



REVIEW ARTICLE

Lack of Time is Still the Main Barrier to Exercise and Physical Activity in the Elderly, Although Less So than Younger and Middle-Aged Participants

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Abstract

The purpose of this study was to examine the main motivators and barriers to Physical Activity (PA) and Exercise (EX) of an elderly population in South Carolina compared to their younger and middle-aged counterparts. Males and females ages 18 years and older representing 13 diverse groups from Cherokee County, South Carolina participated in this study. Phase I of the research study concentrated on gathering data through facilitated focus group discussions. A survey was created to validate the findings of the initial focus group interviews. 345 participants in total, aged 18 years and older, voluntarily completed a survey. The focus of this study is the 65+ year-old group and whether their results differ from younger and middle-aged participants. Data from the 18-64 year-old participants has previously been published but are presented in a different format in the current study and used as a point of comparison to data from the elderly participants which has not previously been published. Common barriers and motivators towards PA in the elderly were largely similar to those of the younger and middle-aged participants. Physical barriers to PA and EX showed some differences. Specifically, factors related to frailty (e.g., concern for safety; pain and injuries preventing participating in PA) were indicated as significant factors more frequently in the elderly. Other physical barriers such as inclement weather, however, did not stand out as a more common barrier in the elderly. Psychological barriers were very similar between older and younger/middle-aged participants. The major difference was that time-related barriers (e.g., other things are more important and require my time and energy; once I get home, it's difficult to find time to be active; I work/have children) were less of a factor for the elderly. However, in all age groups, the top ranked barriers to PA and EX were still time related. Motivators to be physically active were also similar in the elderly. Better

health and feeling good/happy afterwards were consistently ranked as the top motivators for all age groups and genders, with losing/maintaining weight and physical appearance being ranked beneath these. Unexpectedly, being active or working out with a friend or group of friends was not ranked highly as a motivator in any of the age groups, including the elderly. Our results indicate that lack of time, whether real or perceived, is consistently cited as the main barrier to PA and EX regardless of age and gender.

Introduction

Regular Physical Activity (PA) is important for maintaining long-term physical, cognitive, and emotional health. Although the benefits of PA and exercise are well identified, many elderly individuals remain sedentary [1] and few take advantage of programs designed to enhance PA participation [2]. Given that most adults in the United States do not meet PA guidelines, researchers have sought to examine barriers and motivators of PA [2,3]. External barriers refer to factors beyond an individual's control, whereas internal barriers are factors determined by an individual's personal decision [4,5]. Barriers have been found to be significantly more important in influencing exercise patterns than the possible perceived benefits [6].

Physical barriers including health, pain and injury, and environment

Chronic health conditions are identified as a barrier

to PA in the older adult population and include type 2 diabetes, lung-related diseases, and heart conditions [7]. Musculoskeletal conditions, past injuries, osteoarthritic pain, and physical capacity-related factors were also identified as a predominant barrier to PA in the older population with patients often reporting being unable to exercise due to restricted movement in the affected body region or the believe that PA would worsen their condition [6,8]. Painkillers or other medications that caused drowsiness or gastrointestinal complaints were also reported by some patients as barriers to undertaking PA [4]. For many participants, the primary motivation to be physically active was maintaining good physical and mental health, especially in disease management for those with severely or moderately limited mobility, as a means of reaching health goals [9,10]. The benefits of reduced pain, as well as improved strength and range of movement associated with interventions for musculoskeletal conditions, were specifically mentioned as a motivator for undertaking PA [11]. Environmental factors that affect PA include inclement weather, poor physical conditions in the neighborhood, crime, and access to facilities [6,10,11].

Time barriers

Time was the most common barrier reported by older participants across the focus groups in two studies and rated at 28% [10,12]. Family responsibilities (taking care of grandchildren, children, and sick people at home) and domestic duties were the second most common interpersonal barrier to PA at 47%, especially to those in ethnic minority groups [1,6,11,13]. Participants did not assign a high priority to PA in comparison to their other activities of daily life or did not plan to undertake PA when scheduling their time [11].

