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Preferences for Arthritis Interventions: Identifying Similarities and Differences among Blacks and Whites with Osteoarthritis

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Abstract

Objective—To determine if there are differences or similarities in arthritis intervention preferences and barriers to participation between Blacks and Whites with osteoarthritis (OA).

Methods—Using a needs assessment survey, intervention preferences and barriers to participation in arthritis interventions among Black (n=60) and White (n=55) adults with self-reported doctor-diagnosed OA were examined. T-tests, chi-square tests, and multiple regression analyses adjusting for covariates were examined to determine race effects.

Results—While there were many similarities, Blacks were more likely to report cost (p<.01), lack of trust (p=.04), fear of being the only person of their race (p<.001), lack of recommendation from their doctor (p=.04), and lack of recommendation of a family member or friend (p=.02) as barriers to participating in a community-based self-management arthritis intervention. After adjusting for covariates, Blacks preferred interventions that provide information on arthritis-related internet sources (p=.04), solving arthritis-related problems (p=.04), and talking to family and friends about their condition (p=.02) in comparison to Whites. Blacks also preferred an intervention with child care services provided (p<.01), instructors and participants of the same race (p<.01; p<.001) or gender (p<.001; p=.03), allows a friend (p=.001) or family (p=.02) to attend, offered at a local church (p=.01), clinic (p<.01) or mailed (p<.01).

Conclusion—Findings suggest that similar interventions are preferred across racial groups, but some practical adaptations could be made to existing arthritis interventions to minimize barriers, increase cultural sensitivity, and offer programs that would be appealing to Blacks and Whites with arthritis.

Arthritis is the leading cause of disability in the United States (1) with osteoarthritis (OA) being the most common type. OA often results in pain, disability and poor psychological well-being. Arthritis interventions (e.g., coping, self-management, exercise) have been shown through randomized controlled trials to be effective ways to manage OA symptoms (2–5). Effective interventions include, but are not limited to the Arthritis Foundation Aquatics Program (6), the Arthritis Self-Management Program (ASMP), (7–9), Walk-with-

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Ease (4), and psychological interventions for symptom management (10). Such interventions have been shown to decrease pain, depression, medical visits, disability, discomfort, medical expenses, and to increase relaxation, quality of life, self-efficacy, functional ability, self-care behavior, and knowledge about arthritis (2,10). However, the positive effect is only true for the populations the interventions reach.

Research consistently highlights the lack of inclusion and lack of participation of Blacks in health related research and clinical trials (11–13). Similar problems have been found with arthritis behavioral intervention programs and research. The majority of arthritis intervention studies have been conducted with predominantly White populations without any special attention to minorities (e.g., examining effectiveness, recruitment and retention, social or structural needs, preferences or expectations; 2,5,10). The paucity of studies focused on Blacks in arthritis interventions emphasizes the need to understand present challenges (e.g., preferences of the individual, social determinants, healthcare delivery system structure) that may serve as a barrier to the inclusion of Blacks in arthritis interventions particularly when considering the potential impact of the lack of inclusion on health outcomes.

Culture related barriers are a factor that deserves some attention in this field. Race is a multi-dimensional social construct that provides an overarching category for individuals who may have shared norms, values, experiences, and histories that may uniquely contribute either proximally or distally to the lack of inclusion in healthcare options of this type (14,15). Exploring how race differences in preferences and barriers might contribute to the lack of inclusion of Blacks in arthritis interventions is an important topic. In addition, designing effective interventions that can be successfully implemented and disseminated among Blacks with arthritis is predicated on understanding the potential influence of the cultural aspect of race.

