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Where have all the patients gone? Profile of U.S. adults who report doctor-diagnosed arthritis but are not being treated

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Abstract

Background: Patients only benefit from clinical management of arthritis if they are under the care of a physician or other health professional.

Objectives: We profiled adults who reported doctor-diagnosed arthritis who are not currently being treated for it to understand better who they are.

Methods: Individuals with no current treatment (NCT) were identified by “no” to “Are you currently being treated by a doctor or other health professional for arthritis or joint symptoms?” Demographics, current symptoms, physical functioning, arthritis limitations and interference in life activities, and level of agreement with treatment and attitude statements were assessed in this cross-sectional, descriptive study of non-institutionalized U.S. adults 45 years with self-reported, doctor-diagnosed arthritis (n=1,793).

Results: More than half of the study population, 52%, reported NCT (n=920). Of those with NCT, 27% reported fair/poor health, 40% reported being limited by their arthritis, 51% had daily arthritis pain, 59% reported 2 symptomatic joints, and 19% reported the lowest third of physical functioning. Despite no current treatment, 83% with NCT agreed or strongly agreed with the importance of seeing a doctor for diagnosis and treatment.

Conclusions: Greater than half of those 45 years old with arthritis were not currently being treated for it, substantial proportions of whom experienced severe symptoms and poor physical function and may benefit from clinical management and guidance, complemented by community-delivered public health interventions (self-management education, physical activity). Further research to understand the reasons for NCT may identify promising intervention points to address missed treatment opportunities and improve quality-of-life and functioning.

Keywords

arthritis; clinical management; self-management; function; public health

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INTRODUCTION

Arthritis is treatable. For example, osteoarthritis [1-7], rheumatoid arthritis [8-10], gout [11, 12], ankylosing spondylitis [13], and lupus [14, 15] all have a strong evidence base for clinical, pharmacologic, non-pharmacologic, and/or surgical treatments to ameliorate pain and functional loss. Several organizations, including the American College of Rheumatology [1, 8, 11, 12, 14, 15], the European League Against Rheumatism [3, 9, 13], and the Osteoarthritis Research Society International [2, 5, 6], endorse treatment guidelines to aid clinicians in providing the best, most current, and most appropriate care for their patients with arthritis. Of course, patients only reap the benefits from advances in the clinical treatment and management of rheumatic conditions if they are under the care of a health professional. The objective of this study was to profile adults who report doctor-diagnosed arthritis who do not receive current treatment for their arthritis in an attempt to understand better who they are.

MATERIALS AND METHODS

Data source.

Data were obtained from the Arthritis Conditions Health Effects Survey (ACHES), a cross-sectional random-digit-dialed national telephone survey designed to be representative of civilian, non-institutionalized U.S. adults ages 45 years with self-reported, doctor-diagnosed arthritis and/or chronic joint symptoms and specifically to provide population-level estimates of knowledge, attitudes, physical and psychosocial effects, as well as behaviors, treatment, and management of arthritis and chronic joint symptoms. ACHES was funded and designed by the Centers for Disease Control and Prevention (CDC) and fielded through contractual agreement by Battelle Center for Public Health Research and Evaluation in 2005-2006; details are reported elsewhere [16]. Briefly, phone numbers associated with U.S. census blocks were divided into 7 strata and sorted by census division and by urban or rural county classification in each stratum. Within each of the 7 strata, numbers were selected with equal probability, with oversampling in strata with high proportions of Hispanics and non-Hispanic blacks. Efforts to maximize response rates included letters mailed to addresses associated with potential residential phone numbers at least two weeks prior to the first call. The study protocol required a multi-stage screening process to identify all age-eligible (> 45 years) and arthritis-eligible participants at each residential telephone number.

Report of doctor-diagnosed arthritis (n=1,793), hereafter “arthritis,” was defined by a “yes” response to “Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?” Respondents with arthritis were then interviewed by trained interviewers in English (or Spanish, as needed) using a standardized consent statement and questionnaire. The Council of American Survey Research Organizations (CASRO) [17] household-level response and completion rates among eligible households (> 1 age-eligible resident) were 51% and 86%, respectively [16]. Of the first household resident identified as both age- and arthritis-diagnosis-eligible, the ACHES response and completion rates were 31% and 75%. Response and completion rates among subsequent eligible household respondents were 16% and 80%, respectively

[16]. The CDC Human Subjects Review Board reviewed and approved the study. A major strength of ACHES is that, despite the dates of collection, it is entirely focused on arthritis and joint pain and covers a full spectrum of arthritis-related impacts and behaviors unavailable in other data sources, including seeing a doctor specifically for arthritis. ACHES also includes unique measures, e.g., attitude regarding treatment and confidence in managing arthritis symptoms, that are particularly relevant to our research question. Additional detail regarding the ACHES survey, questionnaire, and specifications have been previously provided [16, 18, 19].

