allowed participants to write in additional treatment goals, as appropriate.

Finally, participants were asked to provide information on their sociodemographic status, including their age, gender, ethnicity, race, education, marital status, and living arrangement.

Sample Assembly

Of the 374 individuals screened, 265 (71%) were eligible to participate in the study, and of these 237 (89%) enrolled. Of the 109 ineligible individuals, 81 (59%) screened out because they did not experience a pain problem in the past 6 months, 13 (9%) did not meet the age criteria, while 15 (11%) failed to meet both the pain and age criterion. Of the 237 participants, 139 (59%) were enrolled from one of the senior centers, 40 (17%) were recruited by a research assistant at the ambulatory care practice or by phone from the agree-to-contact list of participants assembled from prior research studies, 31 (13%) were recruited by way of study flyers, while the remaining 27 (11%) were recruited via the social media posts.

Statistical Analysis

We first generated univariate statistics for all sociodemographic, clinical, and outcome (pain management goals) variables. The first set of primary models examined each of the seven goals in separate general linear models, including gender (male vs female), education (some college or less, college graduate, postgraduate degree), marital status (separated/widowed/divorced, single/never married, married or domestic partnership), living situation (alone, with spouse/partner, with others), and race/ethnicity (white, Hispanic or Latino, Black, Asian, multiple race, or other) as fixed classification factors and average pain level, age (in years), number of times visited health care provider for a pain problem in past 12 months as covariates (quantitative independent variables). The independent variables were chosen based on possible importance as determined by our prior research and the literature.

We also examined a mixed model with a fixed repeated measures factor (termed goals, with the seven goals as the seven levels of that factor) added to the above model, as well as individuals included as levels of a random classification factor. The score on the goals was the dependent variable. In this model, we specified a priori contrasts for pain reduction vs each of the other 6 goals and a further contrast, not independent of those six other comparisons, contrasting pain reduction with the 6 other goals jointly. We examined a *post hoc* contrast, closely related to the one just described, comparing pain reduction with the five other treatment goals exclusive finding a cure. In the repeated measures model, we also examined interactions of the goals factor with each of the other independent variables.

Results

Descriptive statistics for the sample appear in Table 1. Participants' mean age was 72.5 (SD = 9.4), and most were female (76%). Race/ethnicity status of the sample was 46% of the participants White, 27% Hispanic or Latino, 11% Black, 10% Asian, and 6% biracial or reported another race. A little less than half of the sample was either separated, widowed, or divorced, 37% were married, and 18% were single or never married. About 17% reported experiencing mild pain, 55% reported the presence of moderate pain, while 28% reported experiencing severe pain. Almost 90% of participants had discussed a pain problem with their healthcare provider in the past 12 months: 31% reported having visited their healthcare provider 1–2 times due to a pain problem, 35% visited 3–4 times, while the remaining 23% reported having visited their provider 5 or more times to discuss a pain issue. Two-thirds of the sample (n = 158) completed the interview in English, while the remaining 79 participants completed it in Spanish.

Associations between the sociodemographic and pain variables and each pain management goal appear in Table 2. We included an "other" goal category that participants could use to record and rank the importance of other management goals. Twenty participants (8.4%) described additional pain management goals, including to enhance their ability to exercise/walk (n = 8), decrease the effects of pain on sleep (n = 3), find new approaches to manage their pain better (n = 1), and alter negative cognitions, for example, adjust to the idea that the pain will always be present (n = 1).

Pain severity was the variable most consistently associated with the perceived importance of the treatment goals. Individuals with higher levels of pain ranked five of the seven goals as more important than those with

Table 1. Sample descriptive statistics (N = 237)

	Mean (SD)/Frequency
Age	72.48 (9.38)
Female	76.4%
Race and/or ethnicity	
White	45.8%
Hispanic or Latino	26.9%
Black	11.6%
Asian	9.7%
Multiple race/Other	6.0%
Education	
Some college or less	54.8%
College graduate	24.5%
Post graduate degree	20.7%
Marital status	
Separated/Widowed/Divorced	45.1%
Married or domestic partnership	36.9%
Single/Never married	18.0%
Living situation	
Alone	42.4%
With spouse/Partner	34.3%
With others	23.2%
Average pain level in the past week	
Mild	17.1%
Moderate	55.3%
Severe	27.6%
Discussed pain problem with provider <12 months	
Yes	89.2%
Number of visits to a health care provider for a pain problem in past 12 months	
None	10.9%
1–2	31.3%
3–4	35.2%
5 or more	22.6%

+Due to missing data, the total number of responses provided for each variable listed above is as follows: age = 216, gender = 220, race/ethnicity = 216, education = 208, marital status = 206.