Recent research has acknowledged that the lack of inclusion of minorities in arthritis intervention research is problematic. Researchers have begun to make an effort to address this gap in the literature by including Blacks in studies of the ASMP (16,17) and other community-based arthritis interventions (18), adapting the materials to become more culturally sensitive (16,18), including Black intervention leaders and coordinators, and by working with African-American community-based organizations (e.g., churches, sororities; 16–18). However, in these studies the process of modifying the materials and delivery of the program for cultural sensitivity were not described in detail (16,17), and the effectiveness, satisfaction, or acceptability of the strategies amongst Blacks were not reported (18). Moreover, 17% of the participants (N=458) in the study conducted by Goeppinger et al. (17) were Black, and Altpeter et al. (18) reported that 19% of a combined sample (N=1,517) from four community-based arthritis interventions were Black; however, analyses specific to Blacks were not presented. To our knowledge only one study to date has examined the acceptability or the effectiveness of an arthritis intervention (i.e., ASMP) among Blacks (16). Without randomized controlled trials for arthritis interventions including and reporting findings on minorities (e.g., Blacks) the question remains as to whether arthritis interventions are appealing, acceptable, feasible, or effective in racial/ethnic minority populations.

Therefore the purpose of this research was to determine if there were racial differences or similarities in barriers to participating in arthritis interventions or in preferences of arthritis intervention content, structure, and delivery. Past research has examined the needs of patients with arthritis, however samples included predominately White participants, and analyses did not examine race differences (19,20). While limited work using needs assessments have been conducted in the area of arthritis and arthritis disparities, utilizing needs assessments to evaluate the care needs of a target population is not a novel concept

(21,22). Researchers have used needs assessments to gather information on health service needs and cultural diversity in other contexts [e.g., health service needs for Latino youth (21) and end of life care needs for African Americans (22)], and to use this information to make interventions appropriate for diverse individuals.

Our project addressed the following research questions: 1) Are there race differences in barriers to arthritis interventions between Blacks and Whites with OA, and 2) Are there race differences in intervention preferences (i.e., content, structure, and delivery) between Blacks and Whites with OA? Based on previous literature (12,13,23,24), it was hypothesized that there would be significant race differences in barriers to participation in arthritis interventions. Black participants were predicted to be more likely to report that lack of trust in the healthcare system, family responsibilities, cost, and transportation were barriers to participating in arthritis interventions. Due to the lack of an extensive previous literature on issues of preferences for arthritis interventions, racial differences in the other issues were explored without hypotheses.

Materials and Methods

Participants

Participants were community-dwelling adults recruited from multi-purpose senior centers, church groups, and senior housing communities in the Tampa, Florida area. Participants were also recruited from an existing School of Aging Studies, University of South Florida (USF) Arthritis participant registry. The names included participants with OA from previous studies who had agreed to participate in future studies. Flyers, presentations, and the snowball method were used to recruit and inform participants about the study. Those interested in the study were provided with additional information about the study, and were prescreened to determine eligibility. Eligible participants included individuals age 50 and older, self-reporting a doctor-diagnosis of OA, with no other complicating musculoskeletal diseases or observable cognitive impairments. Age 50 was selected since the onset of OA often begins around middle age and is more common with greater age. Reading ability was not a criterion as participants who had trouble with reading due to ability or vision impairments were allowed to participate by having the questionnaire read to them. The self-report method used to identify individuals with OA is similar to the method used by the Centers for Disease Control and Prevention to examine arthritis prevalence rates in the population (25). Moreover, this method has been shown to be a valid method among older adults (26). While recruitment efforts and data analyses centered on Black and White adults with OA, volunteers from other race groups were not excluded from participating if they showed an interest in the study. However, due to the small sample size, those who classified themselves as a racial/ethnic group other than Black or White were not included in the analyses. All participants provided written informed consent prior to enrollment.

Procedure

This study was conducted using a non-probability convenience sample survey research design. Based on what was convenient for the participants, surveys were self-administered in either a group setting or individual appointments, and as noted, instruments were read to individuals who required assistance. Participants were provided a five-dollar Target gift card as a token of appreciation for their participation.