Definition of variables.

Arthritis treatment status.—No current treatment (NCT) respondents were identified by a “no” response to “Are you currently being treated by a doctor or other health professional for arthritis or joint symptoms?”

Arthritis symptoms, symptom severity, and symptom management.— Respondents were asked separately if they had joint pain, joint stiffness, or arthritis-related fatigue in the past seven days and to rate severity on a scale from 0 (no symptom) to 10 (symptom as bad as it can be). A severe symptom was defined as a rating of ≥ 7 [20, 21]. Participants reported the number of days in the past seven on which they “had pain or aching from arthritis or joint symptoms.” Daily pain, i.e., pain on seven of the past seven days, was created as a dichotomous variable to capture the extreme of constant pain. Next, respondents were asked to list the joints in which they experienced pain, aching, or stiffness in the past 30 days (excluding back and neck), and a 3-level variable was created to reflect the number of symptomatic joints in the past 30 days (0, 1, 2). Respondents reported “yes” or “no” to whether or not they had “taken any prescription or non-prescription medication for these joint symptoms in the past 7 days.” Respondents were asked if they had “**ever** seen a doctor or other health professional” *specifically for their joint symptoms* and “**ever** taken a course or class” to learn how to manage problems related to arthritis.

Demographics.—Demographic variables examined were: age, sex, race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, and non-Hispanic other), education (less than high school, high school graduate or some college, and college graduate or higher), and employment status (employed; unable to work/disabled; other [students, homemakers, retirees, and those out of work]).

Self-Rated health and physical function.—Self-rated overall health status was defined using an ordinal Likert scale (excellent, very good, good, fair, or poor); response categories were collapsed into three levels 1) excellent/very good, 2) good, 3) fair/poor. Physical functioning was measured using the ten-item Short Form-36v2 Physical Functioning Scale and transformed to a 0-100 scale using standard methods [22]. A three-level physical function variable was created with 33.3 and 66.6 as the cut-points; the lowest scores represent the poorest physical functioning.

Arthritis limitation and interference.—Respondents were asked “Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?”

Those who responded “yes” were considered to have arthritis-attributable activity limitation (AAAL). Satisfaction with current abilities (“How satisfied are you with your current ability to do your usual activities”) was answered on a five-level scale and collapsed to three levels: 1) very satisfied/somewhat satisfied, 2) neutral, or 3) somewhat dissatisfied/very dissatisfied. Arthritis-attributable interference in routine life activities was queried in 5 domains, 1) sleep; 2) recreation, leisure, or hobbies; 3) household chores; 4) errands or shopping; and 5) social activities with family, friends, neighbors or groups, with respondents asked to report whether arthritis or joint symptoms interfered a lot, a little, or not at all with each of these activities. Recall period for the first 4 domains was the past 7 days and the past 30 days for the fifth domain.

Attitudes and confidence.—Two respondent attitudes were assessed by the degree to which an individual agreed or disagreed with the following statements: “There is nothing a person with arthritis or joint symptoms can do to make their arthritis better” and “It is important for someone with arthritis or joint symptoms to see a doctor for diagnosis and treatment.” Responses were collapsed in to one of three categories: 1) strongly agree/agree, 2) neutral, or 3) disagree/strongly disagree. Confidence was similarly assessed but used a 0 to 10 scale “where 0 is not at all confident and 10 is as confident as you can be” for the questions “How confident are you that you can manage your arthritis or joint symptoms?” and “How confident are you that taking a course or class would help you to manage your arthritis or joint symptoms?” Answers were then collapsed into one of three categories: low confidence (0-3), neutral (4-6), high confidence (7).

Missing values for dichotomous variables were assigned to the most conservative category, e.g., participants without a value for daily joint pain were assigned to the “no” category. For the remaining variables, the number of missing values ranged from 2 (employment) to 43 (race/ethnicity), representing 0.0% to 2.4% of the sample.

Analyses.

