IOWA STATE UNIVERSITY
College of Human Sciences and Iowa State University Extension and Outreach

UNIVERSITY OF THE DISTRICT OF COLUMBIA
COLLEGE OF AGRICULTURE, URBAN SUSTAINABILITY AND ENVIRONMENTAL SCIENCES

IDPH IOWA Department of PUBLIC HEALTH

Physical Activity: What do Older Adults Need and Want?

Francis, S.L.[a], Harrison, E. [b], Contrady, A. [a], Montgomery, D. [c], Rudolph, C.S. [a], Monroe Lord, L.[b], Asongwed, E [b]., Jackson, P. [b], Jean Baptiste, A.M. [b], Johnson-Largent, T. [b], Harris, M. [b], Jeffery, T. [b], Broadnax, P. [b]

Abstract

Background: Physical activity (PA) is an integral part of successful aging. However, many older adults (OAs) are not meeting current PA recommendations.

Objective: To assess the PA needs, preferences, and practices of community-residing OAs.

Study Design, Settings, Participants: This qualitative study assessed the PA needs and preferences of 118 community-residing OAs. Thirteen focus groups (FG) were held in Iowa (IA, 5 FG) and Washington, DC (DC, 8 FG). FG discussions centered on perceived PA needs, motivators and barriers and preferred PA programming attributes. Each FG was audio-recorded. Participants also completed a sociodemographic survey. IA participants (n=51) were recruited at congregate meal sites while DC participants (n=66) were recruited from two OAs volunteer programs.

Measurable Outcome/Analysis: FG recordings were transcribed verbatim and reviewed for major themes using standard theme analysis protocols. Sociodemographic data were analyzed using descriptive statistics. Kruskal-Wallis H Test assessed between group differences for sociodemographic attributes ($p \leq 0.05$).

Results: The mean age of participants was 74.4 ± 7.0 years. Participants were mostly educated (77.2%) females (83.1%) in "average or higher" health (84.8%). IA participants were more educated than DC participants ($p \leq 0.0001$). The sample was diverse (44.2% White, 38.9% Black). DC was more diverse than IA ($p \leq 0.0001$). Nearly one-third were widowed (30.5%). Almost one-half (46.6%) classified their PA level as "somewhat high" to "high" with 63.6% claiming to have participated in regular exercise in the last three months. DC participants reported a higher exercise participation rate (p=0.003). PA motivators were socialization and health benefits. PA barriers were pain (or fear of pain), limited disposable income, health limitations, and low motivation. Preferred PA programming attributes included group-based, expert-led, and age-appropriate (e.g. walking [IA], dancing [DC]).

Conclusion: This sample of community-residing OAs are not meeting PA recommendations. The perceived PA needs and preferences were similar regardless of being rural- or urban-residing. These findings provide useful information to better enable tailoring of PA messaging and programming for community-residing OAs.

Background

- The older adult population represents 16% of the US population[1]. Iowa's older adult population is similar at 17.1% while the older adult population in the District of Columbia (DC) is slightly lower at 12.1%.[2-4]
- The environment in which people live, work, and age affects a range of health outcomes and overall quality of life. [5-6]
- Despite the many benefits associated with physical activity, 82.4% of older Americans (84% of older Iowans, and 81% of older adults in DC) are not meeting the physical activity recommendations.[7]

Purpose

- To assess the physical activity needs and practices of community-residing older adults.

Methods

Recruitment

- Adults age 60 years and older were recruited through community-based health programs in Iowa (i.e., SNAP-Ed) and DC (e.g., Respite Aid); 118 older adults participated.

Focus Groups Procedures

- 13 (5 in Iowa, 8 in DC) 2-hour focus group sessions were held.
- Focus group discussions included 7-open ended questions and were conducted in English, Spanish and Chinese. Non-English sessions were conducted with the help of translators.
- Participants completed a 16-item sociodemographic questionnaire.
- Focus group sessions were audio-recorded, transcribed verbatim, and analyzed for themes by the university's respective research team members using standardized protocol.[8]

Data Analysis

- Descriptive statistics were used to analyze sociodemographic characteristics (SPSS 25.0).
- Kruskal-Wallis H Tests were conducted to assess for sociodemographic and physical activity differences between states.