Living situation = 198, average pain = 228, discussed pain problem with provider = 232, and number of times visited provider in the past 12 months due to a pain problem = 205.

lower levels of pain. A one-unit increase in pain level was associated with a 1.14 increase in the perceived importance of decreasing the effects of pain on one's ability to engage in everyday activities ($P < .0001$). This effect translates into a mean score of 9.6 on the 1-to-10 scale for this particular goal among participants with severe levels of pain vs a mean score of 7.4 for those who endorsed only mild pain.

While women consistently ranked each goal as more important than men (Table 2), these differences were not statistically significant. We did not identify any race/ethnicity differences across the seven goals. Education was associated with one treatment goal: individuals with higher levels of education ranked the goal of "seeking to reduce harmful side effects from pain medications" as less important than those with lower levels of education.

Table 3 shows the primary results. The adjusted means (and standard errors) are shown for all seven goals. The mean differences and p's for the contrasts of pain reduction with each of the six other goals along with the unadjusted means and standard deviations are also shown in Table 3. Pain reduction has a higher score than all other goals but finding a cure, with significant differences for side effects and finding a cause, providing at least partial support for our primary hypothesis. Table 3 further shows that the p for the contrast of pain reduction with the average of the six other goals approached ($P = .072$) but did not achieve significance, while the p for the contrast of pain reduction with all other goals exclusive of finding a cure was significant ($P = .021$).

There was a highly significant interaction of goals with age, although the significant regressions were negative for all goals. In contrast, there was no interaction of goals with race/ethnicity or other sociodemographics.

Discussion

To the best of our knowledge, this is the first study to identify the relative importance of seven pain treatment goals among community-dwelling older adults and to assess whether their importance varies as a function of salient demographic and pain variables. Our primary results indicate that pain reduction has a higher perceived importance score than all other goals but finding a cure, with significant differences with the goals of minimizing harmful side effects and finding a cause. Finding a cure encompasses pain reduction and, while not specified a priori, the contrast of pain reduction vs the other goals exclusive of finding a cure is significant, providing partial support for our primary hypothesis.

Our findings are consistent with the limited literature on pain treatment goals in aging adults. In one US-based study of primary care patients (mean age = 59 years) with chronic musculoskeletal pain receiving opioid therapy (N = 87), nearly half of the sample reported reducing pain intensity as their top goal, followed by establishing a diagnosis that was endorsed by 22% [12]. In a recently published study of treatment goals in individuals (mean age = 53 years) living with chronic pain in one of six European countries (N = 487), obtaining pain relief was the highest ranked goal (by 56% of participants) followed by improving sleep by 12% [5].

The most highly ranked treatment goal was finding a cure. Prior research has documented that this goal is commonly endorsed by many patients experiencing chronic pain [14]. Other research has documented that a goal of "cure" is associated with shorter pain durations as well as greater pain interference but negatively associated with depressive symptom severity [15]. One group of investigators has speculated that belief in a cure may have some adaptive significance, that is, hoping for a pain free existence may protect against psychological distress [15]. We speculated that hope for a cure would be associated with greater use of health services utilization. In a post hoc analysis, we examined whether scores on

Table 2. Associations between the sociodemographic and pain variables and the seven pain treatment goals