Sampling weights provided in the ACHES dataset were applied in all analyses to account for the complex sample survey design. Analyses were conducted using SAS software, version 9, which includes survey design procedures [23]. Weighted estimates and 95% confidence intervals (CI) were generated to estimate NCT prevalence overall and among studied groups. We examined respondents who reported NCT and then estimated the distribution of additional demographic, physical, health-related, and attitude and confidence characteristics with proportions and 95% CIs.

RESULTS

More than half (53%) of those 45 years old who reported doctor-diagnosed arthritis reported no current treatment (NCT) for arthritis by a health professional (Table 1). The prevalence of NCT was not significantly different across demographic groups (age, sex, race/ethnicity, education, and employment), with NCT respondents making up roughly 50% of each respective category within these groups (Table 1). The exception was significantly lower NCT among those who were unable to work/disabled (30%). Of those with arthritis reporting 1 severe arthritis symptom, 41% reported NCT; 34% of those with poor physical

function also reported NCT. NCT increased with increasing physical function, reaching 70% among those in the highest functioning group (Table 1).

The distribution of demographic characteristics among respondents with NCT shows they were most often 65 years old (50%), female (58%), Non-Hispanic whites (81%), with high school or some college education (56%). NCT was higher among the “other” (unemployed, retired, homemakers, students) employment group (56%) compared with the employed/self-employed (36%) and unable to work/disabled (8%) categories (Table 2).

Interestingly, 40% of NCT respondents reported their self-rated health as excellent/very good, but a range of negative arthritis effects were observed, including 51% in daily pain, 59% with 2 symptomatic joints, and 40% with AAAL (Table 2). In addition, 10-20% reported “a lot” of arthritis interference with sleep, recreation/leisure/hobbies, household chores, errands/shopping, and social activities; 27% were somewhat/very dissatisfied with their current ability to do their usual activities. Despite this profile, 67% were very confident in their ability to manage their arthritis symptoms.

The majority of NCT respondents (69%) disagreed/strongly disagreed with the nihilistic attitude statement “There is nothing a person with arthritis or joint symptoms can do to make their arthritis better.” An even higher proportion (83%) agreed/strongly agreed that it is important for someone with arthritis to see a doctor for diagnosis and treatment (Table 2). NCT respondents appeared fairly equally divided in their level of confidence that a course or class could help them manage their arthritis (Table 2).

DISCUSSION

More than 5 out of 10 adults ages 45 years who reported doctor-diagnosed arthritis were not currently being treated by a doctor or other health professional for it, and substantial proportions of these individuals were currently experiencing severe arthritis symptoms and/or poor physical functioning. NCT respondents reported surprisingly high confidence in their ability to manage their arthritis despite the high prevalence of pain, limitations, and interference with routine life activities caused by their arthritis. The great majority (at least 4 out of 5) of NCT respondents strongly agreed/agreed that is important to see a doctor for diagnosis and treatment.

One potential reason for NCT may be that not all arthritis is disruptive enough to require treatment. Previous research has demonstrated that people with arthritis tend to identify the need for treatment in response to symptom-related restriction in necessary (e.g., employment) or enjoyed (e.g., church, recreation) activities, pain--especially “unbearable” pain, and disability [24, 25]. However it is clear that there is substantial distress and disability in the NCT population. Given that a third (34%) of NCT respondents have 1 current severe arthritis symptom, 19% are in the worst physical functioning group, 40% report general arthritis interference in their usual activities, and greater than 50% experience daily pain and 2 currently symptomatic joints, it is hard to imagine how dismal an experience must be to motivate seeking further treatment. Although 27% described themselves as in poor or fair health, and 27% are dissatisfied with their ability to do usual

activities, 66% are confident that they can manage their symptoms. This confidence, which may be unwarranted, may dissuade them from current treatment.

Arthritis is one of the most frequently occurring chronic conditions—alone or as a comorbidity [26-29]. There is some evidence that people with multiple chronic conditions (e.g., arthritis plus another chronic condition) may have trouble prioritizing their care and treatment needs [30] and also that people, especially older adults [24, 25, 31], minimize arthritis and do not consider it as important as other health conditions or concerns [24, 25, 31, 32]. We found that approximately 50% of NCT respondents were adults 65 years old, suggesting that this age group in particular may not value or prioritize arthritis treatment. Many, especially older adults, consider arthritis to be an expected part of aging [24, 25], often belittling arthritis pain [31] and describing functional decline as age-normative [32].