Results

- Participants were mostly older, racially diverse, females with at least a high school education who were food secure (Table 1).
- The majority rated their health as "average." (Table 1).
- Significant between state differences were detected for: race (p<0.0001), education level (p<0.0001), food security level (p=0.048) (Table 1). The DC groups were more diverse and had more participants classified as having "low food security." The Iowa groups were more educated.

Table 1. Sociodeomographic Characteristics of Participants (n=118)

Sociodemographic Characteristic	Overall (n=118)		DC (n=66)		Iowa (n=52)	
	Number (N)	Percent (%)	Number (N)	Percent (%)	Number (N)	Percent (%)
Age (in years)						
60-69	32	27.0	26	39.4	6	11.4
70-79	55	46.4	30	45.4	25	47.9
80-89	27	22.6	9	13.6	18	34.6
90 and greater	3	2.4	1	1.5	2	3.8
Missing	1	0.8	--	--	1	1.9
Gender						
Female	98	83.1	54	81.8	44	84.6
Male	18	15.1	10	15.2	8	15.4
Missing	2	1.7	2	3.0	--	--
Race[a]						
Asian	8	6.8	8	12.1	0	0.0
Black	44	37.3	43	65.2	1	1.9
Hispanic	8	6.8	8	12.1	0	0.0
White	50	42.4	0	0.0	50	96.2
Other	3	2.5	2	3.0	1	1.9
Missing	5	4.2	5	7.6	--	--
Marital Status						
Divorced	23	19.5	16	24.2	7	13.5
Married	33	28.0	12	18.2	21	40.4
Separated	3	2.5	3	4.5	0	0.0
Single, never married	18	15.3	14	21.2	4	7.7
Widowed	36	30.5	16	24.2	20	38.5
Missing	5	4.2	5	7.6	--	--
Highest Degree Completed[a]						
Less than high school	22	18.6	20	30.3	2	3.8
High school/GED	44	37.3	25	37.9	19	36.5
Some college	21	17.8	10	15.2	11	21.2
Associate's degree	3	2.5	2	3.0	1	1.9
Technical school	6	5.1	1	1.5	5	9.6
Bachelor's degree	9	7.6	3	4.5	6	11.5
Graduate degree	8	6.8	0	0.0	8	15.4
Missing	5	4.2	5	7.6	--	--
Level of Food Security[b]						
Low Food Security	9	7.6	8	12.1	1	1.9
High Food Security	97	82.2	46	78.7	51	98.1
Missing	12	10.2	12	18.2	--	--
Self-Reported Health Status						
Very poor	3	2.5	1	1.5	2	3.8
Somewhat poor	13	11.0	8	12.1	5	9.6
Average	38	32.2	19	28.8	19	36.5
Somewhat good	34	28.8	23	34.8	11	21.2
Very good	28	23.7	13	19.7	15	28.8
Missing	2	1.7	2	3.0	--	--

[a] p<0.0001; [b] p=0.048

- One-third of participants described their physical activity level as "somewhat high" (Table 2).
- Over one-half of participants reported they did not meet the recommended levels of moderate or vigorous physical activity (Table 2).
- Between state differences were noted for time spent being moderately active (p=0.008), and time spent being vigorously active (p=0.003) (Table 2). The Iowa group had more people meeting the ≥150 minutes of moderate activity recommendation while the DC group had more people meeting the ≥75 minutes of vigorous exercise recommendation.
- Two-thirds of participants reported taking part in regular exercise within the last three months prior to their focus group session. (Table 2).
- The majority preferred exercising in groups (Table 2).
- One third of participants stated they preferred a weekly physical activity routine and that home was the location of regular exercise (Table 2).

Results continued.

