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Older Adults' Pain Descriptions

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Abstract

The purpose of this study was to describe the types of pain information described by older adults with chronic osteoarthritis pain. Pain descriptions were obtained from older adults' who participated in a posttest only double blind study testing how the phrasing of healthcare practitioners' pain questions affected the amount of communicated pain information. The 207 community dwelling older adults were randomized to respond to either the open-ended or closed-ended pain question. They viewed and orally responded to a computer displayed videotape of a practitioner asking them the respective pain question. All then viewed and responded to the general follow up question, "What else can you tell me?" and lastly, "What else can you tell me about your pain, aches, soreness or discomfort?" Audio-taped responses were transcribed and content analyzed by trained, independent raters using 16 a priori criteria from the American Pain Society (2002) *Guidelines for the Management of Pain in Osteoarthritis, Rheumatoid Arthritis, and Juvenile Chronic Arthritis*. Older adults described important but limited types of information primarily about pain location, timing, and intensity. Pain treatment information was elicited after repeated questioning. Therefore, practitioners need to follow up older adults' initial pain descriptions with pain questions that promote a more complete pain management discussion. Routine use of a multidimensional pain assessment instrument that measures information such as functional interference, current pain treatments, treatment effects, and side effects would be one way of insuring a more complete pain management discussion with older adults.

Keywords

pain; communication; geriatrics; arthritis

Osteoarthritis afflicts 16 to 23 million Americans (American Pain Society, 2002), and is associated with debilitating pain (Caporali et al., 2005). Older adults are particularly vulnerable to osteoarthritis pain, and may be unaware of efficacious treatment options (Hill & Bird, 2007). To prescribe effective treatment practitioners need to first elicit from their patients important information for osteoarthritis pain management. Practice guidelines for management of osteoarthritis pain detail pain assessment and treatment options (American Pain Society), but provide little guidance about how to effectively elicit pertinent pain information. Pain communication strategies need to be identified and tested so that improved pain outcomes can result.

Communication content or techniques have been tested in only a few pain studies. Patients with medically unexplained symptoms treated by practitioners trained to use communication techniques which encourage their patients to talk openly reported significantly reduced pain (Aiarzaguena et al., 2007). While the findings support the significant effect of practitioners' use of communication techniques for reducing patient pain, the 20-hour practitioner training

program developed and used during the study might be too costly to widely implement in practice. A study to test the effect of a brief practitioner pain management and communication training program on osteoarthritis patient pain outcomes found a statistically significant, but clinically insignificant pain reduction effect (Chassany et al., 2006). The clinically insignificant pain outcomes might be a result of the brief training, the lack of training in specific strategies for encouraging patient communication, or additional unidentified factors. Clear, cost effective ways to increase pain communication between practitioners and their patients are needed. The purpose of this study was to identify the types of pain information described by older adults with osteoarthritis pain in order to inform practitioners of both commonly described and omitted pain content important for pain management discussions.

Methods

Design

This study describes older adults' pain descriptions from a randomized posttest only double blind study testing how the phrasing of health care practitioners' pain questions affected the amount of important pain information provided by older adults. The current study reports the pain descriptions from two of the three groups, those asked open-ended and those asked closed-ended pain question. The third group was not included in the current study because older adults in the third group responded to the question, "How are you feeling?" a question more likely to elicit a socially desirable response than pain information.

Sample

A total of 207 community-dwelling older adults were included in the current study with 111 participants in the open-ended pain question group, and 96 participants in the closed-ended pain question group. Eligible participants were required to self report having osteoarthritis pain; be at least 60 years of age; and speak, read, and understand English. People with malignant pain were excluded.