It is interesting to note that 54% of NCT respondents had taken medication for their arthritis in the past 7 days; these respondents appear not to consider their medication as “treatment” [24]. It may be that people with arthritis are looking for other forms of treatment. Some studies suggest that people with arthritis are interested in interventions other than medication [24, 25, 32], which opens the door for discussions regarding available non-pharmacologic options, including joint protection techniques, assistive devices, thermal modalities, exercise, topical capsaicin [1], and community-based self-management education or physical activity interventions [33-35]. These conversations could be initiated by clinicians seeing people with arthritis for other conditions, especially because arthritis appears to interfere with management of many other conditions [27-29].

Eighty-Seven percent of respondents have sought treatment specifically for joint symptoms, but 52% are currently NCT; this may reflect the perception that medical management is unnecessary or not helpful. People with arthritis report that physicians minimize arthritis concerns and have their own misconceptions regarding arthritis and aging [24, 25], as well as lack of physician interest in arthritis [24, 32, 36, 37], mistrust of medical professionals [32, 36, 38], poor communication and miscommunications between patients and practitioners [25, 36], unmet care expectations [25], lack of information on treatment options from clinicians [24], and feeling that patient interests are of secondary concern [32]. These studies suggest there is a need to educate physicians further and persuade them that there are treatment options and non-medical interventions that can significantly improve arthritis symptoms. Nevertheless, NCT respondents still express strong agreement with the importance of diagnosis and treatment from a doctor, and other work has shown that a health care provider’s recommendation is the most influential factor in taking an arthritis self-management education course, increasing the likelihood of doing so by about 9 times compared with those who did not receive such a recommendation (multivariable-adjusted prevalence ratio 8.9) [39]. The prevalence of having taken a course or class to learn how to help manage arthritis symptoms was lower among NCT respondents (6%) than the national average of approximately 11% [40], suggesting a prime opportunity for greater clinical/community linkages to help people learn to manage their condition through recommending participation in self-management education workshops.

Access to care does not appear to be a driving factor in NCT among people with arthritis. Unfortunately, ACHES does not contain insurance information, but we did find that the largest proportion of NCT by age was 65 years old. Given that virtually everyone in the United States 65 years old has access to Medicare, it is unlikely that access is a major consideration in seeking arthritis treatment in this age group. For other groups, cost and time needed for care may be factors, but these were not measured in ACHES. Among the employed, a group in which access is traditionally among the highest, NCT was fairly high (57%) but likely reflects the “healthy worker effect,” indicating generally higher function and less arthritis symptoms in those who are working [41]. Those classified as unable to work/disabled, a group with instinctively higher need, had the lowest proportion of NCT of any group studied, suggesting that access to care does not substantially limit their treatment choices. Finally, intuitive patterns, such as the linear relationship of comparatively low NCT in the lowest functioning group and quite high NCT in the highest functioning group, seems to reflect treatment choices beyond issues of access to care.

Arthritis, while common, is not inevitable or normal [42]. Increased clinical and individual recognition of arthritis as a treatable condition may improve quality-of-life and health outcomes. As described above, a myriad of clinical, pharmacologic, non-pharmacologic, and/or surgical treatments now exist for many types of arthritis. Additionally, increasing the reach of evidence-based public health interventions for self-management education and physical activity can either complement clinical efforts or independently improve the health and quality-of-life of NCT individuals because these community-delivered programs can improve self-efficacy and physical and psychological function and decrease pain [33, 35]. Since more than half of the arthritis population is not currently receiving treatment, peer-to-peer referral to these community-based programs, as promoted in CDC’s Ambassador Outreach Program (<http://www.cdc.gov/arthritis/interventions/marketing-support/ambassador-outreach/index.html>) may be important to bring these interventions to the people who would benefit from them.

This study is subject to several limitations. First, arthritis status was determined by self-report rather than examination. However, two clinic-based validation studies found that the arthritis case-finding question used is appropriate for public health surveillance [43, 44]. Specific types of arthritis were not ascertained; however, evidence indicates both that individuals have poor recall for their diagnoses in population-based surveys and that individuals are insufficiently dissimilar by diagnosis across a wide range of characteristics to warrant subgroup analysis [45]. Second, ACHES is a cross-sectional survey and findings cannot be used to infer causation. Third, despite attempts to maximize survey participation, overall response was low, consistent with declining contact and cooperation rates for national random-digit-dialed surveys in general [46, 47]. Similarly, ACHES data are now more than 10 years old. Nevertheless, the distribution of sociodemographic characteristics of ACHES respondents matches closely with the target population as recently measured in the National Health Interview Survey (NHIS), a nationally representative standard for public health surveillance, suggesting that survey results remain relevant for the U.S. population of adults 45 years with arthritis [16, 19, 39]. Alternatively, interpretation of these findings may change in the future as the healthcare system changes.

