

# Understanding Older Adults' Motivators and Barriers to Participating in Organized Programs Supporting Exercise Behaviors

Kelly Biedenweg · Hendrika Meischke · Alex Bohl ·  
Kristen Hammerback · Barbara Williams · Pamela Poe ·  
Elizabeth A. Phelan

Published online: 9 November 2013  
© Springer Science+Business Media New York 2013

**Abstract** Little is known about older adults' perceptions of organized programs that support exercise behavior. We conducted semi-structured interviews with 39 older adults residing in King County, Washington, who either declined to join, joined and participated, or joined and then quit a physical activity-oriented program. We sought to explore motivators and barriers to physical activity program participation and to elicit suggestions for marketing strategies to optimize participation. Two programs supporting exercise behavior and targeting older persons were the source of study participants: Enhance<sup>®</sup> Fitness and Physical Activity for a Lifetime of Success. We analyzed interview data using standard qualitative methods. We examined variations in themes by category of program participant (joiner, decliner, quitter) as well as by program and by race.

Interview participants were mostly females in their early 70s. Approximately half were non-White, and about half had graduated from college. The most frequently cited personal factors motivating program participation were enjoying being with others while exercising and desiring a routine that promoted accountability. The most frequent environmental motivators were marketing materials, encouragement from a trusted person, lack of program fees, and the location of the program. The most common barriers to participation were already getting enough exercise, not being motivated or ready, and having poor health. Marketing messages focused on both personal benefits (feeling better, social opportunity, enjoyability) and desirable program features (tailored to individual needs), and marketing mechanisms ranged from traditional written materials to highly personalized

K. Biedenweg · H. Meischke · K. Hammerback ·  
E. A. Phelan  
Department of Health Services, School of Public Health,  
University of Washington, Seattle, WA, USA

A. Bohl  
Mathematica Policy Research, Cambridge, MA, USA

B. Williams  
School of Social Work, University of Washington,  
Seattle, WA, USA

P. Poe  
Department of Humanities and Communication Arts,  
Cheyney University of Pennsylvania, Cheyney, PA, USA

P. Poe  
School of Nursing and Health Sciences, La Salle  
University, Philadelphia, PA, USA

E. A. Phelan (✉)  
Division of Gerontology and Geriatric Medicine,  
Department of Medicine, University of Washington, 325  
9th Avenue, Box 359755, Seattle, WA 98104, USA  
e-mail: phelane@u.washington.edu

approaches. These results suggest that organized programs tend to appeal to those who are more socially inclined and seek accountability. Certain program features also influence participation. Thoughtful marketing that involves a variety of messages and mechanisms is essential to successful program recruitment and continued attendance.

**Keywords** Aged · Exercise · Health promotion/organization and administration · Patient participation · Health behavior · Qualitative research

## Background

Physical activity has well-documented health benefits for older adults, including chronic disease prevention and control (Hu et al., 1999; Manson et al., 2002), improved functioning (Cress et al., 1999), and reduced risk of falls (Moyer, 2012). A large body of evidence supports the efficacy of a variety of physical activity and behavior change programs to assist older persons to become active (Conn, Minor, Burks, Rantz, & Pomeroy, 2003). However, the majority of older adults are not optimally active (Prohaska et al., 2006); one-third of adults aged 65 and above engage in no leisure-time physical activity whatsoever (Department of Health and Human Services, DHHS, 2013), and disparities by gender, ethnicity, and income are evident (DHHS, 2013; Schoenborn & Heyman, 2009). This situation clearly represents an important public health challenge—i.e., how to increase the engagement of older persons in routine physical activity.

Organized community-based programs hold promise as one means by which to increase participation in physical activity programs, achieve long-term exercise adherence (van der Bij, Laurant, & Wensing, 2002), and optimize health outcomes (Ashworth, Chad, Harrison, Reeder, & Marshall, 2005; Gregg, Pereira, & Caspersen, 2000; Wolin, Glynn, Colditz, Lee, & Kawachi, 2007). Such programs are often designed specifically for older adults (Mathews et al., 2010). However, despite their promise, engagement in these programs by older persons remains low (Hammerback, Felias-Christensen, & Phelan, 2012).

Prior research on physical activity engagement in later life has focused on understanding the adoption of

exercise behavior (Findorff, Stock, Gross, & Wyman, 2007), physical activity preferences (Wilcox, 1999), the relative characteristics of older non-exercisers and regular exercisers (Elward, Larson, & Wagner, 1992a; Walsh, Pressman, Cauley, & Browner, 2001), and motivators and barriers to exercise specific for this age group (Belza et al., 2004; Brawley, Rejeski, & King, 2003; Cohen-Mansfield, Marx, & Guralnik, 2003; Crombie et al., 2004; Lees, Clark, Nigg, & Newman, 2005; Schutzer & Graves, 2004). Much less is known about the role of organized community-based programs that seek to support exercise behavior among older adults (Elward, Wagner, & Larson, 1992b). In particular, an understanding of older adult perceptions of the utility and appeal of such programs is largely lacking. This is especially true for older adults of diverse ethnic backgrounds and those who are socio-economically disadvantaged (Conn et al., 2003).