Procedure

The study was approved by the University Institutional Review Board with data collection taking place between July 2006 and July 2007 at 15 elderly housing sites. Participants were randomized to condition by the SuperLab 3.0 software program (SuperLab Pro, 2006) to view and orally respond to three computer-generated video clips of a health care practitioner asking questions about their pain. The SuperLab software, commonly used in psychology experiments, was programmed to randomly present the first question, followed by the same second and third question across all participants. To increase experimental realism, older adults were given the cover story that the study was testing use of a computer in the physician's waiting room to gather health information from older adults waiting for their health care visit. Use of a cover story, a technique used to decrease response bias, encourages participants to respond as they would in the clinical setting. The initial question differed among the two groups. The open-ended group responded to the open-ended pain question, "Tell me about your pain, aches, soreness, or discomfort," and the closed-ended group responded to the closed-ended pain question, "What would you rate your pain, aches, soreness, or discomfort on a 0 to 10 scale with 0, no pain, and 10 the worst pain possible?" The remaining two questions were identical across the two groups, "What else can you tell me?" and lastly, "What else can you tell me about your pain, aches, soreness or discomfort?" All responses were audio-taped, transcribed, checked for accuracy, and content analyzed by two trained independent raters, blind to participant condition.

Pain characteristics were measured with the Brief Pain Inventory Short Form (BPI-SF; Cleeland & Ryan, 1994) to obtain a measure of baseline pain data. The BPI-SF consists of 15

questions that measure pain location, intensity, pain treatment, and the effect of pain on mood and every day activities. An anterior and posterior body diagram allows the respondent to mark with an "X" the painful body areas. Respondents rate their worst, least, and average pain in the past 24 hours using a 0 – 10 numeric rating scale with 0, no pain, and 10, pain as bad as you can imagine. They also rate their pain right now. An open-ended question measures treatments or medications they are receiving for their pain. Respondents then rate the percent of relief they received from the treatments in the past 24 hours. The seven remaining questions evaluate how pain has interfered with activities including general activity, mood, walking, work, relations with others, sleep and enjoyment of life. Anchors for the 0 – 10 scale consist of 0, does not interfere and 10, completely interferes. Concurrent validity has been established by comparing the BPI-SF to the Short Form McGill Pain Questionnaire (SF-MPQ) with a group of surgical patients, resulting in a correlation of .61, $p < .001$ (Zalon, 1999). Reliability has been established with Cronbach's alpha for the overall BPI-SF ranging from .77 to .87 (McDonald, Thomas, Livingston, & Severson, 2005; Zalon). For the current study the overall BPI-SF reliability was .87. Participants were randomly assigned to respond to the BPI-SF either before or after responding to the practitioner questions to control for a potential confounding effect of measuring baseline pain. Figure 1 depicts participant flow through the study.

Content Analysis

The American Pain Society (2002) *Guidelines for the Management of Pain in Osteoarthritis, Rheumatoid Arthritis, and Juvenile Chronic Arthritis* was used as a priori criteria to identify 16 important osteoarthritis pain management content areas. The 16 osteoarthritis pain management content areas were type of pain (nociceptive/neuropathic), quality of pain, source, location, intensity, duration/time course, pain affect, effect on personal lifestyle, functional status, current pain treatments, use of glucosamine, effectiveness of prescribed treatments, prescription analgesic side effects, weight management to ideal body weight, exercise regimen or physical therapy and/or occupational therapy, and indications for surgery. Recent evidence indicates that glucosamine does not significantly reduce osteoarthritis pain (Clegg et al., 2006; Towheed et al., 2005). Glucosamine was retained in the content analyses to examine whether glucosamine use had been altered by the participant.

The raters used Krippendorff's (2004) method components to content analyze the older adults' responses to the practitioner's open-ended pain question. The unit of analysis was any word or phrase that described one of the 16 criteria. One point was given for each word or phrase, with repeated use of the same word or phrase counted only once across the three questions. Each distinctly different word or phrase about the same criterion was credited one point. Inter-rater reliability for the content analysis was adequate. The coded data were entered into an SPSS database and frequencies were obtained.

Results

Descriptive information about the sample has been reported elsewhere (McDonald, Shea, Rose & Fedo, in press). Table 1 contains the average pain intensity, current pain intensity, number of pain sites, and number of pain treatments in response to the Brief-Pain Inventory Short Form (BPI-SF) for the full sample, open-ended, and closed-ended group. No significant group differences resulted from t-tests comparing the open-ended and closed-ended groups on average pain intensity, current pain intensity, number of pain sites, and number of pain treatments.