Table 2. Participant Physical Activity (PA) and Exercise Levels and Preferences

Physical Activity Levels and Preferences	Overall (n=118)		DC (n=66)		Iowa (n=52)	
	Number (N)	Percent (%)	Number (N)	Percent (%)	Number (N)	Percent (%)
Self-reported PA Level						
No activity	6	5.1	2	3.0	4	7.7
Low activity	17	14.4	9	13.6	8	15.4
Somewhat low activity	36	30.5	21	31.8	15	28.8
Somewhat high activity	43	36.4	23	34.8	20	38.5
High activity	12	10.2	7	10.6	5	9.6
Missing	4	3.4	4	6.1	--	--
Self-reported Time in Moderate PA [a]						
<150 minutes	45	38.1	19	28.8	26	50.0
≥150 minutes	33	28.0	16	24.2	17	32.7
Not sure	34	28.8	25	37.9	9	17.3
Missing	6	5.1	6	9.1	--	--
Self-reported Time in Vigorous PA [b]						
<75 minutes	50	42.4	19	28.8	31	59.6
≥75minutes	25	21.2	15	22.7	10	19.2
Not sure	36	30.5	25	37.9	11	21.2
Missing	7	5.9	7	10.6	--	--
Exercised Regularly Within Last 3 Months						
Yes	75	63.6	40	60.6	35	67.3
No	37	31.4	20	30.3	17	32.7
Missing	6	5.1	6	9.1	--	--
Socialization Preference During Exercise						
I do not exercise	12	10.2	9	13.6	3	5.8
Exercise alone	28	23.7	13	19.7	15	28.8
Exercise in groups	37	39.8	28	42.4	19	36.5
No preference	30	25.4	15	22.7	15	28.8
Missing	1	0.8	1	1.5	--	--
PA Routine Preference						
I am not physically active	15	12.7	9	13.6	6	11.5
I prefer a weekly routine	38	32.2	20	30.3	18	34.6
I prefer variability	35	29.7	18	27.3	17	32.7
No preference	27	22.9	16	24.2	11	21.2
Missing	3	2.5	3	4.5	--	--
Exercise Location						
At home	50	37.6	21	35.0	29	39.7
Community/rec center	21	15.8	14	23.3	7	9.6
Fitness Center	9	6.8	3	5.0	6	8.2
Outdoors	19	14.3	4	6.7	15	20.5
Senior Center	31	23.3	15	25.0	16	21.9
Sports Club	2	1.5	2	3.3	--	--
Yoga/Pilates/barre studio	1	0.8	1	1.7	--	--

[a] p=0.008; [b] p=0.003

- Figures 1 and 2 outline the themes that emerged from the focus group discussions. No key thematic differences between states were noted.

Individual Exercise and Physical Activity Perceptions & Experiences

- **Happy, feel better, fearful/skeptical**
  - *"[exercise] makes me feel good, and I feel bad that I didn't do it for 20 years…."*
  - *"…I'm skeptical if I'm going to be worse off when I get through it [exercise]."*

Perceived Benefits of Exercise and Physical Activity

- **Improved physical function, cognitive function, and general health**
  - *"I think it [physical activity/exercise] keeps your mind sharper…"*
  - *"… I know one of the benefits is lower blood pressure, lower bad cholesterol, higher good cholesterol, lower blood sugar, just overall healthier."*

Local Support & Ideal program Attributes Needed for Exercise and Physical Activity

- **Senior center, designated walking areas, personal trainers, pool, multipurpose, affordable**
  - *"There would be a centrally located facility with both a lap pool so people could swim laps and a warm pool for people to do warm water exercises…and a track … and the ability to have ongoing classes of various kinds for exercises, and hobbies, and socializing…free transportation for those what cannot get there…"*

Figure 1. Physical Activity Perceptions and Preferences

Results continued.

Exercise & Physical Activity Motivators

- **Socialization, group classes, dancing, and anticipated health benefits**
  - *"I exercise more when I hurt. I have to move just so I can feel better."*
  - *"[Socialization] is our primary reason for coming, otherwise we are sitting at home alone."*
  - *"Exercising creates energy, so if you don't exercise then you don't have the energy to exercise."*

Exercise & Physical Activity Barriers

- **Pain/fear of pain, limited time/scheduling challenges, finances, physical limitations and low motivation.**
  - *"I have a friend who no longer goes to the health club or pool because her insurance did not renew the contract with the place they went…financial is a problem for a lot of people."*
  - *"I've been active most of my life. I can't do most of the things I enjoy doing. I really grieved what I can't do because of physical limitations."*

Figure 2. Exercise and Physical Activity Motivators and Barriers

Limitations

- The generalizability of these findings is limited due to small sample size. However, the themes identified in our study reflect those of other studies. For example, Bethancourt and others (2014) noted similar perceived barriers (e.g. fear of pain or injury) and motivators (e.g. improved mood) for the same population. We also found that socialization played a key part in motivation someone to be physically active which is similar to what Costello and others (2011) reported.