Psychological barriers

Feelings of tiredness (51%), lack of self-discipline/motivation (34%), lack of interest/enjoyment (18%), and lack of skills/confidence (17%) were the most frequently reported [1,9] by older participants in one study. However, respondents who noted lack of motivation also identified pain and other barriers associated with musculoskeletal conditions. Personal preferences, proclivity or disinterest in EX, and intimidation of the competitive atmosphere of gyms were also factors influencing participation [2]. In one study, 78% of participants preferred low- or no-cost PA, 61% preferred PA interventions that are not just about EX, and 50% opted for PA with a format/routine set. Moreover, 26%, 15%, and 16% of participants, respectively, preferred supervised, team-based and competitive PA [12]. For example, some participants felt embarrassed in the gym or when participating in group activities, due to their appearance or feeling that they slowed down their group if they could not maintain a set pace. Some participants were unmotivated by the concept of doing PA without a purpose or were not interested in exercise

for the sake of exercise [2]. Poor physical functioning and negative attitudes have been shown to be barriers to exercise in older women [6].

Fear has emerged as a special psychological barrier that is a complex phenomenon occurring in different situations. It can be related to one's health status, leading to fear of injury or pain, fear of falling, and fear of being dependent on others [3]. The perceived fear of falling, frailty, and functional limitations could significantly influence an older adult's ability to engage in regular PA [3,11,14]. Individuals with more sedentary time and less moderate or vigorous physical activity tended to report greater fear of falling [3]. Numerous fear- and anxiety-related responses centered on a fear of making their musculoskeletal condition(s) worse by undertaking physical activity [11].

The purpose of this study was to examine South Carolinian older adults' psychological, lack of time and physical barriers to PA and EX, and identify the most significant barriers in each category, as well as overall. It was hypothesized there would be multiple significant lack of time barriers among the older adults in both genders. In addition, older adults' motivators to PA and EX were investigated to determine if any affective motivators would be identified, specifically the top three most significant motivators to PA. An affective motivator such as "Feeling good and happier afterwards" was theorized to rank among the top three motivators along with "Better health." Due to its' association with "Feeling good" and a positive self-image as well as increased self-efficacy, we also hypothesized that "Losing and maintaining weight" would also be highly ranked.

Methods

Participants

This study received clearance from the Institutional Review Board at Limestone University. Males and females ages 18 years and older representing 13 diverse groups from Cherokee County, South Carolina participated in this study. Data from the subjects 65 years and older is reported for the first time. The data shown in this study is part of a larger study including younger and middle-aged adults (18 to 64 years). For the purpose of comparison, data from these younger subjects which has been previously published albeit in different form [15]. However, this is reported in a different format in the current study. It should be stressed that the data from the elderly participants (65 and older) has not previously been published. Informed consent was obtained from all participants. Focus groups from Cherokee County in South Carolina included members from a United Methodist and Baptist church, the Board of Public Works, the City of Gaffney staff, Rotary Clubs, City of Gaffney firefighters and schoolteachers from a rural elementary school.

The exclusion criteria were any health conditions that precluded a participant from exercising.

Procedures

Phase I: Phase I of the research study gathered data through facilitated focus group discussions and took place in Cherokee County (175 people) from December of 2016 to May of 2018. Focus groups included 6-15 participants and were held in a preferred meeting place to facilitate a relaxed discussion. Conversations were not recorded, and each participant was reassured that the discussions would be kept confidential. Participants were urged to share their experiences and articulate their feelings regarding *barriers and motivators* to being physically active or exercising. At the beginning of each session, participants were asked to complete a short demographic questionnaire regarding their gender, age group, and residence. The focus group discussions lasted approximately 30 to 60 minutes. Participants were free to leave at any time. Overall, the conversations were navigated to explore key barriers and motivators that contribute to partaking in physical activity or exercise. Focus group discussions were facilitated by the same trained, content expert. In order to ensure consistency, the same trained, core group of students for each study were present at all the focus groups to make notes of the conversation as well as an interpretation of what they heard. The notes were meticulously reviewed for each focus group by the same trained group facilitator with the students to allow essential ideas to emerge and to ensure there was complete agreement with the interpretation. The aim was to identify recurring themes emphasized by the participants.