In order to better understand why older persons are not participating in physical activity-oriented programs designed specifically for them, we undertook a qualitative study involving older adults who had elected or declined to participate in such a program. Our purpose was to explore motivators and barriers to program participation among these individuals. We also sought to understand how program marketing strategies had influenced their decision to join a particular program and what additional or alternative marketing strategies might be recommended. As this was an exploratory study, we had no preconceived hypotheses.

## Methods

### Study Design

We conducted semi-structured, one-on-one interviews with older persons who had accepted or declined an opportunity to participate in a program that supported exercise behavior. We used a purposive stratified sampling strategy to interview 40 older adults, approximately equally divided between program joiners and decliners from two programs (Miles & Huberman, 1994). We selected this target enrollment goal based on research suggesting that the perceptions of all but the smallest market segments are likely to be found in samples of 30 or less (Griffin & Hauser, 1993).

## Setting

We conducted the study between February and August 2008 in King County, Washington. Two programs supporting exercise behavior and targeting older persons were the source of study participants: Enhance<sup>®</sup>Fitness (EF) and Physical Activity for a Lifetime of Success (PALS). We selected these programs because several of us had been involved with developing, testing, and/or disseminating the programs and had ongoing working relationships with the community partners in charge of administering the programs. EF is a group exercise class designed for older adults and led by trained instructors. Classes include aerobic, strength, flexibility, and balance exercises. Initially tested in a randomized trial that demonstrated benefits of EF participation on physical and psychosocial functioning (Wallace et al., 1998), EF has since been widely disseminated (Belza, Snyder, Thompson, & LoGerfo, 2010). As of 2013, nearly 40,000 individuals in the United States had participated in EF at least once since the program's establishment. EF has been recognized by the Administration on Aging as an evidence-based program.<sup>1</sup>

PALS is an individual-level, telephone-based physical activity counseling program, modeled after Active Choices (Hooker et al., 2005) and modified to assist sedentary older persons from diverse backgrounds increase their physical activity level. PALS is offered through a senior center in Southeast Seattle. PALS participants are paired with a volunteer phone buddy who assists them in setting a personal activity goal, and volunteers then follow up with their PALS participant intermittently over a six-month period to offer continued motivational support. As of 2010, approximately 130 individuals had participated in the PALS program since its inception in 2005, and the program has increased participants' activity levels (Hammerback et al., 2012).

## Recruitment

We recruited study participants from the two programs' enrollment files. EF enrollment files are maintained by Senior Services, the organization that oversees the program's daily operations. EF program

files contain information about class attendance by individual participants. Individuals listed in EF program files as having attended two or fewer EF classes were included as "decliners" for purposes of the present study. PALS enrollment files are maintained by the PALS program coordinator at the senior center. The PALS program's tracking database contains information on senior center members approached for program participation and their status (i.e., joined or declined). Eligibility criteria included: aged 50+, King County resident, English fluency, able to understand the decision to participate, and enrolled in (or declined) the program at some point after January 2007 and before February 2008. We selected January 2007 as a temporal delimiter, so that those interviewed would have had recent contact with the program and thereby be likely to provide the richest possible insights. The total pool of eligible participants for EF was 206; the total pool of eligible for PALS was 75.

A program employee mailed an invitation letter to potential participants, along with a stamped return postcard to indicate study participation preference. The study coordinator called potential participants who did not respond to the mailing to determine their willingness to participate. Letters were mailed until we enrolled the a priori target of 20 participants from each program. For EF, we mailed 24 letters of invitation to joiners and 30 to decliners to reach the target of 20 completed interviews. For PALS, we mailed 15 letters to joiners and 18 to decliners to reach the target of 20 completed interviews.

## Data Collection

### *Interview Guide*

We developed the interview guide specifically for purposes of this study. It included warm-up questions (e.g., values and views on healthy living, healthy aging, and physical activity) followed by questions specific to the topics of interest (e.g., reasons for joining or not; advice on marketing the program to other older adults). We included probes to encourage participants to "think out loud" (e.g., "Just tell me what first pops into your head [about the reason why you decided to join/not join the program.]"). Other study team members reviewed the guide and we then pilot-tested it for comprehension with four older persons and revised it based on the feedback we

<sup>1</sup> See [http://www.aoa.gov/AoARoot/AoA\\_Programs/HPW/Title\\_IIID/index.aspx](http://www.aoa.gov/AoARoot/AoA_Programs/HPW/Title_IIID/index.aspx).

received. None of the interview questions explored preconceived hypotheses or sought to confirm findings of published studies.