Measures

The instrument used in this study was designed as a structured questionnaire. In addition, one open-ended question was included to supplement quantitative findings pertaining to barriers to participation (i.e., Do you see the need for an arthritis self-help program for people who have been diagnosed with arthritis, Yes or No?; Please explain why or why not). Specifically, the questionnaire was designed to assess demographics, socioeconomic status (SES), health status, barriers, and preferences.

Independent variables—Our primary variable of interest was race/ethnicity. To account for factors that may influence race/ethnicity differences, we included age, marital status, gender, SES, and health status as covariates.

Demographics: Race/Ethnicity was assessed by asking participants to "please tell me your race or ethnicity" with the choices being 1) White/Caucasian, 2) Black/African American, 3) Latino/Hispanic, 4) Asian/Pacific Islander, 5) Native American, or 6) Other. Age was based on date of birth and measured as a continuous variable. Participants were also asked to report their marital status and gender.

Socioeconomic status: Socioeconomic status was assessed based on income and education level. Participants were asked to identify their total annual family income (i.e., wages, pensions, dividends, and any additional household income) by selecting an income starting at $5,000 dollars and increasing incrementally with the final choice being more than $100,000. Education was assessed with a 1-item question that asks "What is the highest grade of school or year of college you have completed?" Choices ranged from 0 to 17+.

Health status: Overall health status, disability, and pain of the participant were assessed using single item questions from the Behavioral Risk Factor Surveillance System (BRFSS) Questionnaire (27). Participants were asked to rate their health in general with choices ranging from excellent=4 to poor=0. Disability was assessed by asking participants to respond yes=1 or no=0 to the question, "Are you limited in way in any activities because of physical, mental, or emotional problems?" Pain was measured by asking participants to rate their average joint pain over the past 30 days using an 11-point Likert scale (0=no pain, 10=extreme pain; 27). Participants were also asked to report the number of years they have had arthritis-related symptoms, and the number of years with an OA diagnosis.

Dependent Variables

Potential barriers: Barriers were assessed by presenting the participants with two vignettes describing existing arthritis interventions. Participants were then asked to read each vignette and answer the questions that follow. Each vignette was designed to assess barriers to participation in both an existing group community-based arthritis intervention (i.e., Arthritis Self-Management Program; 7) and an existing home-based mailed arthritis intervention (i.e., Arthritis Self-Management Toolkit; 17). The first vignette stated, "Imagine that you have been diagnosed with arthritis and have been asked to participate in an arthritis group education course. The course will be offered at the local community center and will be taught by a person who has arthritis and has been trained to offer this course. The course will cost you $30. You will be asked to come to the center once a week from 10:00am–12:00 noon for six weeks. In addition, to the weekly meetings you will receive *The Arthritis Helpbook* (a textbook for the course), Arthritis Foundation brochures, and a year's subscription to the *Arthritis Today* magazine. During the six weeks you will develop an exercise program just for you, discuss arthritis medications, learn how to manage your pain, learn how to solve arthritis-related problems, and learn how to communicate with your health care providers. You will be responsible for getting yourself to and from the community center." The second vignette was similar in nature, delineating the components of the home-based ASMP Toolkit intervention (i.e., the ASMP packaged for independent use at home).

Drawing from previous literature that has identified barriers to recruiting and retaining minorities in health-related research, clinical trials, and interventions, a list of 11 (home) and 13 (community) potential barriers were developed by the authors. The list of potential barriers to participation (e.g., I believe my lack of trust in the health care system would prevent me from participating) was presented following each vignette. Participants were asked to determine how much they believed each statement using an 11-point Likert scale (0=don't believe at all, 10=definitely believe). A complete list of potential barriers can be found in Table 2 and 3.

Arthritis intervention preferences: Intervention preferences were assessed by asking about components of an existing arthritis intervention and about components that could be included in potential arthritis interventions. The questionnaire developed by the authors was modeled after a questionnaire used to assess preferences in bereavement service utilization (28). The questionnaire assessed preferences for the content (e.g., information about medications, internet sources for arthritis care, reducing pain; 0=not helpful at all, 10=extremely helpful), structure (e.g., individual, group, family), and delivery (e.g., in-home program, mailed program; 0=not at all, 10=extremely) of arthritis interventions by having the participant rate the value of intervention components on an 11-point Likert scale.

