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THE EXERCISE ATTITUDES, PERCEPTIONS, AND PERCEIVED OUTCOMES OF OLDER MINORITY WOMEN PARTICIPATING IN A FALL PREVENTION PROGRAM

by

PORSHA HALL

Under the Direction of Dr. Leslie Taylor

ABSTRACT

Fall prevention is a serious issue in the health and aging fields, and much attention and research is now being focused on examining why older adults fall and ways to prevent them from falling. Although it has been well-documented that older adults benefit from programs designed to decrease falling by promoting exercise participation, balance training, and fall education; little research has focused on specifically examining how older minority women view preventive exercise programs. This qualitative study explores the experiences of older minority women participating in a fall prevention program. The specific aims of the study are to: 1) gain an understanding of older minority women's experiences and perceptions about falling and fall prevention; 2) establish what factors influence older minority women to participate in fall prevention programs; and 3) explore participants' perceived outcomes of program participation. Post-test interviews with 21 participants were analyzed using the method of grounded theory to identify common themes and outcomes associated with participation in a fall prevention program. Findings from this study provide an in-depth look into the factors motivating older minority women to participate in exercise and explore their beliefs regarding falling and fall prevention.

INDEX WORDS: Older adults, Fall prevention, Minority women, Social support, Exercise, Exercise attitudes, Exercise beliefs

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by

PORSHA HALL

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

In the College of Arts and Sciences

Georgia State University

2008

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by

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College of Arts and Sciences
Georgia State University
May 2008

DEDICATION

This thesis is dedicated to my family.

Mom and Dad, thank you for always believing in me, supporting me, encouraging me, and pushing me towards the stars. Charlie, thank you for being such a great Brother; someone I can always call and depend on. Keesha, thank you for being such a rock, and for always leading me down the right paths. I would never have been able to accomplish this without all of you and your love.

I love you all very much!

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CHAPTER 1

INTRODUCTION

Statement of Problem

Estimates predict that by the year 2010 approximately 6 million people in the United States will be age 85 or greater, with that number increasing to 16 million by the year 2050 (Haber, 2004). Evidence suggests that older adults are at a higher risk than any other age group of experiencing an injury that will result in hospitalization or death (Feder, Cryer, Donovan, & Carter, 2000). Falling among the older adult population is a major health concern, and the economic burden of treating older adult fallers is substantial. In the year 2000, approximately $19 billion ($0.2 billion for fatal falls, and $19 billion for nonfatal falls) was spent on fall injuries for people age 65 years and older (Ellis & Trent, 2001). Much attention and research is now being focused on examining why older adults fall and ways to prevent them from falling.

Experiencing a fall can be detrimental to an older adult's well-being, and often results in injury, hospitalization, and/or loss of independence. An estimated one-third of community-dwelling older adults over age 65 fall each year (American Geriatrics Society, British Geriatrics Society, & American Academy of Orthopaedic Surgeons Panel on Falls Prevention, 2001; Hausdorff, Rios, & Edelber, 2001), with approximately 50% of those experiencing recurrent falls (Masud & Morris, 2001). Falls are the leading cause of injury deaths in older adults (CDC, 2006) and the most common cause of accidental injury among older adults. Falls increase the risk of experiencing a moderate to severe injury by 20% to 30% (Alexander, Rivara, & Wolf, 1992).

Falls occur for a number of reasons (e.g. physical decline, falling hazards, adverse effects of medications, and vision problems). Participation in regular exercise has proven to reduce falling among older adults (American Geriatrics Society et al., 2001; Chang et al., 2004; Fahlman, Morgan, McNevin, Topp, & Boardley, 2007; Lin, Wolf, Hwang, Gong, & Chen, 2007). Despite the known benefits of exercise, inactivity remains high among the older adult population (Crespo, Smit, Andersen, Carter-Pokras, & Ainsworth, 2000). Regardless of race, women participate in exercise less than men (Clark, 1999). Further, black women exercise less than black men, white men, and white women (Crespo, Smit, Andersen, Carter-Pokras, & Ainsworth, 2000).