	Symptom Reduction				Disability Reduction						Etiology and Management			
	Reduce Pain		Harmful Side Effects		Everyday Activities		Enjoy Life		Connect with Loved Ones		Cause of Pain		Cure for Pain	
	Mean	*P*-value	Mean	*P*-value	Mean	*P*-value	Mean	*P*-value	Mean	*P*-value	Mean	*P*-value	Mean	*P*-value
Gender														
Female	8.64	0.079	7.86	.111	8.38	0.247	8.70	.078	8.45	.078	7.94	.291	8.78	.646
Male	7.98		6.94		7.91		7.93		7.67		7.39		8.60	
Race and/or ethnicity														
White	8.45	0.912	6.79	.368	8.25	0.820	8.35	.912	8.01	.912	7.86	.179	8.57	.789
Hispanic or Latino	8.53		7.00		7.83		8.02		8.93		8.71		9.02	
Black	8.39		8.29		8.44		8.15		7.92		7.00		8.68	
Asian	8.01		7.73		7.91		8.36		7.83		7.59		8.83	
Multiple Race/Other	8.17		7.20		8.29		8.67		7.61		7.14		8.33	
Education														
Some college or less	8.17	0.329	7.68	.042	8.12	0.950	8.12	.715	8.02	.715	7.93	.669	8.92	.516
College graduate	8.08		8.10		8.08		8.32		8.30		7.47		8.43	
Post graduate degree	8.67		6.42		8.23		8.49		7.86		7.57		8.71	
Marital status														
Separated/Widowed/Divorced	8.37	0.767	8.09	.415	8.43	0.699	8.34	.458	7.89	.458	7.92	.300	9.24	.019
Married	7.98		6.20		7.66		7.76		8.27		6.63		7.12	
Single/Never married	8.58		7.91		8.34		8.83		8.03		8.44		9.70	
Living situation														
Alone	8.09	0.110	6.58	.174	7.75	0.148	8.13	.177	8.13	.177	7.24	.145	7.88	.002
With spouse/Partner	9.24		9.11		9.20		9.18		8.56		8.94		10.64	
With others	7.60		6.51		7.49		7.62		7.49		6.80		7.55	
	Coefficient	*P*-value	Coefficient	*P*-value	Coefficient	*P*-value	Coefficient	*P*-value	Coefficient	*P*-value	Coefficient	*P*-value	Coefficient	*P*-value
Age	−0.03	.065	−0.07	.003	−0.04	0.036	−0.03	.084	−0.01	.747	−0.01	.666	0.02	.264
Average pain level	0.92	p<0.001	0.90	.025	1.14	p<0.001	0.62	0.036	0.88	.002	−0.11	.748	0.38	.148
Times visited health care provider for a pain problem in past 12 months	0.05	.766	0.03	.915	−0.05	.778	0.16	.419	0.06	.742	0.44	.056	0.11	.515

+The columns represent separate general linear models for each of the seven goals as dependent variables. The models include gender, education, marital status, living situation (alone, with spouse/partner, with others), and race/ethnicity as fixed classification factors and average pain level, age (in years), number of times visited health care provider for a pain problem in past 12 months as covariates (quantitative independent variables). Table entries are adjusted means for classification factors and regression coefficients for covariates; and P values in both cases.

Table 3. Perceived importance of the seven pain management goals

Specific Goals	Adjusted Mean (SE) Score	Mean Difference (SE), *P* (contrast with reduce pain)		Unadjusted Mean (SD) Score
Symptom reduction				
Reduce my pain	7.89 (0.235)			8.52 (2.08)
Minimize harmful side effects from my pain Medicines	6.75 (0.239)	−1.14 (0.245)	<.0001	7.32 (3.14)
Disability reduction				
Decrease effects of pain on one's ability to do everyday activities	7.64 (0.237)	−0.25 (0.244)	.300	8.27 (2.18)
Decrease effects of pain on one's ability to enjoy Life	7.72 (0.236)	−0.17 (0.242)	.486	8.42 (2.21)
Decrease effects of pain on one's ability to connect with loved ones	7.76 (0.237)	−0.13 (0.243)	.606	8.27 (2.36)
Etiology and Management				
Determine cause of pain	7.41 (0.235)	−0.48 (0.241)	.047	8.09 (2.64)
Find a cure for the pain	8.06 (0.237)	0.17 (0.242)	.482	8.61 (2.15)
Average of all goals but reduce pain	7.55 (0.268)	−.33. (0.185)	.072	
Average of all goals but reduce pain and find cure for pain	7.45 (0.275)	−0.43 (0.187)	.021	