Phase II: Using the themes that emerged from the focus group interviews, a survey was created to validate the findings of the initial focus group interviews regarding barriers and motivators to PA. Common themes and trends that emerged from the focus group interviews were identified and used to construct a series of descriptive statements to reflect the responses from the focus group interviews. The team of content specialists collaborated throughout the process. Since phase I of the study was qualitative, it was imperative the research-generated survey accurately reflected the potential key barriers to PA identified in the focus groups. All survey items reflected what was heard in the focus group discussions from phase I. The survey was designed to be completed in less than 10 minutes.

Phase II of this study was cleared by the Limestone University Institutional Review Board prior to distribution of surveys. Surveys were distributed between July 2018 to July 2019 to individuals 18 years of age and older from the same community groups where the focus group data were initially collected. Informed consents from these participants were obtained and survey administration was scheduled at a convenient time and location suitable for each group. Participation

in the focus group discussions was not required for completion of the survey.

Data analysis

345 surveys were completed. Care was taken regarding the accuracy of the response recording; occasionally, participants did not respond to one or more barrier descriptors on the survey, particularly if the participant did not identify with any of the listed barriers in one of the sections. Participants' responses to the survey were organized in a spreadsheet (Microsoft Excel). Participants were asked to indicate any barriers as well as motivators from a list provided in the survey. In addition, participants were asked to rank their top 3 barriers and motivators ([Table 1](#) and [Table 2](#)).

Results

Barriers

Responses of survey questions related to barriers to PA and EX (lack of time, physical, psychological) are presented in [Table 3](#), [Table 4](#), [Table 5](#) and [Table 6](#). In general, the most consistently identified barriers were those related to lack of time ([Table 3](#)). Furthermore, elderly participants consistently identified these barriers at a lower percentage than younger to middle aged participants i.e., lack of time was not viewed as being as much of a barrier in the elderly. Physical and psychological barriers were generally ranked less often (lower percentage) than lack of time barriers, with the exception of "There are so many other things for me to do, it's easy to make excuses rather than exercise", which is also clearly related to lack of time. The differences in responses to physical and psychological barriers between older and younger participants were not as clear, although certain predictable responses were evident e.g., elderly participants, particularly females, were more concerned with safety and injury.

Motivators

The percentage of respondents that identified specific statements as being an important (first, or top 3) motivator for PA and EX are presented in [Table 7](#) and [Table 8](#). In general, all participants identified better health and feeling good/happy afterwards as being the most important motivators. This was particularly the case when examining factors identified specifically as the single most important motivator ([Table 8](#)). Interestingly, appearance or losing weight were generally not ranked among the top 2 motivators. The importance of appearance was ranked lower in the elderly participants compared to the young and middle aged. Longevity was also ranked much high at a motivator for the elderly participants (ranked 2 and 4), compared to younger participants (ranked 7 and 8). Of some surprise to us was the importance of working out with friends, which was only ranked between 8 and 10 regardless of age or sex.

Table 1: List of potential barriers as indicated on survey.

<i>Which of the following do you consider to be your “lack of time” barriers to physical activity and exercise?</i>
Other things are more important and require my time and energy
Once I get home, it’s difficult to find time to be active
I work and have children
I don’t have time to drive to the gym, change clothes, work-out and shower afterwards
I have a difficult time finding the time needed to fit the gym into my day
Other
<i>Which of the following do you consider to be your “physical” barriers to physical activity and exercise?</i>
Winter weather is a factor for me when it comes to physical activity and exercise
I’m concerned for my safety
Pain and/or injury prevents me from being as physically active as I would like to be
I work in an environment where there is little or no employment resources to be physically active
My job demands and I’m too tired after work to exercise afterwards
Other
<i>Which of the following do you consider to be your “psychological” barriers to physical activity and exercise?</i>
There are so many other things for me to do, it’s easy to make excuses rather than exercise
I did not grow up with exercise and it’s not part of me or my family
I have a negative perception of exercise
I don’t know where or how to start
I just don’t feel like doing anything
Other

Table 2: List of potential motivators as indicated on survey.