Participation in community-based fall prevention programs has also been proven to reduce fall occurrence among older adults (Chang et al., 2004; Clemson et al., 2004; Day et al., 2002; Donat & Ozcan, 2007). Fall prevention programs focus on teaching older adults how to modify their behaviors in order to avoid potential risk factors associated with falling through exercise, education, removing and/or avoiding falling hazards, medication regulation, and vision maintenance.

Fall reduction among older adults is a public heath priority. Yet, little is known about how older women regard exercise, and even less is known about how older minority women view exercise and falling. It is vital that research be conducted exploring the views of this population in order to effectively design and implement programs to decrease their risk of falling.

Summary

This thesis explores why falling among the older adult population is a critical issue that needs to be addressed. Also, it presents why there is a need to identify how

older minority women view exercise and fall prevention in order to decrease their risk of falling. Chapter 2 will provide a review of literature supporting the study's relevance and will discuss the specific aims and questions of the research. Chapter 3 will explain the study's methods; providing details about the sample, data, and analysis used. Chapters 4, 5, and 6 will present findings of the study and will provide insight into the program participants' attitudes and perceptions regarding falls and fall prevention. Additionally, these chapters will outline emerging categories and patterns revealed in the study and discuss the participants' perceived outcomes of participation in a fall prevention program. Chapter 7 will discuss the study's findings, limitations, and provide suggestions for future research.

CHAPTER 2

LITERATURE REVIEW

Benefits of Exercise

Research shows that participation in regular exercise can aid in the reduction of falls among older adults by increasing balance, flexibility, and strength (Chang et al., 2004). Participation in exercise programs designed to increase muscle strength in the lower extremities and improve postural control can significantly reduce the risk of falling among older adults (American Geriatrics Society et al., 2001; Chang et al., 2004; Fahlman, Morgan, McNevin, Topp, & Boardley, 2007; Lin, Wolf, Hwang, Gong, & Chen, 2007). After participating in a 16-week exercise program designed to increase aerobic capacity, muscular strength, and muscular endurance, a group of older adults with limited functional ability showed increased measures of strength and endurance (Fahlman et al., 2007). Additional benefits of exercise participation include decreased pain from musculoskeletal problems, weight loss, decreased shortness of breath, improved sleep, improved blood pressure, and lower blood sugar (Cress et al., 1999; Fahlman et al., 2007; Resnick, Vogel, & Luisi, 2006; Shumway-Cook, A. et al., 2007).

Participation in exercise has also been linked to the decreased fear of falling among older adults (Grossman & Stewart, 2003). Fear of falling is a common and potentially harmful problem among community-dwelling older adults, with prevalence rates ranging from 26% to 55% (Bruce, Devine, & Prince, 2002; Murphy, Williams, & Gill, 2002). Tinetti and Powell (1993) defined fear of falling as a "lasting concern about falling that leads to an individual avoiding activities that he/she remains capable of performing" (p. 36). Fear of falling may be triggered by fall occurrence; however, an

individual may experience it without having a previous history of falling (Li, Fisher, Harmer, McAuley, & Wilson, 2003; Legters, 2002; Tinetti & Powell, 1993). An estimated 30% of older adults who report fear of falling do not have a previous history of falling (Legters, 2002).

Several factors are associated with fear of falling among the older adult population, but its exact causes have yet to be identified (Legters, 2002). Some predisposing factors for developing fear of falling include sedentary lifestyle (Bruce et al., 2002), poor balance (Lach, 2005; Li et al., 2003), physically frailty (Li et al., 2003), poor muscle strength (Delbaere, Crombez, Vanderstraeten, Willems, & Cambier, 2004; Fletcher & Hirdes, 2004; Kressig et al., 2001), and being female (Delbaere et al., 2004; Fletcher & Hirdes, 2004; Howland et al., 1998; Kressig et al., 2001; Vellas, Wayne, Romero, Baumgartner, & Garry, 1997). An examination of 226 community-dwelling adults over the age of 62 years concluded that 60% of females experienced the fear of falling, in comparison to only 37% of men (Howland et al., 1998). Similarly, Vellas et al. (1997) found that women were more likely than men to report fear of falling (74% vs. 26%). Specific factors associated with fear of falling among women include increased age (80 years and older), visual impairment, sedentary lifestyle, and lack of available emotional support (Fletcher & Hirdes, 2004).