Important strengths of this study include using arthritis-attributable measures, the population-based perspective of NCT among adults with diagnosed arthritis, and the extensive range of sociodemographic, health-related, and arthritis-specific characteristics of respondents that allowed for a fairly comprehensive profile of NCT individuals. Clearly, it would be beneficial to repeat this study or simply to have more study of such people to determine the extent to which doctors would be able to help them. It would also be useful to analyze those who report doctor-diagnosed arthritis who are currently being treated to compare differences in their health profiles and to examine both of these groups longitudinally to study changes and, hopefully, improvements with treatment, over time.

People with arthritis with NCT have substantial unmet needs across numerous health domains and may benefit from clinical management and guidance to control and treat their condition more effectively, minimizing painful symptoms and maximizing physical function. In turn, these clinical efforts may be reinforced by clinical/community links to public health interventions, such as self-management education and physical activity programs, to manage currently untreated arthritis. Further research to understand the reasons and barriers to receiving current treatment may help identify promising intervention points to address missed treatment opportunities, increase successful self-management, and improve the quality-of-life and functioning for the huge proportions with arthritis who are currently untreated for it.

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Key Points

- Substantial proportions of the half of adults with doctor-diagnosed arthritis not under current treatment reported current severe symptoms, arthritis-attributable limitations, and poor physical function.
- There are wide gaps between available clinical and community-delivered interventions and uptake by people with arthritis, suggesting that additional medical and public health involvement could benefit many people with arthritis not under current treatment.
- 51% of adults with arthritis not under current treatment reported daily pain, and 83% agree that it is important to see a doctor for diagnosis and treatment, so reasons for not doing so are worthy of further investigation.
- Adults with arthritis not under current treatment represent a population living with considerable morbidity from modifiable sources and indicate missed opportunities to address treatable pain, limitation, and disability in this group.
- Adults with arthritis not under current treatment have significantly lower prevalence (6% vs 11%) of taking an arthritis self-management education course/class compared to the national average, which could be addressed through health care provider recommendations to evidence-based courses to improve clinical and quality-of-life outcomes.

Table 1.

Prevalence and 95% confidence intervals (CI) of No Current Treatment (NCT) by a doctor or health care professional for arthritis among U.S. adults 45 years who report doctor-diagnosed arthritis, by selected characteristics

	Adults 45 years with arthritis (number of respondents)*	NCT (number of respondents)*	% NCT (weighted)	95% CI
Total	1,793	920	52.7	50.1-55.3
Age (years)				
45-54	468	244	51.9	46.6-57.2
55-64	538	250	47.1	42.3-51.9
65	763	417	57.1	53.3-60.9
Sex				
Male	550	305	57.1	52.5-61.7
Female	1,243	615	49.9	46.9-52.9
Race/Ethnicity				
Non-Hispanic white	1,363	705	53.5	50.5-56.4
Non-Hispanic black	206	101	48.9	41.3-56.6
Hispanic	114	59	50.6	39.4-61.8
Non-Hispanic Other	67	41	61.9	50.1-73.7
Education				
Less than high school	286	145	50.7	44.2-57.2
High school or some college	1,031	514	51.8	48.4-55.3
College or more	472	259	55.8	50.9-60.8
Employment				
Employed/self-employed	597	343	57.2	52.6-61.9
Unable to work/disabled	279	79	29.6	23.4-35.8
Other	915	497	56.2	52.7-59.7
At least one severe arthritis symptom (joint pain, joint stiffness, arthritis fatigue)				
Yes	810	322	41.4	37.5-45.2
No	983	598	61.5	58.1-64.9
Physical function (from SF scale); lowest third is poor physical function				
Lowest third	574	187	33.7	29.4-38.0
Middle third	618	320	53.1	48.6-57.5
Highest third	571	397	69.7	65.5-74.0

* Sums for each characteristic may not equal the overall total due to missing values. The number of missing values ranged from 2 (employment) to 43 (race/ethnicity), representing 0.0% to 2.4% of the sample.