Table 2 contains frequencies of the pain content described by the older adults, with the open-ended group responding to the open-ended pain question and closed-ended group responding to the closed-ended pain question. The three most frequent responses to the initial open-ended pain question asked of the open-ended group included 81 (73.0%) responding about pain

location, 45 (40.5%) about pain timing, and 31 (27.9%) about pain intensity. A total of 88 (79.3%) older adults in the open-ended group described multiple content areas in response to the initial open-ended question. An example of multiple pain content responses from the open-ended group included the following.

Case 145: "I do have a little bit of discomfort. I take medication for it so it helps a lot. Umm, the most uncomfortable time is at night. My shoulder hurts a lot. Sometimes I use a heating pad or put a rub on it. Other than that nothing much else helps, except my medication."

The most frequent response to the closed-ended pain question about pain intensity asked of the closed-ended group included 87 (90.6%) responding about pain intensity, with few other content areas described. Closed-ended group participants generally responded to the request to rate their pain with a numeric response. Ten (10.4%) participants responded with multiple pain content. An example of the multiple pain content responses included the following.

Case #227: "I have pain in my neck, in my back, in my knee sometime, and ankle. What percent, I think from 1 to 10 the worst pain in my neck when I eat or write something. I need (a) support collar on the neck. And if I go a lot I should need the little cream. Medicine, I try to use less, but (if) it is very painful I use the Celebrex, I use the Tylenol and it helps. Sometimes my knees are swollen. I need... they should be warm. I use something to cover my knee."

Table 3 contains the pain content frequencies described by both groups of older adults in response to the second general follow up question, "What else can you tell me?" The three most frequent responses to the general follow up question asked of the open-ended group included 26 (23.4%) responding about pain location, 22 (19.8%) about timing, and 20 (18.0%) about pain treatment. Seventy-five (67.6%) older adults responded with one or more items of additional pain information, including 51 (45.9%) responding with two or more items of pain information. An example of responses from the open-ended group included the following.

Case 116 "...the pain which I think is coming from my hip is, it's more like a, uh very fast, quick pain, whereas other times when I have pains in my legs it is like a gnawing, squeezing pain that just stays and stays. I find that if I just apply heat or keep it warm it helps tremendously."

The three most frequent responses to the general follow up question asked of the closed-ended group included 43 (44.8%) responding about pain location, 33 (34.4%) about pain intensity, and 32 (33.3%) about pain timing. Eighty-one (84.4%) older adults responded with one or more pain information items, including 62 (64.6%) responding with two or more items of pain information. An example of responses from the closed-ended group included the following.

Case 26 "...I have it in my right hip too and it really hurts me real bad. Sometimes it hurts real, real bad so I just put a heating pad on it and sort of move my hip around and that sort of helps a little."

Table 4 contains the pain content frequencies described by older adults in the open-ended group responding to the repeated open-ended pain question, "What else can you tell me about your pain, aches, soreness or discomfort?" The three most frequent responses included 32 (28.8%) responding about timing, 32 (28.8%) about pain treatment, and 24 (21.6%) about pain intensity. A total of 88 (79.3%) responded with one or more items of pain information, including 66 (59.5%) older adults responding with two or more items of pain information. An example of responses included the following.

Case 20 "I take Tylenol for my pain and when I take Tylenol the pain, ah go away and I can walk. I can do anything, everything ... with the Tylenol. ...I take another tablet for the pain, too. Ah, the name of the tablet is uh Tramadol, and I feel better."

Discussion

Older adults with chronic osteoarthritis pain most frequently described information about pain location, timing, and intensity in response to the open-ended pain question. Pain draws significant attention to the location of the pain sensation (Van Damme, Crombez & Lorenz, 2007). Pain location is less abstract than many other pain characteristics such as pain quality, and requires less expertise to describe than information such as medication side effects. Pain timing was described by nearly half of the older adults, and might draw similar attention, particularly if the timing interferes with vital activities such as sleeping or walking; or is associated with factors such as the weather. Pain intensity was the third most commonly described pain information. Older adults might use increased pain intensity to identify when they require medical intervention (Gerdle, Bjork, Henriksson & Bengtsson, 2004) or to gauge when they need to decrease pain exacerbating activity. Pain intensity is one of the most frequently assessed pain characteristic (Krebs, Carey & Weinberger, 2007), providing older adults with increased exposure to pain intensity communication. Pain location, timing, and intensity provide helpful assessment data to practitioners managing osteoarthritis pain.