Statistical Analysis

Exploratory data analysis using descriptive statistics was used to assess relationships between variables and identify outliers and missing data. Independent samples t-tests, chi-square tests and multiple regression analyses were used to assess race/ethnicity effects and to adjust for additional covariates. While missing data was minimal in this particular study (i.e., ~2% of the dependent variables), imputed values for missing dependent variables were used. Significance levels were rounded to 2 digits in the manuscript.

Independent samples t-test and chi-square analyses—Frequencies were examined to assess demographics, barriers, and intervention preferences. First, comparisons between groups (Blacks vs. Whites) among the study variables were made with independent samples t-test and chi-square analyses. While several questions were listed under specific categories (e.g., barriers), each question within the category was treated as an individual dependent variable.

Multiple regression analyses with imputation—Next, a general linear model approach was used to examine the associations between our independent and outcome variables (i.e., intervention barriers, content preferences, and structure and delivery preferences). Race/Ethnicity was our primary independent variable of interest. All models were adjusted for the following covariates: age, education, marital status, gender, income, health status, pain, disability, years with arthritis symptoms, and years with OA diagnosis, to account for intergroup variation associated with covariates. All analyses were generated using SAS® software, Version 9.2 (29).

Results

Sample Characteristics

Descriptive statistics for the sample (*N*=115) are displayed in Table 1. Analyses were conducted including only Black (*n*=60) and White (*n*=55) participants. There is a variation in sample size due to missing values, and the missing data varies per variable per race group. When missing data was present most dependent variables had 3 or less missing observations. Income for Blacks and Whites had the largest amount of missing 14 and 7, respectively. Black and White participants in this sample had similar education levels with an average of 13.3 and 13.8 years respectively. Less than 30% of the participants in each group reported being married. Blacks were more likely to be younger, and more likely to have a lower annual household income than Whites. Blacks reported significantly worse health in general and more arthritis-related pain than Whites. However, there was no significant difference in the level of disability between Black and White participants. Blacks reported both having arthritis symptoms and being diagnosed with OA for a less amount of time than their White counterparts.

Potential barriers

Participants' perceptions of need or lack thereof for an arthritis self-help program could serve as a barrier to participation. Of those participants who identified themselves as Black, 90% reported there was a need for an arthritis self-help program. In addition, of those who identified themselves as White, 100% reported there was a need for an arthritis self-help program. Although a statistically significant difference between the groups (p=0.03) was found using a Fisher's exact test, both groups strongly supported the need for an arthritis self-help program.

Table 2 reports race/ethnicity differences in barriers to participating in the community-based ASMP. There were significant group differences on variables assessing potential barriers to participation in the community-based and home-based version of the ASMP. Significant differences were found on five variables associated with the community-based intervention. Blacks were more likely to report that their lack of trust in the healthcare system, fear of being the only person of their race in the program, and the cost of the program would be a barrier to participating in comparison to Whites. Blacks were also more likely to report that they would only participate in the program if family and friends thought it was a good idea, and only if recommended by a doctor. Contrary to expectations, there were no group differences in transportation or family responsibilities as a potential barrier to participation in the community-based intervention. After adjusting for covariates, only one significant main effect remained between Black and White participants. Blacks were more likely to participate only if they were recommended by their doctor in comparison to Whites (p=0.03).

As shown in Table 3 the independent samples t-test for barriers to participation in an at home self-management program yielded similar results to that of the group community-based program. Four significant differences were found. Blacks were more likely to report cost, lack of trust in the healthcare system, fear of being the only person of their race, and lack of endorsement by family/friends as barriers. After adjusting for covariates no group differences remained significant.

