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Factors Associated With Increased Pain Communication by Older Adults

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Abstract

The purpose of this secondary analysis study was to identify factors associated with increased pain communication by older adults. Data were obtained from 312 older adults with osteoarthritis pain. Content analysis was conducted using criteria from the American Pain Society's "Guidelines for the Management of Pain in Osteoarthritis, Rheumatoid Arthritis, and Juvenile Chronic Arthritis" to identify important pain management information described by the older adults in response to general questions about their pain. Gender was the only factor associated with increased pain communication from the predictor variables of age, education, gender, ethnicity, race, marital status, pain intensity, functional pain interference, treatment from a practitioner for arthritis and for pain, and pain relief. The lack of association between pain communication and factors such as pain intensity suggests that practitioners should routinely elicit specific pain information from older adults who have a history of chronic painful conditions such as osteoarthritis.

Keywords

pain; communication; older adult; osteoarthritis; gender

Difficulty communicating with health care practitioners remains a significant barrier for patients seeking pain relief (Shi, Langer, Cohen, & Cleeland, 2007) and may partially explain why pain continues to be frequently undiagnosed and mismanaged (Limaye & Katz, 2006; Wiltshire, Cronin, Sarto, & Brown, 2006). A knowledge gap exists related to factors associated with increased communication about pain between practitioners and their patients. Identification of factors related to increased pain communication could assist practitioners to elicit important pain information and guide interventions to increase patient communication of clinically important pain information.

Factors Associated With Communicating Pain

Although patient demographic factors such as age, gender, and race are not amenable to change, the relationship of these factors to increased pain communication is important to clarify so that practitioners can target communication support for vulnerable patients. Some older adults have been found to try to conceal their pain (Garro, 1990), suggesting that older adults might be one group vulnerable to reduced pain communication.

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Gender may also influence pain communication between patients and health care practitioners. Descriptions, explanations, and consequences of pain provided by women have been shown to be dependent on social interactions, including those with physicians (Johansson, Hamberg, Westman, & Lindgren, 1999). Further supporting the possible influences of gender on perceptions of pain from both the individual's and the health care practitioner's perspectives, women with chronic pain were found to struggle for credibility, self-esteem, and dignity as patients and as women. They referred to "whispering voices" related to medical accounts of hysteria in women, rejecting the stereotype or cultural perception that women who complain are either seeking attention or seen as crazy, languid, hypochondriacal, or weak by health care professionals (Werner, Isaksen, & Malterud, 2003).

Ethnic group and race have been known to influence the reporting of pain, the perception of the pain experience, the way pain is expressed by patients, and whether a patient experiencing pain seeks medical treatment (Anderson et al., 2000; Davidhizar & Bartlett, 2000; Nguyen, Ugarte, Fuller, Haas, & Portenoy, 2005; Todd, Deaton, D'Adamo, & Goe, 2000). A survey conducted with college students determined that ethnic groups differ significantly in their pain-reducing behaviors, with Whites more likely to use self-help remedies than Hispanics and Blacks, and Blacks are more likely to use spiritual methods to reduce their pain (Hastie, Riley, & Fillingim, 2005).

Racial and ethnic differences influence access to care for chronic pain management. Younger single Hispanic men with lower income levels and limited education are less likely than Whites or Blacks to seek care from their primary care practitioner regarding their pain (Nguyen et al., 2005). White patients identified fewer barriers to pain management, more easily found access to providers able to treat their pain, and engaged in a higher degree of self-help behaviors to treat their pain. In contrast, Blacks waited longer after the onset of pain to seek treatment and used prayer or spiritual coping strategies to treat their pain. Hispanics were less likely to seek treatment or use prescribed medications to reduce pain because of financial concerns, fears of developing addiction and adverse medication effects, and their belief that physicians would not understand their pain (Nguyen et al., 2005). Both Blacks and Hispanics with cancer pain expressed strong personal beliefs in stoicism, resulting in a reluctance to communicate their complaints of pain (Anderson et al., 2000). In addition, some cultural groups will not ask for assistance or medication from health care professionals because it can be considered disrespectful or may take the health care professional away from more important duties (Giger & Davidhizar, 2004). Whites are more likely to prefer initial care by a specialist than Blacks, Latinos, and Asians (Wong, Asch, Andersen, Hays, & Shapiro, 2004). Studies exploring pain assessment and management of pain in minority elderly populations determined that Hispanic patients were less knowledgeable about their pain and pain treatments than non-Hispanic Whites, and Hispanics and Blacks scored lower than non-Hispanic White study participants regarding understanding and coping with chronic pain (Juarez, Ferrell, & Borneman, 1998; Limaye & Katz, 2006). Researchers have also proposed that minority patients may hide their pain or withhold communication if they do not feel they have a good relationship with their physicians (Juarez et al., 1998; Limaye & Katz, 2006).