The majority of the older adults in the open-ended group responded with multiple pain information. Description of multiple pain information offers practitioners further data upon which to base pain treatment and suggests more specific areas for the pain management discussion.

Older adults responding to the closed-ended pain question, “What would you rate your pain, aches, soreness, or discomfort on a 0 to 10 scale with 0, no pain, and 10 the worst pain possible?” responded with pain intensity information, but little additional pain information. Thirteen percent responded with no pain intensity information, indicating that some older adults have difficulty responding to an orally administered numeric pain intensity scale (Hadjistavropoulos et al., 2007). Use of a closed-ended pain communication technique elicits helpful but limited pain information.

When given the opportunity to respond to the general follow-up question after the pain specific question, the majority from both groups described important additional pain information. Pain information about location continued to be the most frequently described information from both groups. One-third of the older adults in the closed-ended group also responded with pain intensity and pain timing information, similar to the pattern of pain information that older adults described in response to the open-ended pain specific question. Information about timing, treatments, interference with daily function and lifestyle were described by older adults in the open-ended group.

Older adults in the open-ended group provided substantial additional items of pain information in response to the repeated open-ended pain question. Nearly one-third of the older adults described information about pain timing and treatments. Pain treatment information (e.g. medication, heat application) provides an opportunity to discuss treatment safety and effectiveness. Practitioners who ask repeated open-ended pain questions are likely to elicit additional helpful pain information from the patient.

Several important areas of pain content were infrequently described by the older adults. Content areas such as treatment side effects, exercise, and weight reduction were particularly absent in the pain responses. Older adults might not associate exercise or weight reduction as ways to reduce their osteoarthritis pain. Some older adults might not need to reduce weight and others might be unable to exercise. Older adults who are over weight or who might benefit from exercise should be given the opportunity to discuss weight reduction and exercise as part of their pain management. More than half of overweight or obese women initiated the topic of weight reduction with their practitioner (Pollak et al., 2007) suggesting that patients often are

interested in discussing ways to reduce their weight. The American Geriatric Society Panel on Exercise and Osteoarthritis provides helpful practice guidelines for prescribing exercise in the older adult population (American Geriatric Society Panel on Exercise and Osteoarthritis, 2001). Side effects from Acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs) have been well documented (Van Ganse, Jones, Moore, LaParc & Wall, 2005), but older adults might not recognize side effects.

Responses obtained from the BPI-SF indicated that older adults in both groups had a mean of greater than 4 pain locations, and a mean of 3 pain treatments. Responses to the practitioner questions elicited less pain location and treatment information. The BPI-SF was orally administered, and contains specific questions about pain sites and treatments. Person to person interviewing and/or specific pain questions about pain location and treatments might explain why greater pain information was obtained in response to the BPI-SF.

Study limitations are important to consider. The current study provides insight into how older adults respond under controlled experimental conditions. Older adults responded to a computer displayed video of a health care practitioner to increase treatment fidelity. While the cover story provided increased realism, person to person responses might differ. Older adults were also allowed as much time as needed to respond to the questions. Unlimited response time is unlikely in the clinical setting. Discussion between patients and practitioners is often dominated by practitioners (Marvel, Epstein, Flowers & Beckman, 1999), further limiting the response time available for patients to describe their pain. Results might not be generalized to older adults with other painful conditions or young or middle-aged adults. Future studies are needed to test pain communication responses with different patient populations.