Arthritis intervention preferences

Table 4 displays results on preferences for intervention content. Blacks were significantly more likely on 20 of the 22 comparisons to report the variables would be helpful if included in an arthritis intervention. To ensure the differences were true differences and not a result of response bias, additional analyses were also conducted using z-transformed scores. The response results were unaffected by this procedure. Previous research has shown that this is a sound way to address potential response bias concerns (30). After adjusting for covariates, Blacks reported being more likely to prefer an intervention that will teach you about internet sources focused on arthritis care (p=0.04), teach you about problem solving skills for arthritis-related problems (p=0.04), and teach you how to talk to your family and friends about arthritis (p=0.02).

Regarding intervention structure and delivery, the groups differed significantly on 19 out of 22 variables (Table 5). In comparison to Whites, Blacks were more likely to see the need of the structure and delivery variables for an arthritis intervention. After standardizing the responses to address a potential response bias, results were unaffected. After adjusting for covariates, Blacks were more likely than their White counterparts to prefer mailed interventions (p<.01), bringing a family member (p=0.02) or friend (p<.01) to support and learn with you, interventions to be given by someone of the same race (p<.01), interventions given by someone of the same gender (p<.001), an intervention given at the local church (p=0.01), an intervention given at a local health clinic (p<.01), interventions limited by gender (p=0.03), interventions providing child services (p<.01), and interventions that include people of the same race (p<.001).

Discussion

Results suggest a number of differences between Blacks and Whites with OA in their preferences and reported barriers to community and home based arthritis interventions. In general, Black participants were more likely to report being affected by barriers (e.g., cost, trust, race, lack of doctor’s recommendation) to participating in both a community and a home-based intervention. Physicians may be a very important facilitator in getting Blacks to participate in behavioral arthritis interventions. This finding is interesting in that while we are aware of no studies examining the doctor’s recommendation as a barrier to participating in behavioral arthritis interventions, researchers who have examined this relationship in the context of arthritis joint replacement found that Blacks were less likely than Whites to be willing to consider joint-replacement even with a recommendation from the doctor (31). It may be that there is some sort of skepticism around participating in any unfamiliar intervention procedure; however, a doctor’s recommendation may facilitate participation in a healthcare option that is behavioral and not surgical.

Consistent with prior research, Blacks were found to express distrust in the healthcare system and to report this as a barrier (14). Lack of trust could hinder optimal healthcare. Cultural mistrust, which is the mistrust of Whites by Blacks in politics, interpersonal relations, education and training, and business and work (32), could be a potential explanation as to why Blacks were more likely to report distrust in the healthcare system as a barrier to participating. While this study did not examine cultural mistrust and only examined trust as a barrier to participation with a single-item question, it does suggest that more research is warranted to analyze the relationship between trust and participation in the ASMP for Blacks with OA.

Contrary to our predictions, there were no significant differences between Blacks and Whites in reporting that transportation or family responsibilities served as a barrier to participating in the arthritis programs. Many participants in this study were recruited from their church, senior housing community center, and multi-purpose senior center, so our recruitment approach may have been biased toward individuals who had the ability to attend and participate in other programs. Future research is warranted with a more representative sample to fully understand how barriers may impact the utilization of an arthritis healthcare program.

Results clearly demonstrate that there are race differences in preferences regarding the content, structure, and delivery of an arthritis self-management intervention. After controlling for covariates, Blacks reported being more likely to prefer interventions that teach about arthritis-related internet sources, how to solve arthritis-related problems, and how to talk to family and friends about their condition. In addition, an intervention that provides child care services, includes instructors of the patient’s race or gender and participants of the same race or gender, allows the patient to bring a family member or friend, is offered at a local church or clinic, or could be mailed were all components of an arthritis intervention that were preferred by Black participants. Such findings suggest that personal and social factors, some of which could be readily addressed, play a significant role in the appeal of an arthritis intervention. For example, the fact that communities and family members often serve as gatekeepers to participation in health-related research or programs (13), it is not surprising that Blacks would prefer a program that was offered at a local church or clinic and allowed them to bring a family member or a friend.