Factors such as age, gender, race, and ethnicity in addition to information concerning pain intensity, functional interference from pain, and use of practitioners to help manage arthritis and pain may affect the amount of pain information shared by patients. Knowledge of the variables that positively influence the amount of pain information shared by patients may enhance practitioners' ability to appropriately assess and treat a patients' pain. Awareness of the variables that inhibit the sharing of pain information would enable health care practitioners to use more effective pain communication strategies that encourage patients who may be reticent to share important information regarding their pain.

Purpose

This descriptive secondary data analysis study explored demographic, pain characteristics, and pain treatment factors associated with increased communication about pain by older adults with osteoarthritis pain. The following research question was addressed: “To what extent are age, gender, race, ethnicity, education level, marital status, pain intensity, functional interference from pain, perceived percentage of pain relief from treatments and use of a practitioner (advanced practice nurse or physician) for pain and or arthritis management associated with increased communication of pain information by older adults?”

Method

Design

This study was a descriptive secondary data analysis using data from a posttest-only double-blind experiment (McDonald, Shea, Rose, & Fedo, 2009). During the double-blind experiment, community-dwelling older adults with osteoarthritis pain orally responded to one of three videotaped practitioner pain questions (phrased as open-ended, closed-ended, or social desirability biased), a general follow-up question, and a final open-ended pain question. The experiment was conducted in a structured nonclinical setting, either in the participants’ private apartments or in segregated areas of community rooms located in independent-living housing sites in one state in the northeastern region of the United States.

Sample

A power analysis was conducted for logistic regression using the PASS software program to ascertain whether a sufficient sample size was available for the secondary analysis. A sample size of at least 295 participants was needed for logistic regression analysis with a .05 level of significance, .80 power, and small estimated effect size. Inclusion criteria consisted of adults age 60 or older who spoke, read, and understood English and who self-identified with osteoarthritis pain. Exclusion criterion consisted of the presence of self-identified malignant pain.

Measures

Brief Pain Inventory–Short Form (BPI-SF)—The BPI-SF consists of 15 questions that measure assessment of current pain status, location, intensity, treatments, perceived relief from treatments and functional interference from pain with general activities, mood, walking ability, work, relations with other people, sleep, and overall enjoyment of life. The BPI-SF has been highly correlated with the Short Form McGill Pain Questionnaire (Zalon, 1999).

Demographic measure—The demographic data collection measure, developed for the original study, gathered information on the participants’ age, gender, race, ethnicity, marital status, educational level, and provision of care by a health care practitioner for participants’ osteoarthritis and or osteoarthritis pain.

Procedure

Institutional review board approval was obtained for the original and current study. In the original study (McDonald et al., 2009) older adults were instructed to respond to questions posed by a videotaped practitioner as if they were responding to their own practitioner. Older adults were first asked one of three questions, “Tell me about your pain, aches, soreness, or discomfort,” “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*?” or “How are you feeling?” All responded to the same second question “What else can you tell me?” Finally, all

responded to the same third question, “What else can you tell me about your pain, aches, soreness, or discomfort?” Responses were audiotaped and transcribed.

