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Older adults' favorite activities are resoundingly active: Findings from the NHATS study

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Abstract

Activity is associated with health among older adults yet older adults' favorite activities have rarely been investigated. We analyzed the community dwelling, cognitively-intact sample of NHATS, a nationally representative sample of adults 65, who had named their favorite activities (N = 5247). Logistic regression models estimated the odds of choosing a physical activity controlling for demographics, self-rated health, and disability. For all ages, four of the top five most common favorite activities were active: walking/jogging (14%), outdoor maintenance (13%), playing sports (8.9%), and other physical activity (8.7%). These findings sustain in 65–75 year olds. Even in 80–84 year olds, 3 of the top five activities are active. These findings vary by self-rated health (OR = 0.71, $p < 0.001$), disability (OR = 0.72, $p < 0.001$) and gender (OR = 0.52, $p < 0.001$). Policy makers, clinicians, and urban planners can use these results in their work.

Keywords

Activities; Participation; Physical activity

Introduction

Staying active and socially engaged is important as we age.[1] The activity theory of aging proposes that higher levels of participation in social and leisure activities, and role replacement when circumstances require, are essential to the well-being of older adults[2,3] also endorsed engagement as one of three domains of 'successful aging.' According to their

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successful aging paradigm, 'engagement' can be: (a) performance of activities that give a sense of meaning or purpose, or (b) maintenance of close relationships.[3]

A burgeoning literature demonstrates that activities are associated with health and well-being among older adults.[1,4–6] This literature shows that engagement in activity benefits cognition, depression, heart disease and other diseases. However, relatively few studies have focused on older adults' favorite activities opposed to activities that are simply done. This lack of focus on favorite activities is an important gap as, by definition, activities that are favored are also important potential targets to support interventions that achieve individual and societal goals of reducing disease and improving well-being using older adults' own motivation.[7–9] Authors of a recent critical literature review proposed that three of the most important variables that likely mediate the relationship between performance of a specific activity and well-being are: (a) agency/capability of the older adult to choose the activity; (b) degree of satisfaction/socialization derived from the activity; and (c) purpose/meaning of the activity for the older adult.[1] A better understanding of what specific types of activities are favored among older adults with certain characteristics, and facilitators or barriers to engagement in these activities in later life could help practitioners and policy makers to promote optimal aging.

The objective of this paper was to describe, in a national population-based sample, the favorite activities of older adults. Few, if any, national samples of older adults have collected data about their preferred activities. In these analyses, we examined older adults' favorite activities by age cohort and the extent to which age, race, self-rated health, and living arrangement are associated with their ability to take part in these favorite activities.

Methods

Sample

Data used for the analyses were from the first wave of the National Health and Aging Trends Study (NHATS) collected in 2011. The NHATS sample of 8245 persons 65 or more years of age was drawn from the Medicare enrollment file living in the contiguous United States. The Medicare file represents 96% of persons 65 or older in the US. Persons not represented are those born outside of the country who never qualified for benefits and those who were eligible but have not applied (e.g. delayed enrollment among those still employed). A stratified three-stage sampling design was used with Medicare beneficiaries sampled within secondary sampling units (typically zip codes) that were nested within primary sampling units (counties or groups of counties). African Americans and older participants were oversampled by design. The weighted NHATS sample is nationally representative of the 65 and older Medicare population. Additional details regarding the study design has been described elsewhere (see[10] for additional details on sample design).

Data were collected through in-person interviews of approximately 2 h in length. The baseline wave response rate was 71%. Only community-dwelling persons were used in the present analyses ($N = 7197$), representing 91.6% of the 65 and older Medicare population (weighted percentage). Excluded are persons living in nursing homes and other residential care environments such as assisted living. Removing proxy respondents ($N = 517$), sample

persons classified as having "Probable Dementia" and "Possible Dementia" according to the NHATS dementia classification scheme ($N = 1414$), and respondents with incomplete answers for any outcome variable or covariate ($N = 19$) leaves an analytic sample of 5247 respondents that includes 2204 men and 3043 women (which, when weighted, represents 43.5% and 56.5% of the target population, respectively).

Measures

Favorite activity

During the survey, respondents were asked to describe their favorite activity that they are currently able to do. Respondents' verbatim responses were grouped into fifty-two activities using categories developed in the Panel Study of Income Dynamics Supplement on Disability and Time Use.[11] See Table 2 for rank ordered examples of the 28 activities for which more than 0.5 percent endorsed as favorite. We further categorized these groupings as physical or non-physical activity based on whether they involved considerable body movement or strength to complete (e.g. walking or household chores). Non-physical activities included socializing in person with others or attending casinos.