The means in column 1 are adjusted for gender (male vs female), education (some college or less, college graduate, postgraduate degree), marital status (separated/widowed/divorced, single/never married, married or domestic partnership), living situation (alone, with spouse/partner, with others), and race/ethnicity (White, Hispanic or Latino, Black, Asian, multiple race or other) as fixed classification factors and average pain level, age (in years), number of times visited health care provider for a pain problem in past 12 months as covariates (quantitative independent variables) in a mixed model with goals as a classification factor (a repeated measure) and individuals as levels of a random classification factor. *A priori* contrasts for pain reduction vs each of the other six goals and further contrasts, not independent of the other six, contrasting pain reduction with the other goals jointly and with other goals (excluding "finding a cure") are shown in the third column. Scores for each treatment goal range potentially from 1 (not at all important) to 10 (extremely important). SE is standard error. The means shown in column 3 are unadjusted difference scores. Due to missing data, the total number of responses provided for each variable listed above is as follows: reduce my pain = 232, minimize harmful side effects from pain medicines = 224, decrease effects of pain on one's ability to do everyday activities = 226, decrease effects of pain on one's ability to enjoy life = 234, decrease effects of pain on one's ability to connect with loved ones = 229, determine cause of pain = 234, and find a cure for pain = 231.

this goal were associated with number of provider visits over the past 12 months but did not find an association. Clearly more research is needed to determine the impact of endorsing a hope for cure in older patients with pain.

Another key finding of this study is that participants rated all seven goals as relatively important. This finding provides strong support for routine assessment of patients' treatment goals prior to the start of any pain treatment. Knowing whether patients' goals are focused on a single goal (e.g., pain reduction) or on multiple goals (e.g., pain reduction, functional enhancement, finding a cure) could help to inform tailored treatment plans and may have benefits in terms of what constitutes treatment success. For example, a treatment plan that determined etiology and sought to enhance patient functioning, but did little to decrease pain level, may be considered a success in patients who rated all 3 of these goals as important. Routinely inquiring about older patients' pain treatment goals is likely to have several additional salutary effects in practice. First, treatment engagement and adherence are likely to be enhanced when patients' goals form the basis of the management plan [16–19]. For example, patients who report "minimizing harmful side effects from pain medications" may be more amenable to trying nonpharmacologic approaches to manage their pain, while patients who endorse "decreasing the effects of pain on everyday activities" as an important goal may be more likely to accept referral for rehabilitative-based therapies (e.g., physical therapy) to ensure independence in activities of daily living. Second, eliciting treatment goals can help to identify patients with unrealistic goals (e.g., finding a cure in a patient who has lived with pain for many years) that can be potentially addressed through education. Prior research has demonstrated that many patients with pain maintain unrealistic expectations about the degree of pain relief that can be achieved with customary treatments [18]. Establishing realistic expectations prior to treatment initiation could also help to enhance treatment engagement and adherence [20]. Finally, almost one in 10 participants listed additional treatment goals to include functional enhancement, decreasing the effects of pain on sleep, and addressing negative pain-related cognitions. These data support efforts to employ comprehensive goal assessment tools or use open-ended questions in practice.

An increasing level of pain was associated with greater perceived importance of several goals, whereby those with greater levels of pain ranked achieving pain reduction, being able to perform activities of daily living and being able to connect/spend time with loved ones as more important than participants with milder levels of pain. These findings are consistent with prior research demonstrating marked increases in pain interference as a function of pain intensity [21, 22].

Taken together, our results raise several important questions that should be the focus of future research.