Conclusions

- These findings suggest that community residing older adults in both rural and urban areas share similar perceptions and preferences regarding physical activity and exercise despite their sociodemographic and physical activity differences.
- The identified individual perceptions and physical activity experiences themes as well as the perceived benefits and motivators focused on the anticipated positive outcomes that are brought about by being physically active. It may be advantageous for physical activity educational messages to touch on the many benefits of an active lifestyle versus teaching only the exercise movements.
- For both states, the senior center was noted as one of the main ways communities support regular activity for older adults. It would be of interest for public health practitioners who serve both rural and urban areas to utilize such centers as educational channels through which to further promote and educate regarding physical activity and exercise.
- It would be beneficial for public health practitioners to examine access to existing facilities which allow for community residing older adults to partake in regular physical activity and exercise (i.e. cost, age appropriate activities, access to instructors/trainers, transportation, etc.).

References

1. United States Census Bureau. (2019). QuickFacts: Iowa. US Census Bureau: https://www.census.gov/quickfacts/IA
2. Population Reference Bureau. (2019). Which States Have the Oldest Populations? Population Reference Bureau: https://www.prb.org/which-us-states-are-the-oldest/.
3. United States Census Bureau. (2019). Quickfacts: United States. US Census Bureau: https://www.census.gov/quickfacts/fact/table/US/PST045218
4. United States Census Bureau. (2019). QuickFacts: District of Columbia. US Census Bureau: https://www.census.gov/quickfacts/DC.
5. Center for Disease Control and Prevention (CDC). (2019). Social Determinants of Health: Know What Affects Health. CDC: https://www.cdc.gov/socialdeterminants/
6. Office of Disease Prevention and Health Promotion (ODPHP) (2019). Social Determinants of Health. ODPHP: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health
7. Center for Disease Control and Prevention. (2017). Percent of adults who achieve at least 150 minutes a week of moderate-intensity aerobic physical activity or 75 minutes a week of vigorous-intensity aerobic physical activity and engage in muscle-strengthening activities on 2 or more days a week. CDC: https://nccd.cdc.gov/dnpao_dtm/rdPage.aspx?rdReport=DNPAO_DTM.ExploreByTopic&islClass=PA&islTopic=PA1&go=GO
8. Rabiee P. (2004). Focus-group interview and data analysis. *The Journal of Nutrition.* 63(4):655-660. doi:10.1079/PNS2004399.
9. Bethancourt, H., Rosenburg, D., Beatty, T., Arterburn, D. (2014). Barriers to and Facilitators of Physical Activity Program Use Among Older Adults. Clinical Medicine and Research. 12(1-2), 10-20. https://dx.doi.org/10.3121%2Fcmr.2013.1171.
10. Costello, E., Kafchinksi, M., Vrazell, J., Sullivan P. (2011). Motivators, Barriers, and Beliefs Regarding Physical Activity in an Older Adult Population. Journal of Geriatric Physical Therapy. 34(3), 138-147. https://doi.org/10.1519/jpt.0b013e31820e0e71.

a= Iowa State University; b= University of the District of Columbia; c= Iowa Department of Public Health

Iowa Funding Source: USDA's Supplemental Nutrition Assistance Program, SNAP, in collaboration with the Iowa Department Public Health and Iowa State University Extension and Outreach. These institutions are equal opportunity providers and employers. Iowa Food Assistance can help you buy healthy food. Visit http://dhs.iowa.gov/food-assistance or contact your local Department of Human Services office. **UDC Funding source**: This research is supported by the USDA's NIFA Hatch/ Multi-State. **This work was completed as part of the USDA NE-1439 Multistate Project "Changing the Health Trajectory for Older Adults through Effective Diet and Activity Modifications."**

For more information contact:
Sarah L. Francis, slfranci@iastate.edu