Cultural competence is a broad concept describing the importance of understanding social and cultural influences on health beliefs and behaviors, and the ability for practitioners or healthcare providers to use this knowledge habitually to improve healthcare programs/ services and eliminate health disparities (15,34,35 as cited in 34,36,37). Research has identified various strategies (e.g., cultural awareness, cultural tailoring, culturally-based, culturally relevant, culturally appropriate, culturally sensitive, cultural leverage) through which cultural competency can be reached (15,34,35 as cited in 34). This particular study has drawn from two of those constructs (i.e., cultural sensitivity, and cultural tailoring). Based on the findings of this study, we believe that there is not a specific need to culturally tailor (i.e., design an intervention only for a specific racial/ethnic group; e.g., African American Arthritis Self Help Program) to replace existing arthritis self-management programs, because Blacks and Whites appear to agree on many facets of what makes a program desirable. However, practical issues should be addressed and systematic adaptations made to make these program more culturally sensitive (i.e., taking into account the shared preferences, beliefs, values experiences, and practices, in the design and delivery of the program) and appealing for Blacks. For instance personal and social factors could be addressed by ensuring that those trained to deliver the ASMP are from diverse backgrounds, and that the programs are offered in areas that would attract both White and minority participants. The findings of our research are in line with findings from the research done by Goeppinger et al. (16) in that there is a need to strengthen the content of the ASMP by including information on cultural dimensions (e.g., the importance of social support). It is likely that adaptations have begun to take place (16,17) but are not systematically documented in the arthritis intervention literature. It is suggested that adaptations be documented and tested to determine whether such changes yield benefits in acceptability and successful recruitment and retention.

Our study had several limitations. Individuals in this study were asked to self-report a doctor-diagnosed case of OA. While self-report has been used as a method to determine national prevalence rates for arthritis of any type, the use of both clinical criteria and radiological scales would be the ideal method to confirming an OA diagnosis. Using clinical criteria and radiological scales would be considered a gold standard and would strengthen the validity of the research. These findings need to be examined to see if they are relevant to other interventions (e.g., Cognitive Behavioral Therapy, Exercise, Education), and with larger samples. Because our study was predominately female, gender differences should also be explored.

The American College of Rheumatology’s most recent non-pharmacological recommendations for individuals with OA include self-management and physical activity arthritis interventions (38). In addition the CDC has placed an emphasis on identifying evidence-based arthritis interventions (39), and the importance of increasing participation and availability of the interventions (40), but did not emphasize addressing cultural diversity and health disparities. This issue deserves greater attention in arthritis interventions. Reducing health and healthcare disparities has been identified as a national priority and has been the focus of CDC, Department of Health and Human Services, and the National

Arthritis Action Plan (41,42). We believe that our results can be useful in designing culturally sensitive effective arthritis interventions. CDC has also made an effort to address public health concerns around arthritis in general by funding state health departments to offer self-management and physical activity interventions (43). While these are laudable actions, efforts should be made to determine how funding coupled with a cultural sensitive approach could make a positive impact. Culturally sensitive interventions must promote accessibility and be designed in a manner taking in consideration the values, preferences, and needs of diverse populations. It is vital that we make strides toward being more culturally sensitive and take all steps possible to broaden the appeal of arthritis interventions.

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Significance and Innovations

- The findings highlight the need to address practical issues and make systematic adaptations in order to make existing arthritis interventions appealing to both Blacks and Whites.
- Arthritis intervention studies typically have not included a substantial amount or have not reported the inclusion of Black participants. This study highlights the importance of including minority groups in randomized controlled trials testing the effectiveness of arthritis interventions as a way to ensure feasibility, appeal, and effectiveness across all groups.
- Culturally appealing arthritis interventions ultimately may increase the utilization of existing arthritis interventions.