Various outcomes have been connected with fear of falling among older adults; these include increased risk for falls (Delbaere et al., 2004), declines in gait (Vellas et al., 1997), lower health-related quality of life (Delbaere et al., 2004; Li et al., 2003; Vellas et al., 1997), decreased exercise participation (Bruce et al., 2002; Delbaere et al., 2004; Howland et al., 1998; Kressig et al., 2001; Li et al., 2003), and a loss of independence (Li

et al., 2003; Legters, 2002). Further, even among high-functioning older adults, fear of falling has been linked to self-imposed activity restriction (Bruce et al., 2002; Delbaere et al., 2004; Fletcher & Hirdes, 2004; Li et al., 2003) and a reduction in tasks that involve walking and reaching (Delbaere et al., 2004). Murphy et al. (2002) found that of 1,064 community-living persons aged 72 and older, 19% expressed restricting their activity due to a fear of falling. Activity restriction and/or avoidance are dangerous problems, which can potentially lead to functional decline and a loss of independence among older adults (Fahlman et al., 2007; Gill, Allore, Holford, & Guo, 2004; Herbert, 1997).

Additionally, older adults who restrict activity due to the fear of falling tend to be more physically frail, have a greater burden of chronic conditions, and exhibit more depressive symptoms than those who experience the fear of falling yet remain active (Delbaere et al., 2004; Murphy et al., 2002). Factors associated with activity restriction and/or avoidance among older adults who also have the fear of falling include not communicating about falls, having less social support, and knowing someone who has fallen (Howland et al., 1998). Fear of falling, as well as activity restriction and/or avoidance, are key barriers that need to be overcome in order to improve activity levels and decrease falling among older adults.

Despite the known benefits of exercise, inactivity among the older adult population remains high (Crespo et al., 2000), and the majority of older adults do not participate in exercise programs (Newson & Kemps, 2007). Current estimates suggest that 33% of men and 50% of women over the age of 75 do not engage in physical activity (CDC, 2004). Additionally, of the older adults who begin exercise programs, it is

estimated that approximately 50% drop out of the programs within the first 6 months (Resnick & Spellbring, 2000).

Exercise Participation and Older Adults

Although the benefits of participating in regular physical activity have been studied extensively, researchers have only recently begun examining the determinants of exercise participation among older adults (Schutzer & Graves, 2004). Older adults are motivated to participate in exercise programs for diverse reasons. Some may begin exercising after noticing declines in their physical abilities (Norman, 1998) and are motivated by desires to improve aerobic conditioning, strength, balance, and flexibility (Grossman & Stewart, 2003; Newson & Kemps, 2007; Resnick & Spellbring, 2000; Schuler et al., 2004). Others may be seeking increased social interaction (Belza et al., 2004; Henderson & Ainsworth, 2003; Izquierdo-Porrera et al., 2002; Resnick, Vogel, and Luisi, 2006), an increase in knowledge (Belza et al., 2004; Grossman & Stewart, 2003), improved psychological well-being (Grossman & Stewart, 2003; Resnick, 2000), and increased motivation (Resnick & Spellbring, 2000).

Research suggests that social interaction (e.g. familial support, peer contact) plays a key role in motivating older adults to participate in exercise (Belza et al., 2004; Grossman & Stewart, 2003; Henderson & Ainsworth, 2003; Izquierdo-Porrera, Powell, Reiner, & Frontaine, 2002; Resnick et al., 2006). For example, when a diverse group of older women (consisting of seven different ethnic groups) were interviewed in order to gain a better understanding about their perspectives concerning physical activity and exercise, analysis revealed that family encouragement (coming mostly from their children) strongly influenced their activity performance (Belza et al., 2004; Grossman & Stewart,

2003). Additionally, pleasant social interactions, seeing others exercise, verbal encouragement from group members, and accountability have all been identified as motivators for older adults participating in exercise programs (Resnick et al., 2006).

Program design also influences older adults' desires to participate in physical activity (Belza, Chiang, Seman, & Tsai, 2008; Belza et al., 2004; Cohen-Mansfield, Marx, Biddison, & Guralnik, 2004). Cohen-Mansfield and colleagues (2004) administered health questionnaires to 324 community-dwelling persons aged 74–85 years designed to examine and identify their exercise preferences. Findings conclude that having a qualified instructor, easy access to the exercise facility, the type of exercise performed, participating with people the same age, and cost are all important factors contributing to program participation among older adults. Also, participants were more likely and willing to participate in exercise programs that were administered in the mornings and were monitored/evaluated by a health professional.