### *Interview Procedure*

Trained research assistants conducted all interviews in the participant's home or at an alternative location selected by the participant. We audiotaped interviews that lasted an average of 45 min. We collected demographic information at the conclusion of the interview and then gave a \$25 gift card to each participant. We monitored interviewers for fidelity to the script and for consistency across interviewers. The University of Washington's Institutional Review Board approved all study procedures.

### *Qualitative Analysis*

A professional transcriptionist transcribed the interviews verbatim and imported them into QSR NVivo version 7.0 (QSR International, Cambridge, MA, USA). Coding was approached using grounded theory (Corbin & Strauss, 1990). An initial reader experienced in qualitative analysis generated themes, and a second experienced reader confirmed and modified them. Using grounded theory helped ensure that the motivations related to joining or not joining a program were defined by the participants and not by the researchers (Charmaz, 2006). A final reader confirmed that the results matched her overall impression of the interviews.

The initial reader generated a model based on two broad categories of factors influencing the decision to engage in a behavior that emerged from reviewing the interview transcripts: personal and environmental. Personal factors refer to internal drivers, and include outcome expectancies (e.g., motivation for and benefits of performing a behavior) and emotional responses related to the behavior. Environmental factors are external drivers and may be physical, social, or structural. Physical factors refer to the location of the program and participants' ability to get to that location or their acceptance of the location as a place they would go. "Social" refers to the human factors, such as other people who participated in the program or the program instructor. "Structural" refers to programmatic features, such as program marketing, whether it was delivered in a group or individual

format, the class schedule, and health insurance coverage of the program. The initial reader then developed a codebook that defined several themes for each of these factors. The themes and codebook were further developed by the second reader, who read every interview and assigned relevant lines to each theme. The research team discussed the final themes until consensus was achieved. Because coding was done by consensus, we did not calculate inter-rater agreement.

We then analyzed study data for each theme, grouped by personal and environmental motivators and barriers to joining programs. We explored variations in themes for three categories of program participation that arose endogenously from the data, in order to explore if motivators and barriers were different. The first category comprised those who had joined, enrolled and participated in the program ("joiners"). The second category included those who had declined to join the program ("decliners"), meaning those who (in the case of PALS) did not enroll when invited, or (in the case of EF) enrolled but attended no classes. The third category of participation comprised those who joined but left the program after brief participation ("quitters"); these were all EF participants who attended only one or two classes. We also explored variations in themes by program and participant race.

## **Results**

### *Overview of Results*

The results that follow are based on completed interviews with 19 program joiners and 20 decliners. Of the 20 decliners, eight (all EF) participated for a short time and then left the program. We therefore analyzed interview data according to these three participant categories ("joiner," "decliner," and "quitter"), because this approach was most grounded in the data and also because we suspected that each category might offer different insights that could inform program recruitment and retention.

### *Demographics*

Participant demographics and health self-ratings are displayed in Table 1. Most participants were females

**Table 1** Demographics and self-rated health of study participants, by category of physical activity program participation (joiner, decliner, quitter)

Characteristic <sup>a</sup>	Joiner ( <i>n</i> = 19)	Decliner ( <i>n</i> = 12)	Quitter <sup>b</sup> ( <i>n</i> = 8)
Mean age ( <i>SD</i> ) in years	73 (11)	72 (6)	69 (3)
% Female	84	67	88
% Married or partnered	37	42	37
% Non-White	50	58	25
% College graduate <sup>c</sup>	53	42	75
% Household income ≤\$15,000	23	17	0
% Household size ≥2 persons	47	50	50
% Self-rated health: excellent or very good	63	42	75

<sup>a</sup> Between-group comparisons except for education all non-significant using Pearson Chi Square tests for categorical variables and ANOVA for continuous variables, with a probability threshold of 0.10

<sup>b</sup> Quitters were comprised of participants who joined and participated in one or two EF classes

<sup>c</sup> Significant group difference on the education variable [ $F(2, 36) = 3.33, p = 0.05$ ]

in their early 70s. Approximately half were non-White, and about half were college graduates. The majority rated their health as excellent or very good. College graduates were significantly more likely to quit a physical activity program than to join.

## Themes Related to Program Participation

### Motivators

Study participants cited several personal and environmental motivators that contributed to their decision to pursue a program. We summarize themes described by >30 % of participants in Table 2. Some participants contributed data to both categories (i.e., personal as well as environmental) of motivators, and some contributed data to more than one theme within a category. Personal motivators included enjoying being with others while exercising and desiring a routine that promoted accountability. Other personal motivators included the desire to learn something new, the desire to get out of the house, and prior participation in some sort of organized fitness class that motivated continuing with this format for physical activity. The most important environmental motivators were marketing

materials, encouragement from a doctor or other trusted person, the lack of fees, and program location. Other motivators included the type of exercise offered, time of day of the program, and the encouragement received (from a class instructor or phone buddy). Each of these motivators was mentioned infrequently by decliners.