<i>What motivates you to be physically active or exercise? Choose ONLY 3 and rank them from 1 to 3, with 1 being the most motivational.</i>
Feeling good and happier afterwar
Longevity
I work and have children
Appearance
Better health
Losing or maintaining my weight
<i>Exercising with a friend or group</i>
Enjoying the feel of being physically active
Seeing the rewards physically
It is part of my job (i.e., if one is physically active at work)
Personally, impacted by negative consequences of health (i.e., you or someone you know experienced a heart attack, stroke, or suddenly died)
Other

Discussion

The current study examined barriers and motivators towards PA and EX in elderly participants from a South Carolina population. This was compared to our previously published findings examining younger and middle-aged participants from the same population. Interestingly, the barriers and motivators towards PA in the elderly did not, for the most part, differ from younger and middle-aged participants. Perhaps not surprisingly, the major difference was that time-related barriers (e.g., other things are more important and require my time and energy; once I get home, it’s difficult to find time

to be active; I work/have children) were less of a factor for the elderly. Physical barriers to PA and EX showed some differences. Factors related to physical frailty (e.g., concern for safety, pain and injuries preventing participating in PA) were indicated as significant factors more frequently in the elderly. However, other physical barriers such as inclement weather did not stand out as a more common barrier in the elderly. Lastly, psychological barriers were very similar between older and younger/middle-aged participants. In all age groups, the top ranked barriers to PA and EX were time-related. Motivators to be physically active were also

Table 3: Male and female responses to descriptive statements related to lack of time as a barrier to physical activity. Numbers represent the percentage of total respondents answering “Yes” to the question.

Descriptive statements	Ages 18-64 male, n = 144 female, n = 93	Ages 65+ male, n = 56 female, n = 52
Other things are more important and require my time and energy	Male 65% Female 60%	Male 45% Female 40%
Once I get home, it's difficult to find time to be active	Male 41% Female 51%	Male 34% Female 25%
I work/have children	Male 36% Female 28%	Male 7% Female 4%
I don't have time to drive to the gym, change clothes, work out, and shower	Male 33% Female 37%	Male 23% Female 10%
I have a difficult time finding the time needed to fit the gym into my day	Male 57% Female 59%	Male 41% Female 23%

Table 4: Male and female responses to descriptive statements related to physical barriers to physical activity. Numbers represent the percentage of total respondents answering “Yes” to the question.

Descriptive statements	Ages 18-64 male, n = 144 female, n = 93	Ages 65+ male, n = 56 female, n = 52
Inclement weather is a factor for me when it comes to physical activity and exercise	Male 15% Female 28%	Male 23% Female 23%
I'm concerned for my safety	Male 4% Female 6%	Male 18% Female 21%
Pain and/or injury prevents me from being as physically active as I would like to be	Male 24% Female 20%	Male 34% Female 46%
I work in an environment where there is little or no employment resources to be physically active	Male 3% Female 15%	Male 11% Female 10%
My job demands are high and I'm too tired after work to exercise	Male 28% Female 30%	Male 16% Female 4%

Table 5: Male and female responses to descriptive statements related to psychological barriers to physical activity. Numbers represent the percentage of total respondents answering “Yes” to the question.

Descriptive statements	Ages 18-64 male, n = 144 female, n = 93	Ages 65+ male, n = 56 female, n = 52
There are so many other things for me to do, it's easy to make excuses rather than exercise	Male 43% Female 61%	Male 52% Female 40%
I did not grow up with exercise and it's not part of me or my family	Male 15% Female 15%	Male 18% Female 19%
I have a negative perception of exercise	Male 3% Female 3%	Male 5% Female 12%
I don't know where or how to start	Male 12% Female 9%	Male 13% Female 8%
I just don't feel like doing anything	Male 22% Female 28%	Male 27% Female 25%

Table 6: Male and female overall barrier rankings to the survey descriptive statements related to lack of time, physical and psychological barriers to physical activity. Numbers represent the percentage of total respondents answering “Yes” to the question.