Regardless of an individual's beliefs about the benefits of exercise participation, several barriers to the adoption and maintenance of exercise behavior exist among older adults (Schutzer & Graves, 2004). Barriers to exercise among older adults include: a lifetime history of inactivity, weather and environment constraints, economic constraints, safety issues, fatigue, a lack of facilities and opportunities, the lack of knowledge about exercise, and the experience of major life changes (Heesch, Brown, & Blanton, 2000; Henderson & Ainsworth, 2003; Newson & Kemps, 2007; Resnick & Spellbring, 2000). Also, the experience of unpleasant sensations (e.g. pain, shortness of breath, discomfort, fear of falling, and feelings of boredom) may decrease an older adult's willingness to participate in exercise (Clark, 1999; Resnick & Spellbring, 2000).

Additionally, some older adults may deem the adoption of exercise as being unnecessary for them because they are unaware about the benefits of exercise (Yardley et al., 2006), while others may hesitate to engage in exercise because of preexisting attitudes and beliefs that they have developed throughout their lifetimes regarding exercise (Norman, 1998; Resnick & Spellbring, 2000; Yardley, Donovan-Hall, Francis, & Todd, 2007). Due to generational differences in societal views regarding exercise, older adults may have different beliefs regarding exercise participation than current generations. Older women may have grown up during a time when exercise was thought to be "unladylike" or damaging to the female anatomy. For older men, exercising in their youth was often viewed as a frivolous use of time (Norman, 1998). Calasanti and Slevin (2001) argue that appropriate behavior is socially constructed, and societal views dictate age-appropriate behaviors for different groups of people. Yardley et al. (2007) found that an older adult's intention to participate in strength and balance training was associated with the belief that their family, friends, and doctor considered it to be suitable.

Gender, Race, and Exercise

Although research has shown that there are several mutual components to exercise engagement across gender and ethnic groups (Belza et al., 2004; Heesch, Brown, & Blanton, 2000), research has also supported that there are some characteristics identified as being particularly relevant to certain groups of people (Belza et al., 2004; Heesch et al., 2000; Henderson & Ainsworth, 2003; Izquierdo-Porrera et al., 2002). Research indicates that, regardless of race or ethnicity, women participate in exercise less than men (Clark, 1999; Crespo et al., 2000; Henderson & Ainsworth, 2003) and women are more likely to report health concerns as a reason to begin participating in exercise

(Henderson & Ainsworth, 2003). Additionally, sociocultural factors, such as history and marginality (specifically a past history of oppression), are highly correlated with older minority women's views about physical activity (Henderson & Ainsworth, 2003).

Fall Prevention Programs

Fall prevention programs are designed to decrease the risks of falling among older adults by minimizing the effect of, or exposure to, any potential falling risk (Tinetti, 2003). Community-based fall prevention programs have proven to be successful at reducing fall occurrence among older adults (Chang et al., 2004; Clemson et al., 2004; Day et al., 2002; Donat & Ozcan, 2007). Additionally, evidence supports the use of multifactorial fall prevention programs (Clemson et al., 2004; Tinetti et al., 1994).

Tinetti (2003) presented four strategies that should form the basis for any fall prevention program: 1) identifying and treating any underlying medical reason that may be associated to the fall occurrence, 2) encouraging older adults to participate in exercise programs designed specifically for fall reduction, 3) ensuring the removal any potential falling hazards from the older adults living environment, and 4) helping older adults learn how to cope within a potential falling situation. Clemson et al. (2004) administered a 7-week fall prevention program to 141 community-dwelling adults aged 70 and older who had fallen in the previous year. Key aspects of the program included improving lower-limb balance and strength, improving home and community environmental and behavioral safety, encouraging regular visual screening, making adaptations to low vision, and encouraging medication review. Upon completion of the program 31% of the participants exhibited reduced risks of falling.