Comparing motivators by program, EF joiners more often mentioned class features (e.g., instructor, time of day, class location) and their prior participation in some sort of organized fitness class.

We found no differences in motivators by race (White vs. non-White). We did find differences in the frequency of mentions of environmental factors, with non-Whites citing marketing materials, the lack of fees, location, and type of exercise less often than Whites. When these factors were mentioned, however, the content of the discussion was similar: both groups mentioned receiving brochures in the mail, appreciating the lack of fees, preferring a program site near their home, and the appeal of a new form of activity.

### Barriers

Barriers were comparable for decliners and quitters. Summarized in Table 3, the most frequently cited barriers were personal, including already getting enough exercise, not being motivated or ready, and having poor health. Other barriers included being too busy, a lack of affiliation with the type of people in the program, and insufficiently rigorous exercises. The barriers cited most often by quitters were not feeling like they fit in with the other participants (for example, not bonding socially, being more or less fit than others) and not having enough time. The main difference in barriers offered by decliners of the two programs was that PALS decliners more often felt that they already achieved sufficient exercise or that they didn't need the program.

We found no differences by race in the frequency with which participants mentioned that they already got enough exercise, were insufficiently motivated, had poor health, or did not wish to affiliate with the type of people that were in the program.

Although not directly acknowledged by the interviewees as a barrier to joining, the authors noted that several PALS decliners had inaccurate perceptions of the program. Two decliners appeared to believe it was a walking program, while another believed she would

**Table 2** Motivators to joining a physical-activity-oriented program: major themes among program joiners and quitters ( $N = 27$ )

Theme	Example of a participant's response
<b>Personal motivators</b>	
Exercising with others ( $n = 15$ ) <sup>a</sup>	Ok, well, one of the real benefits of getting involved with Enhance <sup>®</sup> Fitness is doing something with other people, making new acquaintances, and having a good time at doing it
Having a routine ( $n = 9$ )	I mean, like a class was important. I can exercise in the living room easily...but I'm also not very disciplined...so, yes, having a class that you had to go to, or at least you felt that you had to go to it
<b>Environmental motivators</b>	
Marketing materials ( $n = 18$ )	I think that it was because we got the flier probably from (our health plan) saying that this was available to us. (Our health plan), obviously, they send fliers out that this is available to you if you want it
Encouragement from a trusted person ( $n = 15$ )	Actually, it was the community health worker—the neighborhood community health worker. She told me, she said, “You know what? You need to let your pride go, and you need help”
Cost ( $n = 12$ )	The big incentive for me was the “no cost.” That was what made me go through with it, because I cannot afford the cost of joining a gym, or the Y even, and the monthly costs incurred. So the big incentive for me, because I wanted to get active, was that it was a no-cost program
Location of program ( $n = 9$ )	The location is one of the important things because we could actually walk down there. We don't, we take the car down there, but I could walk down there or take the bus. It's very convenient

<sup>a</sup> The “ $n$ ” accompanying each theme indicates the number out of the total number of joiners and quitters ( $N = 27$ ) who endorsed that theme

be the one responsible for calling a buddy. Another decliner misunderstood the purpose of phone contacts:

I guess that it didn't really explain well enough about the other partner thing. All I could think of when it just said that a partner checks in is just somebody calling you... it sounded like it was for a shut-in, I guess.

#### Suggestions for Optimizing Program Participation: Marketing Messages and Mechanisms

Interviewees provided several suggestions for marketing messages seeking to motivate people to join the programs (Table 4). Decliners more often suggested a message whose content focused on feeling better physically and psychologically, whereas joiners more often suggested messages focused on enjoyability and the ability to tailor the class routine to one's level of fitness.

Suggestions for ways to optimize program appeal based on structural features were numerous and did not vary by category of program participant. Suggestions included: keeping the cost free or low; ensuring that the instructor is motivational; adding interesting activities (e.g., walking in downtown areas, going to a casino or ballgame); offering classes in both the morning and afternoon, or when the gym is only open to seniors; and adding a nutrition component.