Living arrangement

Interview questions resulted in four household living situations: respondents who lived alone, respondents who lived with a spouse or partner only, respondents who lived with a spouse or partner and others, and respondents who lived with others only. Children, relatives, and non-family relations comprised "Other" household members. For respondents missing information on the living arrangements questions, the total number of people living in the household was used to categorize living alone status. A binary variable was created to identify those respondents who live alone versus those who did not.

Health and disability

Disability was measured by the number of self-care impairments respondents reported. Respondents were asked if they had any problems completing everyday activities without help. These domains included eating, getting in or out of bed, getting in or out of chairs, walking around inside, going outside, dressing, bathing, and toileting.[12]

Self-rated health

Respondents were asked to rate their general health. Response categories were 1 = Excellent, 2 = Very Good, 3 = Good, 4 = Fair, 5 = Poor.

Demographic variables

Respondent characteristics included in the analyses were gender, race, age, and income. Gender was confirmed with the respondent and coded as male or female. Eight categories were available for race: White, Black/African American, Asian, American Indian/Alaska Native/Native Hawaiian/Pacific Islander, and other. Respondents that identified multiple races were asked to name a primary race; those unable to choose were classified as "Other" in our analyses. Respondents also identified if they considered themselves Hispanic or Latino. These categories were condensed to White non-Hispanic, Black/African American

non-Hispanic, Hispanic, and Other due to a small sample size of Native Americans/Pacific Islanders. We used six pre-defined NHATS age groups provided in the data file: 65–69, 70–74, 75–79, 80–84, 85–89, and 90+. Income was a respondent estimate of sample person plus spouse or partner, if applicable, for the last year considering all monetary sources. We used the imputed total income value provided by the NHATS public use file, which filled in missing values for 13% of the cohort within a reported bracketed value and 31% within an imputed bracketed value (see[10] for details regarding imputation methodology). Income was divided into intervals of $10,000 up to $100,000.

Statistical analyses

We applied analytic weights to adjust for differential nonresponse and produce national prevalence estimates. All analyses were performed using Stata 13.0 (Stata Corp, College Station, TX). Chi-square tests were used to compare demographic characteristics of those who chose a physical activity as their favorite versus those who chose a non-physical one. Frequencies of the respondent's favorite activity were examined in order of preference for the entire analytic sample and for the age categories of 65–70, 75–80, 80–85, and 90+. We used a logistic regression model to estimate the odds of choosing a physical (versus non-physical) activity controlling for self-rated health status, gender, race/ethnicity, income, age, and living arrangement. Finally, we used a second logistic regression model to estimate the odds of choosing a physical activity (versus non-physical) as the respondent's favorite activity, controlling for disability status, instead of self-rated health, while retaining the same demographic confounders (gender, race/ethnicity, income, age, and living arrangements) in the model.

Results

Characteristics of the community-resident population 65 and older, categorized by preference for a physical versus non-physical favorite activity, are displayed in Table 1. Their ages ranged from 65 to 105 years. The most frequently reported favorite activities for all respondents are listed in descending order of endorsement rate in Table 2. These weighted percentages show that the most popular activities for Medicare beneficiaries over age 65 are overwhelmingly physical ones. The most common favorite activity was walking or jogging (14.00%), followed by outdoor maintenance (12.64%) such as gardening or yardwork, playing sports (8.91%), reading (8.81%), other physical activity (8.73%) and other outdoor activities (6.77%). Only 3% of population listed no favorite activity. Separate analyses for each age group (not shown) revealed that the general pattern in Table 2 also characterizes the older adults in the 65–69 and 70–74 age cohorts. It is not until ages 80–84 that *two* of the top five favorite activities are sedentary (reading at third with 11.0% endorsing and arts and crafts/hobbies with 6.5% endorsing). Even at years 80–84, 3 of the top five activities are active (walking/ jogging, outdoor maintenance, and other physical activity). The cohort who are 90 years old or more endorse reading as their favorite activity (11.79%), with 2 of the next four being active activities (walking/jogging as their second favorite (10.92%) and physical activity as their third favorite (10.62%)). Arts and crafts/ hobbies is fourth with 8.68% and doing puzzles or games not on the computer is fifth at 7.62%.