Males (18-64) n = 144	Males (65+) n = 56	Females (18-64) n = 93	Females (65+) n = 52
#1 Other things are more important and require my time and energy 65%	#1 There are so many other things for me to do, it's easy to make excuses rather than exercise 52%	#1 There are so many other things for me to do, it's easy to make excuses rather than exercise 61%	#1 Pain and injury prevents me from being physically active * 46%
#2 I have a difficult time finding the time needed to fit the gym into my day 57%	#2 Other things are more important and require my time and energy 45%	#2 Other things are more important and require my time and energy 60%	#2 There are so many other things for me to do, it's easy to make excuses rather than exercise 40%
#3 There are so many other things for me to do, it's easy to make excuses rather than exercise 43%	#3 I have a difficult time finding the time needed to fit the gym into my day 41%	#3 I have a difficult time finding the time needed to fit the gym into my day 59%	#2 Other things are more important and require my time and energy 40%

*Pain and injury were ranked at # 8 (24%) for males 18-64, # 10 (24%) for females 18-64, and # 7 (27%) for males 65+.

Table 7: Ranking of all motivators in males and females. Percentages refer to those respondents that indicated a motivator as one of their top 3 ranked motivators (1st, 2nd or 3rd).

Ranking	Males (18-64) n = 144	Males (65+) n = 56	Females (18-64) n = 93	Females (65+) n = 52
1	Better health (65%)	Better health (80%)	Better health (65%)	Feeling good and happier afterwards (54%)
2	Feeling good and happier afterwards (47%)	Longevity (52%)	Feeling good and happier afterwards (52%)	Better health (54%)
3	Losing or maintaining weight (40%)	Feeling good and happier afterwards (41%)	Appearance (50%)	Seeing the rewards physically (38%)
4	Appearance (28%)	Losing or maintaining weight (39%)	Losing or maintaining weight (46%)	Longevity (36%)
5	It's part of my job (24%)	Enjoy the feeling of being more active (24%)	Seeing the rewards physically (29%)	Enjoy the feeling of being more active (26%)
6	Enjoy the feeling of being more active (23%)	Seeing the rewards physically (22%)	Enjoy the feeling of being more active (19%)	Losing or maintaining weight (24%)
7	Longevity (22%)	Appearance (15%) Personally impacted by negative health (15%)	Exercising with a friend of group (14%)	Appearance (16%)
8	Seeing the rewards physically (21%)		Longevity (13%)	Exercising with a friend of group (14%) Personally impacted by negative health (14%)
9	Personally impacted by negative health (12%)	Exercising with a friend of group (7%)	Personally impacted by negative health (6%)	
10	Exercising with a friend of group (11%)	It's part of my job (4%)	Other (4%)	Other (10%)
11	Other (5%)	Other (2%)	It's part of my job (1%)	It's part of my job (0%)

similar in the elderly. Better health and feeling good/happy afterwards were consistently ranked as the top motivators for all age groups and genders, with losing/maintaining weight and physical appearance being

ranked beneath these. Being active or working out with a friend or group of friends was not ranked highly as a motivator in any of the age groups.

Social, emotional, and behavioral supports for

Table 8: Percentage of male and female survey respondents that chose a particular motivator as their first choice.