Table 2.

Weighted distributions and 95% confidence intervals (CI) of selected characteristics among U.S. adults 45 years old with doctor-diagnosed arthritis who are receiving no current treatment (NCT) for their arthritis

	NCT		
	Number of respondents	%	95% CI
Total	920	100	–
Demographics			
Age (years)			
45-54	244	24.6	21.4-27.9
55-64	250	25.8	22.5-29.1
65	417	49.6	45.7-53.4
Sex			
Male	305	42.3	38.8-45.7
Female	615	57.7	54.3-61.2
Race/Ethnicity			
Hispanic	59	6.0	4.2-7.7
Non-Hispanic white	705	81.0	78.4-83.6
Non-Hispanic black	101	8.9	7.2-10.5
Non-Hispanic other	41	4.2	2.8-5.6
Education			
Less than high school	145	15.0	12.4-17.5
High school or some college	514	56.4	52.7-60.1
College or more	259	28.6	25.2-32.1
Employment			
Employed/Self-Employed	343	36.2	32.6-39.7
Unable to work/Disabled	79	8.2	6.1-10.3
Other	497	55.7	51.9-59.4
Self-rated health and physical function			
Self-Rated health in general			
Excellent/Very good	348	39.9	36.2-43.6
Good	314	33.4	30.0-36.7
Fair/Poor	255	26.8	23.6-29.9
Poor physical function	187	19.4	16.6-22.2
Arthritis symptoms, symptom severity, and symptom management			
1 severe arthritis symptom	322	34.4	30.9-37.9
Daily pain (pain on 7 of past 7 days)			
Yes	459	51.1	47.5-54.8

	NCT		
	Number of respondents	%	95% CI
Number of symptomatic joints in past 30 days			
0 joints reported	212	22.8	19.8-25.9
1 joint reported	150	17.9	15.0-20.8
2 joints reported	558	59.2	55.7-62.8
Taken prescription or non-prescription medication for joint symptoms in past 7 days			
Yes	519	54.1	50.6-57.7
Ever seen a doctor or other health professionals for joint symptoms			
Yes	613	86.8	84.1-89.5
Ever taken a course or class to teach you how to manage arthritis or joint symptoms			
Yes	52	5.9	4.1-7.6
Arthritis limitations and interference			
Limited in any way in any of your usual activities because of arthritis or joint symptoms (AAAL)			
Yes	374	40.2	36.6-43.8
Satisfaction with current ability to do usual activities			
Very/Somewhat satisfied	631	69.6	66.1-73.0
Neutral	40	3.9	2.6-5.2
Somewhat/Very dissatisfied	242	26.5	23.2-29.8
Arthritis interferes "a lot" with			
Good night's sleep	186	20.3	17.3-23.2
Recreation, leisure, hobbies	158	16.6	13.9-19.3
Household chores	151	15.3	12.7-17.9
Errands/Shopping	131	13.2	10.8-15.6
Normal social activities	93	9.8	7.6-12.0
Attitudes and confidence			
Attitudes: There is nothing a person with arthritis or joint symptoms can do to make their arthritis better.			
Strongly agree/Agree	145	17.3	14.4-20.2
Neutral	128	14.2	11.7-16.8
Disagree/Strongly disagree	620	68.5	65.1-71.9
Attitudes: It is important for someone with arthritis or joint symptoms to see a doctor for diagnosis and treatment.			
Strongly agree/Agree	763	82.7	79.9-85.5
Neutral	90	10.2	7.9-12.4
Disagree/Strongly Disagree	62	7.1	5.2-9.0
Confidence: How confident are you that you can manage your arthritis or joint symptoms?			
Very confident	602	66.9	63.5-70.3
Neutral	242	25.9	22.7-29.1
Not confident	63	7.2	5.4-9.0
Confidence: How confident are you that taking a course or class would help you manage your arthritis or joint symptoms?			
Very confident	303	33.3	29.8-36.8

	NCT		
	Number of respondents	%	95% CI
Neutral	300	34.0	30.6-37.5
Not confident	281	32.6	29.2-36.0

* Sums for each characteristic may not equal the overall total due to missing values. The number of missing values ranged from 2 (employment) to 43 (race/ethnicity), representing 0.0% to 2.4% of the sample.

Note: Columns may not sum to 100.0 due to rounding.

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