The White respondents were the least likely to endorse a physical activity as their favorite (see Table 3). Across all races, 4 of the top 5 favorite activities are physical, with reading being the only sedentary one consistently in the top five. A higher proportion of African Americans, Hispanics, and the "other" races endorsed walking/jogging than White older adults (18.70% for African Americans, 24.03 for Hispanics, 20.7 for Asian and others compared to 13.20% for Whites). In adjusted analyses, compared to Whites, African Americans were 40% more likely ($p < 0.001$) to report a physical activity as their favorite, Hispanics were 49% more likely ($p < 0.05$) and Asians/others were 80% more likely ($p < 0.01$) to report a physical activity as their favorite controlling for income, education, and self-rated health (see Table 3).

A higher proportion of older men reported active activities as their favorite and older women were more likely to report non-active activities controlling for age, income and health status. Reading is not in the top 5 favorite activities for men as it is for women. Interestingly, controlling for self-rated health, income is not a predictor of endorsing physical activities as favorite activities (see Table 3).

Self-rated health was associated with picking a non-physical favorite activity (see Table 3). Of interest, even for those rating their health as only "fair," four of the five top favorite activities were active. Only in the worst category of self-rated health ("poor") was "reading" the top choice. "No favorite activity" was the third most popular choice in the poor health category and watching TV was the fifth favorite activity. However, even in this worst health category, "outdoor maintenance" and "walking" remain two of the top five activities.

As expected, disability increased the odds of picking a non-physical favorite activity. For each increase in the count of self-care limitations, older adults were 29% more likely to endorse a non-physical activity as their favorite activity ($p < 0.001$) controlling for race, income and age. Living alone was not related to the odds of choosing a physical activity as the favorite one.

Discussion

Findings from this nationally representative sample of adults 65 or more years of age show that contrary to stereotype,[13] older adults prefer to walk, jog, garden, or play sports more than they like to watch TV, attend religious services, or travel. The questions asked to ascertain favorite activity includes in the definition that they have been able to do this favorite activity over the last month. The fact that an overwhelming proportion of older adults chose physical activity as their favorite activity and that they have been able to do it in the previous month is good news for an aging society.

The importance of even just a small amount of walking or other physical activity has been established in the gerontological literature.[14,15] Staying physically active is the closest advice that gerontologists and geriatricians have to a "silver bullet" to prevent and ameliorate depression,[16,17] heart disease,[18] and further disability.[19] Further, an NIH consensus panel on dementia recently concluded that physical activity is the only intervention against cognitive decline with enough evidence to recommend it to forestall

cognitive decline.[20] The physical activity literature among older adults is clear that physical activity among older adults also improves quality of life.[21,22] City planners, clinicians, and older adults can use the results of this study to further develop policies to help older adults sustain these favorite activities by designing around favorite activities. Local governments, businesses and non-profits can benefit the overall society by providing ways for older adults to safely exercise such as community centers, walking groups and TaiChi groups.

Physical activities were chosen as the favored activities for respondents from all income and race groups. This finding has implications for nursing and public health practitioners designing health disparity interventions using older adults' favorite activities.

These findings should be interpreted within the context of the following limitations. First, it is possible older adults experience worries about social desirability in answering the question and are less likely to answer that their favorite activity is gambling, drinking, or another activity that might cause embarrassment. In addition, social desirability bias could lead people to overstate the importance of activities considered healthy such as walking or jogging. As the majority of older adults do not achieve the daily physical activity recommendations, this tension could either be overstating their preference or could reflect lack of supports to engage in these activities. Second, these analyses are cross-sectional and limited to a discrete period of time. Respondents were asked the favorite activity that they have actually done in the last month. Seasonality and weather could influence the activities chosen. Also, clear bidirectionality in the relationship between favorite activity that one can do and one's ability to do the activity exists and can limit the findings of the analyses. It will be important to examine this question again in successive waves of NHATS. Subsequent data collection waves are scheduled for the NHATS, and these follow-up data will allow careful longitudinal analyses of changes in favorite activity. Interesting cohort differences over time may emerge as the "Baby boomers" age and the "silent generation" gets even older.[23]

In conclusion, the present results indicate that older adults resoundingly choose a physically engaging activity as their "favorite" activity. This goes against common stereotypes[24] that older adults prefer more sedentary activities. These findings show that clinicians, interventionists and policy makers can target improvements in physical activity knowing that it is the favorite activity of the vast majority of older adults. Longitudinal data from NHATS will contribute important knowledge on the ways in which favorite activities change with aging and possible causal pathways among health, disability and favorite activities.

Acknowledgments

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Table 1

Respondent demographic characteristics.