Table 1

Sample Characteristics

	Black Participants (*n*=60)	**White Participants (*n*=55)**	***t*(x^2)**
Variable	**M (SD)**	**M (SD)**	***p***
Age (M in years)	67 (9.60)	77 (8.24)	<.001
Education (% High School or Less)	47.5	32.1	(0.10)
Marital Status (% Married)	20.3	27.3	(0.38)
Gender (% female)	93.2	78.2	(0.02)
Income (%)			
< $15,000	46.9	21.7	(0.02)
$15,000–49, 999	38.8	47.8	
≥$50,000	14.3	30.4	
Health Status	1.8 (0.90)	2.2 (0.91)	0.01
Pain	6.8 (2.37)	5.5 (2.42)	<.01
Disability (% Yes)	63.2	71.7	(0.34)
Symptoms (M in years)	11.7 (9.79)	18.6 (15.22)	<.01
Arthritis Diagnosis (M in years)	10.3 (7.89)	16.0 (14.43)	0.01

Table 2

Barriers to Group Community-based Participation

	Black Participants (*n*=60)	White Participants (*n*=55)	*t*
Variable	**M (SD)**	**M (SD)**	***p***
Cost	6.01 (4.20)	3.72 (3.81)	<.01
Difficult to find time	5.23 (3.77)	4.65 (3.74)	0.41
Hard to find the drive or determination	4.99 (3.70)	4.48 (3.77)	0.46
Only if recommended by my doctor	4.58 (4.15)	3.05 (3.75)	0.04
Other health concerns	4.27 (3.65)	3.29 (3.33)	0.14
Lack of trust in the healthcare system	3.95 (3.75)	2.59 (3.34)	0.04
Difficult to find transportation	3.82 (4.04)	3.15 (3.80)	0.36
Family responsibilities	3.40 (3.63)	2.38 (3.45)	0.13
Only if family and friends thought it was a good idea	3.25 (3.99)	1.67 (3.19)	0.02
Physically unable	3.16 (3.64)	2.29 (3.13)	0.17
Fear of being the only person of my race	2.78 (3.78)	.67 (1.68)	<.001
My neighborhood is not safe	2.45 (3.48)	1.38 (2.62)	0.07
Believe the program will be helpful[a]	1.84 (2.70)	2.65 (2.91)	0.12

[a] Note. Table includes imputed values. Item is reverse coded.

Table 3

Barriers to Home-based Participation

	Black Participants (*n*=60)	White Participants (*n*=55)	*t*
Variable	**M (SD)**	**M (SD)**	***p***
Cost	5.85 (4.27)	3.18 (3.79)	<.01
Only if recommended by my doctor	3.82 (3.93)	2.73 (3.50)	0.12
Hard to find the drive or determination	3.79 (3.56)	4.05 (3.51)	0.68
Difficult to find time	3.73 (3.87)	3.31 (3.40)	0.54
Other health concerns	3.45 (3.57)	3.02 (3.35)	0.50
Physically unable	3.33 (3.70)	2.33 (3.33)	0.13
Believe the program will be helpful[a]	3.16 (3.10)	2.04 (3.27)	0.06
Lack of trust in the healthcare system	3.02 (3.72)	1.38 (2.35)	0.01
Only if family and friends thought it was a good idea	2.78 (3.67)	1.14 (2.39)	0.01
Family responsibilities	2.58 (3.56)	1.60 (2.70)	0.10
Fear of being the only person of my race	2.16 (3.46)	.67 (1.61)	<.01

[a] Note: Includes Imputed Values. Item is reverse coded.