Content analysis was conducted to identify important pain communication by older adults in response to the three questions posed by the videotaped practitioner. The content analysis was conducted by two trained, independent raters who used 16 a priori criteria from the American Pain Society’s (2002) “Guidelines for the Management of Pain in Osteoarthritis, Rheumatoid Arthritis, and Juvenile Chronic Arthritis.” The 16 a priori osteoarthritis pain management criteria included type, quality, source, location(s); intensity, duration/time course, pain affect, effect on personal lifestyle, functional status, current pain treatments, use of glucosamine sulfate, effectiveness of prescribed treatments, analgesic side effects (prescription and nonprescription), weight management to ideal body weight, exercise regimen (including prescribed physical therapy and/or occupational therapy), and indications for surgery. Each distinct word or phrase describing one of the 16 pain communication criteria was identified. Words or phrases repeating pain content by the participant were not included to avoid inflating the amount of older adults’ pain communication. Specific pain content communicated by the older adults has been previously reported, with pain location, timing, and intensity the most frequently reported pain information (McDonald, 2009). A total pain communication variable was computed by summing all of the unique pain information communicated by each older adult across the 16 important pain content areas. For example, an older adult who communicated “I have a lot of pain in my knee so I do not walk much anymore” would be content analyzed to have one pain intensity, one pain location, and one functional status of important pain information and a total pain communication score of three items of important pain information.

Analysis

Descriptive analysis including frequencies, means, and standard deviations were conducted to describe the sample. The pain communication variable was not normally distributed and efforts to transform the variable were unsuccessful. Logistic regression was therefore selected because logistic regression does not require a normally distributed dependent variable. A total of 49% of the older adults described a total of five items or less of important pain information. A dichotomous variable was computed for pain communication with low pain communication coded as 0, representing zero to five items of communicated pain information, and high pain communication coded as 1, representing six or more items of communicated pain information. Exploratory logistic regression was conducted with the high/low pain communication as the dependent variable. Independent variables were entered into a three-step regression model to predict increased pain communication by older adults: Step 1 (demographics)—race, gender, age, education, marital status, and ethnicity; Step 2 (intensity and functional status)—mean pain intensity and mean functional interference; and Step 3 (treatments and effect)—pain relief percentage, practitioner treatment for arthritis, and practitioner treatment for pain. The third and final step depicted the contribution from each variable toward explaining low versus high pain communication.

Results

The sample consisted of 312 community-dwelling older adults diagnosed with osteoarthritis and experiencing chronic pain. The mean age for the participants was 75.6 ($SD = 8.65$) years, with 72% of the participants being female, unmarried (248, 80%), and educated at a level of high school or above (198, 64%). Of the unmarried participants, 45% (139) were widowed. A total of 281 (90%) were non-Hispanic, including 213 (69%) White and 74 (24%) Black Americans. A total of 229 (74%) participants indicated they were under the care of a practitioner for their arthritis and 200 (65%) were under the care of a practitioner for their pain. Older adults reported an $M = 4.6$ ($SD = 1.90$) pain intensity and $M = 4.2$ (SD

= 2.47) functional interference from the pain on a 0 to 10 scale, with 10 indicating increased pain. Older adults reported on average a 67% reduction in their pain ($SD = 28.89$) with the pain treatments that they were currently using. A more detailed sample description can be found in McDonald et al. (2009).

The final logistic regression model resulted in a Cox and Snell $R^2 = .09$, and a Nagelkerke $R^2 = .11$, with female gender (OR = 1.97, 95% CI = 1.11 to 3.48), $p = .02$, the only significant variable associated with communicating more information about pain. Table 1 contains the odds ratios, confidence intervals, and levels of significance for each predictor variable in the final step of the logistic regression with all variables entered.

Cronbach's alpha for the overall BPI-SF has been reported as .77 to .87 (McDonald, Thomas, Livingston, & Severson, 2005; Zalon, 1999), and in the current study it was .87.

Discussion

Gender alone modestly predicted increased pain communication. Women might experience more intense osteoarthritis pain than men (Weaver et al., 2009) and therefore be more motivated to discuss their pain with their practitioner. Women with chronic cancer pain believed that men's cancer pain was addressed more seriously than women's pain (Im et al., 2009) suggesting that women might feel the need to communicate about their pain more in order to secure comparable pain treatment. Results from the current study appear to contradict findings from a descriptive study where men included more factual content about their osteoarthritis pain, describing three words related to pain location, one word related to pain intensity, and one word related to exercise. Women in the study described only one item of important pain information, related to activities of daily living (Gooberman-Hill, French, Dieppe, & Hawker, 2009). The conflicting findings might be related to the examination of only frequently occurring words important to pain information. Important pain information might have been infrequently described, and thus not included in the results. Although female gender was modestly associated with increased pain communication in the current study, research is needed to establish further evidence of this relationship and possibly uncover causal explanations. Meanwhile, practitioners should continue to encourage older adults with osteoarthritis pain to talk about their pain, irrespective of gender.