Characteristic	Those that list a "physical activity" as favorite (*n* = 3134)	Those that list a "non-physical" activity as favorite (*n* = 2115)	Total (*n* = 5249)	χ^2 (*p* value) for categorical variables[a]
Age, %				110.19 (<0.000)
65–69	26.5	19.2	23.6	
70–74	26.3	21.3	24.3	
75–79	21.0	21.0	21.0	
80–84	15.7	21.4	18.0	
85–89	7.6	11.1	9.0	
90+	2.9	6.0	4.1	
Gender, %				113.03 (<0.000)
Male	48.0	33.2	42.0	
Female	52.0	66.8	58.0	
Race, %				19.12 (0.0003)
White, Non-Hispanic	70.7	75.5	72.7	
Black, Non-Hispanic	20.6	18.0	19.6	
Hispanic	5.0	4.3	4.7	
Other	3.8	2.2	3.0	
Living arrangement, %				23.45 (<0.000)
With others	71.7	65.4	69.2	
Alone	28.3	34.6	30.8	
Self-rated health, %				145.55 (<0.000)
1 – Excellent	17.8	9.9	14.6	
2 – Very Good	32.1	26.2	29.7	
3 – Good	31.2	34.4	32.5	
4 – Fair	15.5	21.8	18.0	
5 – Poor	3.4	7.7	5.2	
Income, %				48.70 (<0.000)
< $10,000	8.6	10.2	9.2	
$10,000 –$20,000	18.3	23.6	20.4	
$20,000 –$30,000	15.4	16.7	15.9	
$30,000 –$40,000	13.5	12.7	13.2	
$40,000 –$50,000	9.1	9.2	9.1	
$50,000 –$60,000	8.0	7.0	7.6	
$60,000 –$70,000	5.4	4.1	4.9	
$70,000 –$80,000	5.2	4.0	4.7	
$80,000 –$90,000	3.6	3.3	3.5	
$90,000 –$100,000	2.0	1.6	1.9	
> $100,000	10.9	7.6	9.6	

[a] Pearson χ^2.

Table 2

Percentage and ranking of older adults' favorite Activity.

Activity	Percent (%)	Rank
Walking/jogging	14.00	1
Outdoor maintenance	12.64	2
Playing sports	8.91	3
Reading	8.81	4
Other physical activity	8.73	5
Other outdoor activity	6.77	6
Arts, crafts, hobbies	5.50	7
Puzzles/games not on computer	4.04	8
Socializing in person	3.95	9
No favorite activity	2.99	10
Watching TV/movies	2.85	11
Travel for leisure	1.81	12
Household chores	1.50	13
Other shopping	1.23	14
Going out to eat	1.20	15
Volunteering	1.09	16
Food/drink preparation	1.08	17
Other religious activities	0.99	18
Computer leisure activities	0.97	19
Attending religious activities	0.90	20
Work	0.86	21
Watch sporting events	0.69	22
Animal care	0.67	23
Puzzles/games on computer	0.56	24
Gambling at a casino	0.55	25
Walking pets	0.54	26
Physical care to others	0.50	27
Attending movies	0.50	28

Bolded text denotes physical activities.

Table 3

Logistic regression analysis of the association between choosing a "physical activity" as favorite and decreasing self rated health (N = 5247).

Variables	Odds ratio	95% CI[a]
Self rated health (5 = poor, 1 = excellent)	0.71	**(0.67, 0.76)**
Gender[b]	0.52	**(0.45, 0.61)**
Race		
White, non-Hispanic	1.0 (ref)	
Black, non-Hispanic	1.40	**(1.22, 1.61)**
Hispanic	1.48	**(1.02, 2.14)**
Other	1.84	**(1.23, 2.78)**
Age categories		
65–69	1.0 (ref)	
70–74	0.92	(0.79, 1.07)
75–79	0.77	**(0.64, 0.92)**
80–84	0.59	**(0.50, 0.70)**
85–89	0.54	**(0.44, 0.67)**
90+	0.41	**(0.29, 0.59)**
Living alone[c]	0.95	(0.82, 1.12)
Income		
< $10,000	1.0 (ref)	
$10,000–$20,000	0.84	(0.64, 1.10)
$20,000–$30,000	0.96	(0.71, 1.30)
$30,000–$40,000	0.99	(0.72, 1.35)
$40,000–$50,000	0.80	(0.57, 1.13)
$50,000–$60,000	0.94	(0.67, 1.33)
$60,000–$70,000	0.98	(0.63, 1.54)
$70,000–$80,000	0.82	(0.56, 1.22)
$80,000–$90,000	0.78	(0.53, 1.16)
$90,000–$100,000	1.07	(0.64, 1.77)
>$100,000	0.94	(0.65, 1.35)

CI = confidence interval.

[a]Bolded confidence intervals indicate significance (p < 0.05).

[b]Reference group is male.

[c]Reference group is living with others.