Table 4

Content and Preferences

	Black Participants (*n*= 60)	**White Participants (*n*=55)**	***t***
Variable	**M (SD)**	**M (SD)**	***p***
Teach you helpful exercises	9.23 (2.11)	8.02 (2.73)	0.01
Get the most out of the healthcare system	9.23 (1.57)	8.11 (2.33)	<.01
Teach you about your type of arthritis	9.20 (1.71)	7.81 (2.63)	<.01
Reduce your pain	9.19 (2.08)	8.27 (2.44)	0.03
Problem solving-skills for arthritis-related problems	9.13 (1.88)	7.93 (2.81)	0.01
Treatment decisions	9.07 (1.96)	8.02 (2.20)	0.01
Problem solving skills in general for health-related problems	9.01 (1.96)	7.91 (2.70)	0.01
Nutrition and healthy and eating	8.95 (2.20)	7.55 (2.87)	<.01
Improve physical functioning	8.95 (2.25)	8.33 (1.83)	0.11
Arthritis healthcare options/resources other than PCP	8.89 (1.92)	7.87 (2.67)	0.02
Make meals you eat already in a healthier way	8.88 (2.42)	7.22 (2.94)	<.01
Arthritis medications that are available	8.88 (2.11)	7.40 (3.14)	<.01
Various types of arthritis	8.87 (2.07)	6.79 (3.19)	<.001
Talk to professionals about your arthritis	8.75 (2.46)	7.29 (2.87)	<.01
Information about the use of medications	8.62 (2.60)	7.49 (3.00)	0.03
Decrease negative emotions	8.62 (2.68)	6.80 (3.46)	<.01
Set personal treatment goals and a plan of action	8.48 (2.34)	6.97 (3.13)	<.01
Choose a doctor	8.47 (2.69)	7.15 (3.10)	0.02
Non-traditional treatment decisions	8.40 (2.76)	7.85 (2.84)	0.30
Talk to family and friends about your arthritis	8.35 (2.77)	5.87 (3.47)	<.001
Internet sources for arthritis care	8.15 (3.06)	5.15 (3.92)	<.001
Discrimination in healthcare	8.05 (3.16)	5.86 (3.97)	<.01

Note- Includes imputed values

Table 5

Structure and Delivery

	Black Participants (*n*=60)	**White Participants (*n*=55)**	***t***
Variable	**M (SD)**	**M (SD)**	***p***
Mailed	8.57 (2.41)	5.84 (3.60)	<.001
Include discussion with other people who have arthritis	8.20 (2.89)	6.47 (3.28)	<.01
Offer a class to a group teaching you to manage arthritis	7.90 (3.30)	6.41 (3.40)	0.02
Given at a community or senior center	7.55 (3.39)	5.49 (3.62)	<.01
Bring a friend for support and to learn with you	7.54 (3.26)	4.05 (3.55)	<.001
Led by someone who has arthritis themselves	7.52 (3.19)	6.68 (2.90)	0.14
Video-Tape/DVD	7.45 (3.54)	5.76 (3.71)	0.01
Given in your neighborhood	7.43 (3.60)	6.24 (3.52)	0.08
Cassette Tape/CD	7.31 (3.65)	5.25 (3.82)	<.01
Given in an instructional or lecture format	7.28 (3.54)	5.75 (3.15)	0.02
Given at the local Arthritis Foundation	7.17 (3.47)	4.69 (3.35)	<.001
Material on spiritual beliefs	7.17 (3.52)	4.53 (3.76)	<.001
Given at a local health clinic	7.04 (3.18)	4.07 (3.17)	<.001
Bring a family for support and to learn with you	6.95 (3.86)	4.00 (3.55)	<.001
Include people in your same age group	6.63 (4.44)	4.76 (3.72)	0.02
Given at a local church	6.45 (3.85)	3.00 (3.16)	<.001
Include people of your race	5.60 (4.47)	2.55 (3.33)	<.001
Be given by someone of the same gender	5.42 (3.95)	2.05 (3.04)	<.001
Provide child care services	5.25 (4.33)	1.51 (2.67)	<.001
Be limited by condition	5.13 (4.19)	4.85 (3.44)	0.69
Given by someone of the same race	4.73 (4.23)	.94 (1.93)	<.001
Be limited by gender	4.19 (3.99)	1.38 (2.38)	<.001

Note – Includes Imputed Values