What are the Characteristics Associated with Frequent Physical Exercise among Adults with Arthritis? Results of a National Survey in the United States.

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Background

- Arthritis is a chronic, often debilitating, condition that involves inflammation, swelling, and pain or tenderness of joints in the body.

- Regular physical exercise is important for people with arthritis, which is a common condition in the United States (US).

- Yet, the characteristics associated with frequent physical exercise in US adults with arthritis are not well known.

Objectives

- This study investigated characteristics associated with frequent physical exercise in US adults with arthritis.

Methods

- This cross-sectional database study used Medical Expenditure Panel Survey data, which is a national survey conducted throughout the US.

- US adults (age ≥18) alive and with a diagnosis of arthritis were included.

- The dependent variable was frequent physical exercise, defined as moderate-vigorous intensity exercise for ≥30 minutes ≥5 times weekly (response options: yes, no).

- A multivariable logistic regression model was developed to test the association of the following variables with the dependent variable: age, sex, Hispanic, race, census region, marriage status, schooling, employment, health insurance, household income, mental health, general health, smoking status, chronic conditions, pain, and functional limitations.

- The clusters and strata within the data were maintained, and data were weighted to produce national estimates using SAS software SURVEY procedures.

Table 1

Characteristics of US adults with arthritis who did or did not do regular physical exercise in the study population

Variable	Regular Physical Exercise % [95% CI]	No Regular Physical Exercise % [95% CI]
Age ≥70 years	36.4 [33.7, 39.2]	36.8 [34.5, 39.1]
60–69 years	28.5 [26.2, 30.8]	27.7 [25.3, 30.0]
50–59 years	20.2 [17.8, 22.6]	18.8 [16.8, 20.9]
18–49 years	14.9 [12.6, 17.1]	16.7 [14.3, 19.1]
Male	44.0 [41.3, 46.7]	35.2 [33.1, 37.3]
Hispanic	8.4 [6.8, 10.0]	9.7 [7.6, 11.7]
White race	82.7 [80.3, 85.1]	79.0 [76.5, 81.4]
Black race	10.9 [8.9, 12.8]	13.9 [11.9, 16.0]
American Indian/Alaskan race	0.9 [0.4, 1.4]	0.5 [0.2, 0.8]
Asian/ Hawaiian/Pacific race	3.3 [2.0, 4.6]	3.6 [2.4, 4.9]
Multiple races	2.2 [1.4, 2.9]	3.0 [2.1, 4.0]
Northeast census region	17.3 [14.1, 20.5]	17.0 [13.5, 20.5]
Midwest census region	21.2 [17.7, 24.7]	23.3 [19.6, 26.9]
South census region	39.0 [34.5, 43.6]	41.2 [36.9, 45.6]
West census region	22.4 [18.2, 26.7]	18.5 [15.1, 21.9]
Married	55.3 [52.7, 57.9]	51.8 [49.1, 54.5]
High school or less schooling	38.2 [35.5, 41.0]	45.3 [42.8, 47.7]
Employed	46.6 [43.7, 49.5]	35.9 [33.4, 38.4]
Private healthcare	59.8 [57.0, 62.7]	56.9 [54.3, 59.4]
Low household income	26.5 [24.0, 29.0]	34.5 [31.8, 37.2]
Good mental health	90.0 [88.4, 91.6]	81.6 [79.7, 83.4]
Good general health	85.7 [83.7, 87.6]	64.6 [62.1, 67.1]
Current smoker	13.4 [11.3, 15.5]	13.9 [12.2, 15.6]
2+ chronic conditions	58.9 [56.0, 61.7]	68.5 [66.3, 70.7]
Little/moderate pain	80.8 [78.0, 83.6]	63.5 [60.5, 66.5]
No functional limitation	76.5 [74.1, 78.8]	56.9 [54.2, 59.7]

CI = confidence interval. The difference between regular physical exercise and no regular physical exercise groups for each variable was assessed using the Chi² test. There were differences between groups for all variables except age, ethnicity, census region, marital status, health insurance, and smoking status.

Table 2

Associations of variables with regular physical exercise (vs. no regular physical exercise) among US adults with arthritis

Variable	OR [95% CI]
Age ≥70 vs. 18–49 years	1.2 [0.8, 1.7]
Age 60–69 vs. 18–49 years	1.1 [0.8, 1.6]
Age 50–59 vs. 18–49 years	1.2 [0.8, 1.8]
Male vs. female	1.4 [1.2, 1.7] *
Hispanic yes vs. no	0.8 [0.6, 1.2]
White vs. multiple races	1.1 [0.6, 2.0]
Black vs. multiple races	0.9 [0.4, 1.7]
American Indian/Alaskan vs. multiple races	1.9 [0.6, 6.3]
Asian/Hawaiian/Pacific vs. multiple races	0.6 [0.2, 1.4]
Northeast vs. West census region	0.9 [0.7, 1.2]
Midwest vs. West census region	0.7 [0.5, 0.9] *
South vs. West census region	0.9 [0.7, 1.2]
Married vs. not married	0.8 [0.7, 1.0]
High school or less vs. > high school	0.9 [0.8, 1.2]
Employed vs. unemployed	1.3 [1.0, 1.6] *
Private vs. no healthcare	0.9 [0.5, 1.6]
Public vs. no healthcare	1.0 [0.5, 1.9]
Low vs. mid/high household income	0.9 [0.8, 1.2]
Good vs. poor mental health	1.0 [0.7, 1.3]
Good vs. poor general health	2.2 [1.7, 2.8] *
Current smoker vs. nonsmoker	1.2 [0.9, 1.6]
2+ vs. <2 chronic conditions	0.8 [0.6, 1.0]
Little/moderate vs. quite/extreme pain	1.4 [1.1, 1.8] *
Functional limitation no vs. yes	1.6 [1.3, 1.9] *

OR = odds ratio. CI = confidence interval. * = statistical significance

Conclusions

- This study identified variables that were associated with frequent physical exercise among US adults with arthritis. Further work is needed to develop interventions for characteristics that may help increase exercise, and subsequently health outcomes, in this population.

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