To convey marketing messages and program features, interviewees suggested that advertising should be by word-of-mouth and multiple media outlets, including brochures, postcards, and newsletters from insurance companies, the American Association of Retired Persons, and parks and recreation departments; advertisements in local senior and neighborhood newspapers; websites for insurance companies and senior news agencies; signs on the bus; and television spots. Brochures and posters could also be placed at doctors' offices, libraries, senior centers, community centers, churches, grocery stores, drugstores, and banks, and sent to people who had fallen and to adult children. Several interviewees suggested that doctors should play a role in recommending the programs to their older patients, including giving a competency test that would determine if one should join. Four felt that people would be more likely to participate if they were



**Table 3** Major barriers to joining or continuing a physical-activity-oriented program: themes among program decliners and quitters ( $N = 20$ )

Theme	Example of a participant's response
<b>Personal barriers</b>	
Already get sufficient exercise ( $n = 9$ ) <sup>a</sup>	I think that the assumption is that a lot of seniors don't exercise, so neither of those assumptions really fit me. I mean, I'm a member of a health club, and I'm perfectly able to go and take much more strenuous exercise than that
Not motivated or ready ( $n = 8$ )	I say that it's important, but my actions do not prove that because I don't do anything. It is important, but I'm not doing it
Poor health ( $n = 7$ )	I was going to this class, and then I did something. I've got at least one arthritic knee, and I did something to bang that up

<sup>a</sup> The “ $n$ ” accompanying each theme indicates the number out of the total number of decliners and quitters ( $N = 20$ ) who endorsed that theme

first able to see a demonstration of the activities included in the program. Many suggested that current participants should invite their friends to join.

When creating advertising products, interviewees advised that materials clearly display if a program is free, give audio and written testimonials, show colorful photographs of diverse people doing enjoyable activities, and clearly present the benefits. Attention to diversity should include age, gender, race/ethnicity, and level of fitness, and these should be combined in a single photograph. Several mentioned that pictures showing older adults with grandchildren would be particularly motivating. One interviewee advised against negative or avoidance language and suggested fun messages such as, “Learn belly dancing or salsa or tango.” Others suggested focusing on personal fall risk, with statistics about falls and questions that would affect internal motivation, such as, “Have you fallen?” or “Do you have trouble keeping your balance?”

## Discussion

### Summary of Findings

We sought to elucidate motivators and barriers to participation in organized, physical activity-oriented

**Table 4** Recommendations for marketing messages to promote program participation, by category of physical activity program participation (joiner, decliner, quitter) ( $N = 39$ )

	Joiner ( $n = 19$ )	Decliner ( $n = 12$ )	Quitter ( $n = 8$ )
<b>Personal messages</b>			
They would feel better	10	11	2
It is a social activity and they could meet people	11	5	5
They might actually enjoy the class or type of exercise offered	7	4	0
They would get the support of others while in the class	4	5	1
They will feel good about themselves and it will give them something to do	1	5	0
The class will teach them something new	2	1	1
It might prevent using a walker, experiencing a fall, or minimize arthritis pain	1	2	1
<b>Programmatic messages</b>			
It's free	7	2	1
The program is flexible they don't have to keep up or do everything and there are several options	2	0	1
A phone buddy is available and will only talk about things the participant wants to talk about	0	1	0

programs designed for older adults. To our knowledge, ours is the first study to conduct individual interviews to examine physical activity-oriented program participation among older adults outside the context of research trial participation, and to elicit ideas regarding program marketing (Stathi, McKenna, & Fox, 2010).

Several key findings emerged from our analysis. First, we found that social aspects of a program and the accountability associated with program participation were primary personal motivators. These motivators were common to joiners and quitters and consistent across race. Second, we found that marketing information, along with encouragement from a trusted person and lack of out-of-pocket expense, were key environmental motivators.

Third, the most frequently cited barriers to program participation, common to both decliners and quitters,

were the beliefs that one was already exercising sufficiently or didn't need the support, a lack of motivation or readiness, and poor health. Barriers cited most frequently by quitters were feeling like they did not fit in with the other participants and that they did not have enough time. The finding that a sense of personal affiliation with other class participants influences continued program participation may be a novel finding of our study.

Fourth, with regard to program marketing, suggested messages focused on highlighting the personal gains and benefits of program participation and also unique program features, especially any tailoring to the individual (e.g., phone buddy who listens to you; exercise routine suitable for you). A wide variety of marketing approaches was recommended.

### Interpreting Results: Social Cognitive Theory

Our results indicate that personal beliefs and environmental factors affected willingness to join and attend physical activity programs. Social cognitive theory (SCT) may be a useful framework for interpreting these results (Bandura, 2001). SCT suggests that behavior is a dynamic process in which the social and physical environment affects and is affected by personal beliefs and behaviors. In our study, participants who had positive outcome expectancies about physical activity programs (e.g., exercising provides a routine and improves social engagement, which are both valued outcomes of behavior) were likely to be program joiners. In addition, these individuals reported that encouragement from their social networks and environmental factors (such as cost and timing of program and difficulty level) influenced their decision to join. Some older adults did not believe they were healthy enough to fully participate, indicating that they might have low self-efficacy beliefs regarding their ability to join and remain with such programs. Using SCT as a conceptual framework to develop exercise programs and marketing strategies may prove important in accomplishing behavior change among this population. SCT would suggest that addressing misconceptions about participation in organized fitness programs, increasing confidence in older adults' beliefs that they are healthy enough to participate in such programs, and reducing cost and increasing times and locations in which these programs are offered, would likely constitute effective strategies to increase

participation. In addition, it would be useful to include members of older adults' social networks to motivate them to participate.