First, how often do providers ask patients with chronic pain about their treatment goals and then formulate treatment plans based on patients' goals? Second, various applications, for example, PainTracker [23] and PainAPP [24] and new approaches, for example, Patient Priorities Care [25] have been developed to promote patient-centered care. To what extent can these new tools and approaches facilitate elicitation of treatment goals among patients who experience chronic pain and contribute to improved outcomes? Third, prior research indicates that older adults with chronic pain vary in their willingness to engage in patient-centered pain care [6]. Although older adults did not have difficulty rating the importance of several treatment goals in a research setting, it remains unclear whether older patients are comfortable articulating their treatment goals in a clinical setting and working jointly with providers to establish care plans to achieve those goals. Most important, research is needed to determine the value of eliciting older patients' treatment goals who experience chronic pain where outcomes include treatment engagement/adherence, quality of life, satisfaction with care, reduction in the level of pain-related interference, and enhanced functional status.

Although our study has several strengths including a high response rate, few missing data, and diversity with respect to race/ethnicity, it also has limitations in the areas of study measures, methods of recruitment, and the final sample assembled for study. Limitations regarding our study measures include the fact that our measure of pain consisted of single item that assessed participants' pain severity level. It is possible that we could have found associations between other dimensions of the pain experience (e.g., level of disability, pain self-efficacy, pain-related affect, level of catastrophizing) and study outcomes. The responses for the pain severity measure ranged from mild to severe and did not provide an option for no pain. Furthermore, we did not assess participants' cognitive status. It is possible given the mean age of the sample that some individuals were experiencing cognitive difficulties at the time of the study that could have affected their ability to recall information accurately, including the number of visits made to their healthcare provider over the past year. Finally, we restricted the number of treatment goals participants were asked to rate in an effort to decrease subject burden and minimize the possibility of missing data. Important treatment goals such as improving sleep, sex life, and emotional well-being were not assessed [26].

Providing a pain talk prior to enrolling and surveying a participant could have biased our results, since only participants recruited from senior centers (n = 139) received these talks. It is possible that we could have "primed" these participants to reflect on their goals and treatments as a consequence of attending the talk.

Possible limitations of our assembled sample include the fact most participants were in the "young-old" category. Only one in four participants was 80 years of age or older. It is possible that persons in their eighth decade of life and beyond have different pain treatment goals. In addition, our sample was composed of individuals who experienced a pain problem in the 6 months prior to the study; we did not inquire about the duration of pain individuals experienced. It is possible that treatment goals vary as a function of pain duration. We restricted the number of treatment goals participants were asked to rate in an effort to decrease subject burden and minimize the possibility of missing data. Important treatment goals such as improving sleep, sex life, and emotional well-being were not assessed [26].

Conclusion

In conclusion, our study indicates that older adults view pain reduction as one of the two most highly rated goals besides finding a cure for the pain, which itself encompasses pain reduction. Our results add to a small but growing literature on treatment goals in older individuals with pain and underscore the need for future research to establish the benefits of eliciting older patients' goals as part of patient-centered pain care initiatives in this growing population of patients.

Acknowledgments

Dr. Reid is supported by the followings grants from the National Institute on Aging (grants K24AGO53462, P30AG022845). Mr. Henderson and Dr. Pillemer are also supported by grant P30AG022845 from the National Institute on Aging.

References

1. Institute of Medicine Committee on Quality of Health Care in America. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academies Press (US); 2001.
2. Bokhour BG, Fix GM, Mueller NM, et al. How can healthcare organizations implement patient-centered care? Examining a large-scale cultural transformation. BMC Health Services Research 2018;18(1):168.
3. Umberger W. Complementary and integrative approaches to pain and patient preference. Pain Manag Nurs 2019;20(1):1–2.
4. Haverfield MC, Giannitrapani K, Timko C, Lorenz K. Patient-centered pain management communication from the patient perspective. J Gen Intern Med 2018;33(8):1374–80.
5. Goudman L, De Smedt A, Linderoth B, et al. Identifying goals in patients with chronic pain: A European survey. Eur J Pain 2021;25(9):1959–70.
6. Teh CF, Karp JF, Kleinman A, Reynolds Iii CF, Weiner DK, Cleary PD. Older people's experiences of patient-centered treatment for chronic pain: A qualitative study. Pain Med 2009;10(3):521–30.
7. Davis GC, White TL. A goal attainment pain management program for older adults with arthritis. Pain Manag Nurs 2008;9(4):171–9.
8. Reid MC, Eccleston C, Pillemer K. Management of chronic pain in older adults. BMJ 2015;350:h532.