Ranking	Males (18-64) n = 144	Males (65+) n = 56	Females (18-64) n = 93	Females (65+) n = 52
# 1.	Better health (28%)	Better health (43%)	Better health (38%)	Better health (42%)
# 2.	Feeling good and happier afterwards (19%)	Feeling good and happier afterwards (17%)	Feeling good and happier afterwards (18%) Losing or maintaining weight (18%)	Feeling good and happier afterwards (18%)
# 3.	Losing or maintaining weight (10%)	Losing or maintaining weight (11%) Longevity (11%)	Appearance (10%)	Losing or maintaining weight (14%)

physical activity: Previous research has indicated that participants identified social contact as an important motive for being physically active. When older adult participants chose an activity, these participants stated that their main reasons for partaking were social belonging and interactions [9]. For individuals older than 65-years-old, the key motivators were different forms of reinforcement such as peer encouragement and having fun, the social aspect of PA, and support from health professionals [16]. A person's social network was highly associated with participation, as older individuals expressed the desire to interact with people in their own age group [9]. Group activities involving a dance component and novel exercises such as tai-chi or yoga were preferred choices [10]. It is perhaps surprising, therefore, that in the current study exercising or being active with a friend was not highly ranked as a motivator. It may be that the elderly participants in the current study were generally more independent, and therefore not as dependent on forming social interactions. Regardless, elderly participants in the current study still valued the enjoyment aspect of PA and EX, ranking "feeling good and happier afterwards" as a top 3 motivator, and "enjoy the feeling of being more active" in the top 6. Other personal motivators for elderly participants in the current study that may have been more important in the current study are wanting a routine that held them accountable, and the desire to learn something new or get out of the house. These and other factors/motivators that may have had influence, and have been previously identified e.g., encouragement from a doctor, lack of fees to join the program, and program location [9]. However, these factors were not examined in the current study.

Access to preferred exercise environments: Although not specifically addressed in the current study, accessibility to suitable and preferred exercise environments is considered a facilitator of patients' PA. This includes access to specific exercise locations, particularly gymnasiums or swimming pool facilities. In a previous study, nearly 53% said they engage in PA at a gym or fitness facility, while 28% reported they prefer doing PA at home [2]. Some older patients have noted mobility equipment, such as walking sticks or

frames, as enabling them to undertake PA. Although we did not specifically ask about availability of mobility equipment, this is in line with elderly participants in our study indicating that pain and injury (34-46%), as well as concerns for safety (18-21%), are a greater barrier to PA compared to younger individuals (20-24% and 4-6% respectively). Elderly patients in previous studies have also reported other environmental factors, including favorable weather conditions or being able to walk at indoor locations, as facilitating their PA [11]. In the current study, 23% of elderly participants identified inclement weather as a barrier to PA, which was similar to that reported by 18-64 year-old individuals (male, 15%, female 28%).

Opportunities for physical activities and incorporation into daily routine: McPhail, Schippers, Marshall, Waite, & Kuipers [11] identified having opportunities for PA built into everyday activities as a facilitator for being physically active. These included physical activities undertaken as part of interventions prescribed by their medical professional, including both land- and water-based exercises. Some participants also associated the benefits of active occupation, domestic, and transit activities in promoting regular PA. Certainly, this agrees with our own previous research that most individuals prefer to incorporate PA into everyday life activities, regardless of their age [17]. Patients with children in their household also identified undertaking activities with their children or grandchildren as facilitating PA. Opportunity to exercise while other family members, particularly children, were taking part in organized sport training or competition at sporting venues was also identified as a potential PA facilitator.

Time availability: In previous studies, some participants reported free time as something that facilitates being physically active. Other patients reported that flexible work schedules or PA into their daily routine was beneficial for fostering PA. One patient remarked, "Exercise is the first thing to go when things get busy" [11]. Indeed, this sentiment resonates with our own findings. Although the elderly participants indicate lack of time related barriers (40-45%) less strongly than younger and middle-aged participants (60-65%), this was still their primary barrier to PA and EX.

Conclusion

Ultimately, our findings reinforce a consistent and somewhat sobering conclusion. While most people recognize the physical and mental health benefits of EX and PA and tend to feel good after exercising or being active, it is either not enjoyable enough or a high enough priority to consistently make time for. It is therefore imperative for all people, including the elderly, to find activities that they thoroughly enjoy and can easily be incorporated into their daily routine.

Statement of Competing Interests

The authors have no competing interests.

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