Various outcomes have been associated with participation in fall prevention programs; however, the most prominent result is fall reduction (Chang et al., 2004; Clemson et al., 2004; Day et al., 2002; Donat & Ozcan, 2007; Lin et al., 2007). This reduction is often the result of improvements in balance and strength due to exercise participation (Clemson et al., 2004; Day et al., 2002; Lin et al., 2007). However, home modifications and vision corrections have also been associated with decreased falling among older adults participating in fall prevention programs (Day et al., 2002; Stevens, Holman, Bennett, & Klerk, 2001). Additionally, participation in fall prevention programs has resulted in increased confidence levels (Clemson et al., 22004; Lin et al., 2007) and the adoption of more cautious behavioral practices (Lin et al., 2007).

Research Aims and Questions

Although fall prevention programs have been successful at reducing the risks of falls among older adults, little is known about the views that older adults have regarding their experiences while participating in fall prevention programs. No study has been conducted examining the views of older minority women participating in a fall prevention program. It is imperative for researchers to identify what motivates and discourages women of color to participate in preventive exercise programs, in order to successfully aid in decreasing their risks associated with falling. This study attempts to address these existing gaps in knowledge.

The overall goal of this study was to gain a better understanding about the experiences and perceptions of a group of older minority women participating in a fall prevention program regarding exercise, falling, and fall prevention. Specifically, the study addressed the following aims:

1. Gain an understanding of older minority women's experiences and perceptions about falling and fall prevention.
    a. Personal experiences with falling
    b. Fear of falling
    c. Participant's thoughts on why older adults fall
2. Establish what factors influence older minority women to participate in fall prevention programs.
    a. Reasons for program enrollment
    b. Reasons for continued program participation
    c. Reasons for program attrition
3. Explore the perceived outcomes experienced by older minority women from program participation.

CHAPTER 3

RESEARCH METHODS

Data

Primary Study

This qualitative study is designed to identify and examine the exercise attitudes, beliefs, and perceived outcomes of older minority women participating in a fall prevention program. Data for this study were drawn from a broader study, entitled UPRIGHT (Using Principles of Research to Improve Global Health Today). UPRIGHT is a 10-week community-based fall prevention program developed to address the problem of falls among community-dwelling older adults and was conducted in the fall of 2007 at a senior center in DeKalb County, Georgia. The program was a collaboration between representatives from DeKalb County's Senior Connections, Visiting Nurse Health System, DeKalb County Board of Health, Centers for Disease Control and Prevention, DeKalb County Office of Senior Affairs, Prevent Blindness Georgia, Mercer University School of Pharmacy, and the Division of Physical Therapy at Georgia State University.

UPRIGHT's goal was to improve balance, strength, and gait among older adults. Specifically, the program was designed to facilitate behavior change among DeKalb County's older adult population by: 1) encouraging seniors to participate in the program voluntarily; 2) motivating seniors to continue participation once they began the program; and 3) focusing on the message of independence rather than falling. Pre-test and post-test intervention assessments included: the Berg Balance test, the Timed Up and Go test, the Fear of Falling questionnaire, medication reviews, home safety assessments, and a vision clinic (conducted during pre-testing).

UPRIGHT is unique in that it combines education about falling and fall prevention with the administration of exercises designed to be performed either sitting or standing. The program addresses both intrinsic (e.g. muscle weakness, vision deficits, gait problems, medication effects) and extrinsic or environmental (e.g. poor lighting, stairs) factors associated with falling, and aims to decrease preventable risks related to falling by educating participants about fall prevention and facilitating behavioral changes. The program also provides a book to aid with participation in the program. The UPRIGHT book is composed of ten chapters, each structured to cover a specific falling and/or fall prevention topic on a weekly basis. Additionally, ten specific exercises targeted at fall reduction were assigned for each week of the program. Descriptions of the exercises, along with photographs portraying the exercises were included in the book to assist study participants in performing the exercises correctly from either a seated or standing position. An overview of the chapters is displayed in Table 3.1.