9. Sale JE, Gignac M, Hawker G. How "bad" does the pain have to be? A qualitative study examining adherence to pain medication in older adults with osteoarthritis. Arthritis Rheum 2006;55 (2):272–8.
10. Tompkins DA, Hobelmann JG, Compton P. Providing chronic pain management in the "Fifth Vital Sign" Era: Historical and treatment perspectives on a modern-day medical dilemma. Drug Alcohol Depend 2017;173:S11–21.
11. Scher C, Meador L, Van Cleave JH, Reid MC. Moving beyond pain as the fifth vital sign and patient satisfaction scores to improve pain care in the 21st century. Pain Manag Nurs 2018;19 (2):125–9.
12. Henry SG, Bell RA, Fenton JJ, Kravitz RL. Goals of chronic pain management: Do patients and primary care physicians agree and does it matter? Clin J Pain 2017;33(11):955–61.
13. Shalev A, Henderson CR Jr., Gutierrez I, Mullen E, Reid MC. The prevalence and potential role of pain beliefs when managing later-life pain. Clin J Pain 2021;37(4):251–8.
14. Bhana N, Thompson L, Alchin J, Thompson B. Patient expectations for chronic pain management. J Prim Health Care 2015;7 (2):130–6.
15. Sánchez-Rodríguez E, Aragonès E, Jensen MP, et al. The role of pain-related cognitions in the relationship between pain severity, depression, and pain interference in a sample of primary care patients with both chronic pain and depression. Pain Med 2020; 21(10):2200–11.
16. Wilson SR, Strub P, Buist AS, et al. Shared treatment decision making improves adherence and outcomes in poorly controlled asthma. Am J Respir Crit Care Med 2010;181 (6):566–77.
17. Nickel WK, Weinberger SE, Guze PA et al.; Patient Partnership in Healthcare Committee of the American College of Physicians. Principles for patient and family partnership in care: An American College of Physicians position paper. Ann Intern Med 2018;169(11):796–9.
18. O'Brien EM, Staud RM, Hassinger AD, et al. Patient-centered perspective on treatment outcomes in chronic pain. Pain Med 2010;11(1):6–15.
19. Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. J Fam Pract 2000;49(9):796–804.
20. Robinson JH, Callister LC, Berry JA, Dearing KA. Patient-centered care and adherence: Definitions and applications to improve outcomes. J Am Acad Nurse Pract 2008;20(12):600–7.
21. Naylor JC, Wagner HR, Johnston C, et al.; VA Mid-Atlantic MIRECC Women Veterans Work Group. Pain intensity and pain interference in male and female Iraq/Afghanistan-era veterans. Women's Health Issues 2019;29(Suppl 1):S24–31.
22. Reid MC, Guo Z, Towle VR, Kerns RD, Concato J. Pain-related disability among older male veterans receiving primary care. J Gerontol A Biol Sci Med Sci 2002;57(11):M727–32.
23. Langford DJ, Tauben DJ, Sturgeon JA, Godfrey DS, Sullivan MD, Doorenbos AZ. Treat the patient, not the pain: Using a multidimensional assessment tool to facilitate patient-centered chronic pain care. J Gen Intern Med 2018;33(8):1235–8.
24. Col N, Hull S, Springmann V, et al. Improving patient-provider communication about chronic pain: Development and feasibility testing of a shared decision-making tool. BMC Med Inform Decis Mak 2020;20(1):267.
25. Blaum CS, Rosen J, Naik AD, et al. Feasibility of implementing patient priorities care for older adults with multiple chronic conditions. J Am Geriatr Soc 2018;66(10):2009–16.
26. Turk DC, Dworkin RH, Revicki D, et al. Identifying important outcome domains for chronic pain clinical trials: An IMMPACT survey of people with pain. Pain 2008;137(2):276–85.