Health care practitioners might assume that patients experiencing higher pain intensity, increased functional impairment, and decreased pain relief from treatments would communicate more information about their pain, but this was not supported in the current study. Older adults with osteoarthritis pain have low self-efficacy for communicating their pain to their partner (Porter, Keefe, Wellington, & deWilliams, 2008) and might have low self-efficacy for communicating with their practitioner. Low expectations for obtaining pain relief (Jairath & Kowal, 1999; Zalon, 1997) have been identified as a contributing factor to inadequate pain relief. Older adults might assume that their practitioner implicitly knows best how to manage their pain (Zalon, 1997) and therefore diminish the importance of communicating to practitioners about their pain. Older adults with low self-efficacy for communicating their pain to the partner reported higher pain levels, greater physical disability, and greater psychological distress (Porter et al., 2008), suggesting ineffective pain management. Older adults with a history of a painful condition such as osteoarthritis should be routinely asked about their pain. Practitioners should not assume that absence of pain communication equates to absence of pain in older adults.

The absence of relationship between the remaining demographic variables of age, race, ethnicity, education level, or marital status with pain communication reinforces the need to

routinely ask about pain, irrespective of demographic factors. A lack of relationship for ethnicity, age, and education was also found in a study of general patient communication with practitioners (Heritage, Robinson, Elliott, Beckett, & Wilkes, 2007). Difficulty communicating about pain might transcend demographic differences. Older adults in the current study were recruited from low-income housing sites, which might have reduced educational differences. Future studies should examine the association between education level and pain communication with more educationally diverse samples.

The absence of relationship between pain communication and being under the care of an arthritis specialist and/or a pain management specialist might be due to measurement error. Older adults might have considered their primary care practitioner as their arthritis specialist or pain management specialist.

Study limitations warrant cautious use of the findings. Nonsignificant results do not provide evidence of the absence of a relationship. Older adults might have been more uncomfortable responding to the videotaped practitioner questions. Findings from the larger study reduce this concern by documenting a mean of 4.5 ($SD = 3.10$) to 7.4 ($SD = 3.76$) items of important pain information described across the three groups of older adults in response to the videotaped practitioner questions (McDonald et al., 2009). Unmeasured factors such as depressive symptoms, a common comorbid condition with pain (Bair, Robinson, Katon, & Kroenke, 2003), might be associated with reduced ability to communicate pain information and should be included in future studies (Dworkin et al., 2008).

Results from this secondary data analysis suggest areas for future research. Additional research exploring predictor variables for increased pain communication should be conducted using patients experiencing pain because of other conditions (e.g., cancer pain, surgical pain, and acute pain). It would also be helpful to examine predictor variables using other age groups (e.g., young children, teenagers, and the young and middle adult patient populations), populations with English as a second language, non-English-speaking populations, and more culturally diverse populations (e.g., focused recruitment of Hispanic, American Indian/Alaska Native, Asian and Native Hawaiian participants). Clear identification of additional factors that affect pain communication would assist further in promoting increased pain communication between practitioners and older adults.

The paucity of factors associated with increased communication of important pain information by older adults suggests that practitioners should encourage all older adult patients with a history of osteoarthritis or other painful condition to talk about their pain management. Increased pain communication affords practitioners additional patient-specific data on which to base pain relieving treatment.

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Table 1Logistic Regression Model Predicting Pain Communication ($N = 312$)

Variables	Odds Ratio	95% Confidence Interval	<i>p</i>
Age	0.98	0.95-1.01	.20
Education	1.18	0.99-1.40	.07
Gender	1.97	1.11-3.48	.02
Ethnicity	0.64	0.25-1.64	.35
Race	1.69	0.98-2.93	.06
Marital status	1.74	0.89-3.43	.11
Pain intensity	0.99	0.84-1.16	.87
Functional pain interference	1.11	0.97-1.26	.14
Arthritis practitioner	0.46	0.18-1.17	.10
Pain practitioner	1.50	0.65-3.45	.34
Percentage of pain relief	1.00	0.99-1.01	.53