### Comparisons with Other Studies

Although we identified a few studies that examined personal characteristics of older persons who chose to attend a structured exercise class (Deforche & De Bourdeaudhuij, 2000; Elward et al., 1992b), we found no studies that explored motivators and barriers to uptake of physical activity-oriented programs, outside the context of research study participation. One focus group study that involved longstanding EF participants examined facilitators of program adherence (Chiang, Seman, Belza, & Tsai, 2008). Our study complements this one in that we examined drivers of initial participation and elicited suggestions from older persons about how to market such programs to their peers. Our study also complements an earlier evaluation of PALS (Hammerback et al., 2012) that used our in-depth interview data to gauge perceptions of PALS: the evaluation found that communicating by telephone was an unattractive aspect of the PALS program.

Our finding that positive outcome expectancies were among the most common personal motivators influencing physical activity program participation mirrors other studies (O'Shea, Taylor, & Paratz, 2007), in which the key factor driving initial motivation for participation in a 12-week trial of an exercise program designed for older persons with chronic lung disease was the expectation that the program would be beneficial.

Some of our findings may not be specific to the elderly population. One study (Rimmer, Hsieh, Graham, Gerber, & Gray-Stanley, 2010) of African-American women enrolled in a pilot study of a telephone-based intervention to increase physical activity found that health concerns were the most common personal barrier to exercise and that program cost was a common environmental barrier.

### Implications for Increasing Older Adult Participation in Organized Programs

Our findings with regard to participation in organized programs designed to support exercise behavior among older persons have a number of implications.



First, more socially-oriented people may be more inclined to join or attend any type of program (Elward et al., 1992b). On the other hand, a group-oriented class may be less appealing to persons who do not enjoy exercising with other people. Because group classes may appeal to only a segment of all older persons, a variety of formats for exercise-oriented programs need to be readily available in order to maximize engagement in some form of routine exercise. One-on-one (e.g., trainer-led) and self-guided (e.g., DVD) formats may hold appeal, depending on the individual. Key to program uptake and long-term adherence will be matching the format to a given individual. Older persons prefer that their healthcare provider assist them in selecting the most appropriate program, which will require that providers are familiar with available options.

Another key implication of our findings is that potential participants' health issues need to be confronted directly. Many older persons experience symptoms such as pain or difficulty breathing; while these symptoms may be ameliorated through routine physical activity, they may also preclude exercise initiation (Cohen-Mansfield et al., 2003). Options for surmounting this frequently-cited barrier may include optimizing treatment of pain, instruction in energy conservation techniques, or initial participation in a one-to-one supervised, cardiopulmonary rehabilitation program, followed by "graduation" to a class or personal routine.

A final implication of our study findings is that a program must be clearly marketed, with emphasis placed on the extent to which the program might be modified or tailored to meet individuals' specific needs. Given the wide array of suggestions from our study participants about how to encourage participation, it is clear that no single marketing strategy will reach all people. Thus, several advertising strategies for any given program may need to be developed to reach various audiences.

### Limitations and Strengths

Our study has several limitations. One is its relatively small sample size, especially when we disaggregated the data by subgroups of joiners, decliners, and quitters. Another is the relatively good health of the sample we recruited; as such, our findings may not generalize to persons in poorer health. Our sample was

also majority female, likely due to the underlying female predominance of the older population and also a greater tendency for females to participate in group exercise classes (Belza et al., 2006; Bopp, Peterson, & Webb, 2012). Additional studies with older men would be informative. We did not assess the physical activity level of our participants, which would have helped clarify whether our findings apply to the full spectrum of inactive, insufficiently active, and optimally active older persons, or only to certain subgroups. Lastly, the interview context (i.e., interviewers from a research center focused on health promotion and healthy aging) may have influenced participants to give socially desirable responses. However, interviewers were trained to probe carefully regarding motivations, and we also interviewed joiners who had recently made the decision to participate.

This study also has numerous strengths. Our sample was drawn from the enrollment files of real-world, community-based programs, as opposed to a research trial. Additionally, half of our sample was non-White, and half were college graduates. This range of racial and educational identity suggests that findings are likely broadly applicable and reflect values in relation to physical activity that are more similar than different across racial groups. In addition, findings were quite similar across the two programs, lending further support for the external validity of our results.