Results indicate that older adults with osteoarthritis pain have important pain information to describe. Older adults more readily describe information about pain location, timing, and intensity, but rarely describe information about treatment side effects, exercise or weight reduction. Open-ended pain questions elicit a greater range of pain information than closed ended pain questions. Older adults generally continue to provide distinctive pain information when asked follow up questions, and provide even more pain information when directly asked about specific content areas through use of a pain measure such as the BPI-SF.

Practitioners who ask repeated open-ended pain questions are likely to elicit additional helpful pain information from the patient. Practitioners might need to ask specific follow up questions about important pain information such as pain treatment and medication side effects when such information is not included in older adults' responses. Routine use of a brief multidimensional pain measure such as the Brief Pain Inventory Short Form (Cleeland & Ryan, 1994), available on World Wide Web sites such as the National Pain Education Council pain web site at <http://www.npecweb.org/clinicaltoolbox.asp?id=26&selMenu=15,0>, could assist practitioners to obtain vital additional pain information.

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Table 1

Sample Pain Characteristics

Variable	Full Sample	Open-ended Group	Closed-ended Group
	N = 207	n = 111	n = 96
	M (SD)	M (SD)	M (SD)
Average Pain Intensity *	5.5 (2.16)	5.5 (2.03)	5.5 (2.30)
Current Pain Intensity *	3.1 (2.95)	3.0 (2.91)	3.3 (3.00)
Pain Sites	4.7 (1.97)	4.6 (1.93)	4.9 (2.03)
Pain Treatments	3.0 (1.51)	2.9 (1.32)	3.1 (1.70)

* Pain intensity was measured with the Brief Pain Inventory Short Form 0 to 10 scale with 0, no pain, and 10, pain as bad as you can imagine.

Table 2

Frequency of Pain Content in Response to the Open-ended or Closed-ended Pain Question

Pain Content	Open-ended Group	Closed-ended Group 2
	n = 111	n = 96
	Frequency (n)	Frequency (n)
Type	5 (5)	0 (0)
Quality	5 (5)	1 (1)
Source	25 (18)	3 (2)
Location	196 (81)	24 (11)
Intensity	39 (31)	88 (87)
Time	58 (45)	2 (2)
Affect	2 (2)	0 (0)
Lifestyle	2 (2)	0 (0)
Functional	20 (16)	1 (1)
Treatment	29 (21)	9 (3)
Glucosamine	0 (0)	0 (0)
Effective	11 (10)	2 (2)
Side Effects	0 (0)	0 (0)
Weight Reduction	0 (0)	0 (0)
Exercise	5 (5)	0 (0)
Surgery	1 (1)	0 (0)
Total Responses	398 (n = 103)	130 (n = 94)

Table 3

Frequency of Pain Content in Response to the General Follow Up Question

Pain Content	Open-ended Group	Closed-ended Group
	n = 111	n = 96
	Frequency (n)	Frequency (n)
Type	1 (1)	1 (1)
Quality	9 (5)	1 (1)
Source	11 (9)	9 (8)
Location	37 (26)	97 (43)
Intensity	15 (12)	36 (33)
Time	25 (22)	35 (32)
Affect	8 (8)	4 (4)
Lifestyle	21 (17)	0 (0)
Functional	21 (16)	18 (15)
Treatment	32 (20)	19 (16)
Glucosamine	0 (0)	0 (0)
Effective	9 (8)	11 (10)
Side Effects	0 (0)	0 (0)
Weight Reduction	0 (0)	0 (0)
Exercise	4 (4)	1 (1)
Surgery	1 (1)	0 (0)
Total Responses	194 (n = 75)	232 (n = 81)

Table 4

Frequency of Pain Content in Response to the Follow Up Open-ended Pain Question

Pain Content	Open-ended Group (n = 111)
	Frequency (n)
Type	2 (2)
Quality	6 (6)
Source	25 (18)
Location	35 (21)
Intensity	25 (24)
Time	34 (32)
Affect	5 (4)
Lifestyle	14 (12)
Functional	23 (18)
Treatment	41 (32)
Glucosamine	0 (0)
Effective	18 (17)
Side Effects	0 (0)
Weight Reduction	0 (0)
Exercise	1 (1)
Surgery	0 (0)
Total Responses	229 (88)