### Conclusions

Encouraging physical activity for older adults is vital to health and functioning in later life. However, physical-activity-oriented programs will only achieve their desired results if older adults are willing to participate. Promoting existing programs is necessary but clearly not sufficient to optimize participation by older individuals. Both personal and environmental factors play a role, and thus both sets of factors need to be taken into consideration. Perhaps most importantly, particular attention must be paid to also addressing identified barriers, which may ultimately determine participation.

**Acknowledgments** This article was sponsored by the CDC Office of Public Health Research through its Centers of Excellence in Health Marketing and Health Communication program (Grant 5-P01-CD000249-03). Additional funding support came from the University of Washington Health

Promotion Research Center, one of CDC's Prevention Research Centers (HPRC cooperative Agreement No. U48-DP-001911).

## References

- Ashworth, N. L., Chad, K. E., Harrison, E. L., Reeder, B. A., & Marshall, S. C. (2005). Home versus center based physical activity programs in older adults. *Cochrane Database of Systematic Reviews*. doi:10.1002/14651858.CD004017.pub2.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1–26.
- Belza, B., Shumway-Cook, A., Phelan, E. A., Williams, B., Snyder, S. J., & LoGerfo, J. P. (2006). The effects of a community-based exercise program on function and health in older adults: The EnhanceFitness Program. *Journal of Applied Gerontology*, 25(4), 291–306.
- Belza, B., Snyder, S., Thompson, M., & LoGerfo, J. (2010). From research to practice: EnhanceFitness, an Innovative Community-Based Senior Exercise Program. *Topics in Geriatric Rehabilitation*, 26(4), 299–309.
- Belza, B., Walwick, J., Shiu-Thornton, S., Schwartz, S., Taylor, M., & LoGerfo, J. (2004). Older adult perspectives on physical activity and exercise: Voices from multiple cultures. *Preventing Chronic Disease*, 1(4), A09.
- Bopp, M., Peterson, J. A., & Webb, B. L. (2012). A comprehensive review of faith-based physical activity interventions. *American Journal of Lifestyle Medicine*, 6(6), 460–478.
- Brawley, L. R., Rejeski, W. J., & King, A. C. (2003). Promoting physical activity for older adults: The challenges for changing behavior. *American Journal of Preventive Medicine*, 25(3 Suppl 2), 172–183.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage Publications.
- Chiang, K. C., Seman, L., Belza, B., & Tsai, J. H. (2008). "It is our exercise family": Experiences of ethnic older adults in a group-based exercise program. *Preventing Chronic Disease*, 5(1), A05.
- Cohen-Mansfield, J., Marx, M. S., & Guralnik, J. M. (2003). Motivators and barriers to exercise in an older community-dwelling population. *Journal of Aging and Physical Activity*, 11(2), 242–253.
- Conn, V. S., Minor, M. A., Burks, K. J., Rantz, M. J., & Pomeroy, S. H. (2003). Integrative review of physical activity intervention research with aging adults. *Journal of the American Geriatrics Society*, 51(8), 1159–1168.
- Corbin, J., & Strauss, A. (1990). Grounded theory research: Procedures, canons and evaluative criteria. *Qualitative Sociology*, 13(1), 3–21.
- Cress, M. E., Buchner, D. M., Questad, K. A., Esselman, P. C., deLateur, B. J., & Schwartz, R. S. (1999). Exercise: Effects on physical functional performance in independent older adults. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences*, 54(5), M242–M248.
- Crombie, I. K., Irvine, L., Williams, B., McGinnis, A. R., Slane, P. W., Alder, E. M., et al. (2004). Why older people do not participate in leisure time physical activity: A survey of activity levels, beliefs and deterrents. *Age and Ageing*, 33(3), 287–292.
- Deforche, B., & De Bourdeaudhuij, I. (2000). Differences in psychosocial determinants of physical activity in older adults participating in organised versus non-organised activities. *The Journal of Sports Medicine and Physical Fitness*, 40(4), 362–372.
- Department of Health and Human Services, Centers for Disease Control and Prevention. (2013). U.S. Physical Activity Statistics. <http://apps.nccd.cdc.gov/PASurveillance/DemoCompareResultV.asp?State=0&Cat=1&Year=2008&CI=on&Go=GO>. Accessed July 7, 2013.
- Elward, K., Larson, E., & Wagner, E. (1992a). Factors associated with regular aerobic exercise in an elderly population. *Journal of the American Board of Family Practice*, 5(5), 467–474.
- Elward, K. S., Wagner, E. H., & Larson, E. B. (1992b). Participation by sedentary elderly persons in an exercise promotion session. *Family Medicine*, 24(8), 607–612.
- Findorff, M. J., Stock, H. H., Gross, C. R., & Wyman, J. F. (2007). Does the Transtheoretical Model (TTM) explain exercise behavior in a community-based sample of older women? *Journal of Aging and Health*, 19(6), 985–1003.
- Gregg, E. W., Pereira, M. A., & Caspersen, C. J. (2000). Physical activity, falls, and fractures among older adults: A review of the epidemiologic evidence. *Journal of the American Geriatrics Society*, 48(8), 883–893.
- Griffin, A., & Hauser, J. R. (1993). The voice of the customer. *Marketing Science*, 12(1), 1–27.
- Hammerback, K., Felias-Christensen, G., & Phelan, E. A. (2012). Evaluation of a telephone-based physical activity promotion program for disadvantaged older adults. *Preventing Chronic Disease*, 9, E62.
- Hooker, S. P., Seavey, W., Weidmer, C. E., Harvey, D. J., Stewart, A. L., Gillis, D. E., et al. (2005). The California active aging community grant program: Translating science into practice to promote physical activity in older adults. *Annals of Behavioral Medicine*, 29(3), 155–165.
- Hu, F. B., Sigal, R. J., Rich-Edwards, J. W., Colditz, G. A., Solomon, C. G., Willett, W. C., et al. (1999). Walking compared with vigorous physical activity and risk of type 2 diabetes in women: A prospective study. *Journal of the American Medical Association*, 282(15), 1433–1439.
- Lees, F. D., Clark, P. G., Nigg, C. R., & Newman, P. (2005). Barriers to exercise behavior among older adults: A focus-group study. *Journal of Aging and Physical Activity*, 13(1), 23–33.
- Manson, J. E., Greenland, P., LaCroix, A. Z., Stefanick, M. L., Mouton, C. P., Oberman, A., et al. (2002). Walking compared with vigorous exercise for the prevention of cardiovascular events in women. *The New England Journal of Medicine*, 347(10), 716–725.
- Mathews, A. E., Laditka, S. B., Laditka, J. N., Wilcox, S., Corwin, S. J., Liu, R., et al. (2010). Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *Journal of Aging and Physical Activity*, 18(2), 119–140.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks: Sage Publications.

- Moyer, V. A. (2012). Prevention of falls in community-dwelling older adults: U.S. Preventive Services Task Force recommendation statement. *Annals of Internal Medicine*, 157(3), 197–204.
- O'Shea, S. D., Taylor, N. F., & Paratz, J. D. (2007). But watch out for the weather: Factors affecting adherence to progressive resistance exercise for persons with COPD. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 27(3), 166–174.
- Prohaska, T., Belansky, E., Belza, B., Buchner, D., Marshall, V., McTigue, K., et al. (2006). Physical activity, public health, and aging: Critical issues and research priorities. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 61(5), S267–S273.
- Rimmer, J. H., Hsieh, K., Graham, B. C., Gerber, B. S., & Gray-Stanley, J. A. (2010). Barrier removal in increasing physical activity levels in obese African American women with disabilities. *Journal of Women's Health (Larchmont)*, 19(10), 1869–1876.
- Schoenborn, C. A., & Heyman, K. M. (2009). Health characteristics of adults aged 55 years and over: United States, 2004–2007. *National Health Statistics Reports*, 16, 1–31.
- Schutzer, K. A., & Graves, B. S. (2004). Barriers and motivations to exercise in older adults. *Preventive Medicine*, 39(5), 1056–1061.
- Stathi, A., McKenna, J., & Fox, K. R. (2010). Processes associated with participation and adherence to a 12-month exercise programme for adults aged 70 and older. *Journal of Health Psychology*, 15(6), 838–847.
- van der Bij, A. K., Laurant, M. G., & Wensing, M. (2002). Effectiveness of physical activity interventions for older adults: A review. *American Journal of Preventive Medicine*, 22(2), 120–133.
- Wallace, J. I., Buchner, D. M., Grothaus, L., Leveille, S., Tyll, L., LaCroix, A. Z., et al. (1998). Implementation and effectiveness of a community-based health promotion program for older adults. *Journal of Gerontology: Medical Sciences*, 53A(4), M301–M306.
- Walsh, J. M., Pressman, A. R., Cauley, J. A., & Browner, W. S. (2001). Predictors of physical activity in community-dwelling elderly white women. *Journal of General Internal Medicine*, 16(11), 721–727.
- Wilcox, S. (1999). Physical activity preferences of middle-aged and older adults: A community analysis. *Journal of Aging and Physical Activity*, 7(4), 386–399.
- Wolin, K. Y., Glynn, R. J., Colditz, G. A., Lee, I. M., & Kawachi, I. (2007). Long-term physical activity patterns and health-related quality of life in U.S. women. *American Journal of Preventive Medicine*, 32(6), 490–499.