Table 3.1 Summary of UPRIGHT Chapters

Week	Topic	Exercise
1	Overview of Program, Activity Logs, Fall Prevention	Breathing and Posture
2	Fear of Falling, What if You Fall?	Toe and Heel Raises
3	Importance of Exercise, Facts about Exercise	Weight Shifting with Trunk and Neck Rotation
4	Types of Exercise: Strengthening and Balances	Marching
5	Types of Exercise: Stretching and Aerobics	Knee Extension or Single Leg Stance
6	Barriers to Exercise Solutions	Isometric Gluteal Sets or Squat
7	Home Safety	Bridging or Hip Extension and Abduction
8	Other Systems Involved in Balance	Scooting or Controlled Standing and Sitting
9	Medications and Health Conditions	Weight Shifting and Reaching
10	Nutrition and Wellness	Side Stepping

The UPRIGHT sample (N=30) was divided into two groups, center-based (n=18) and home-based seniors (n=12). In order to be enrolled into the program, participants had to meet two out of the first four inclusion criteria: (1) one or more falls within the last year, 2) currently taking four or more medications and/or one or more psychotropic medication, 3) unsteady gait, and 4) experiencing one or more chronic disease. Additional program inclusion criteria included: being able to ambulate with or without equipment in a senior center, being able to go to the senior center for pre-testing and post-testing, and agreeing to participate in program requirements.

The center-based participants included 18 community dwelling older adults who were recruited into the study by the center's manager. These participants met for one

hour a week for ten weeks at the Senior Center with members of the Division of Physical Therapy at Georgia State University. At each meeting, participants were presented one new safety or wellness topic and exercise included in the UPRIGHT informational book. The second group consisted of 12 home-based seniors who were identified to be at risk for falling by DeKalb County case managers. These participants received similar materials to those presented to the community-based group; however, the home-based group read and reviewed the week's lessons independently. Additionally, this group received weekly telephone calls from me (P.H.) to monitor their progress, encourage participation, and answer questions regarding information in the UPRIGHT book. Both groups were responsible for independently performing the UPRIGHT exercises and recording their weekly progress onto an activity log while in the program. Table 3.2 shows UPRIGHT participant demographic.

Table 3.2 Full Sample Demographics – UPRIGHT Participants
** Poverty defined as $851 monthly

Variable	Center-Based	Home-Based	Total
Participants	n=18	n=12	N=30
Race			
Black	18	11	29
White	0	1	1
Age			
Range	66 to 91	62 to 86	62 to 91
Mean	79	78	79
Gender			
Female	18	11	29
Male	0	1	1
Marital Status			
Divorced	3	2	5
Married	1	0	1
Widowed	13	10	23
Seperated	1	0	1
Live Alone			
Yes	4	11	15
No	14	1	15
Income			
At/below poverty**	8	11	19
Above poverty**	10	1	11

During the post-test session, researchers conducted in-depth interviews to investigate participants' perceptions of falls, exercise, and the program. The use of an open-ended, structured interview guide allowed researchers to achieve standardization within the interview process (i.e., being able to ask participants the same questions, in the same order), while still permitting program participants to have freedom and flexibility in how they responded to the questions. Data for this study were drawn from the analysis of face-to-face interviews conducted at the conclusion of the program. Moreover, general mobility and health questionnaires completed prior to the interviews were used to gather baseline information about study participants.

Present Study

The present study examines the experiences of 21 out of the 30 UPRIGHT participants who completed the intervention (8 home-based participants and 13 center-based program participants). Participants ranged in age from 71 to 90 and described themselves as being Black or African American women. All were community-dwelling adults living in the greater Atlanta area. Nine of the original UPRIGHT participants were not included in data analysis. Two home-based participants (one African American male and one Caucasian woman) were excluded from data analysis in order to satisfy specific study aims (i.e. examining minority women). Additionally, three study participants (one center-based and two home-based) who were unable to remain in UPRIGHT for the program's entirety were not included in data analysis. Further, the opinions of four center-based participants who completed the program but were unable to participate in the interview portion of post-testing were excluded from data analysis.

There were a few major differentiating factors between the two groups. Home-based participants weighed significantly more, were more likely to live alone, and were less likely to participate in exercise than center-based participants. Table 3.3 shows characteristics of the present study participants.

Table 3.3 Subsample Characteristics – Present Study

Variable	Center-based	Home-based	Total
Participants	n=13	n=8	N=21
Age (mean)	79	77	78
Sex **Female**	13	8	21
Race **Black/African American**	13	8	21
Weight (mean)	143	194	161
Height cm. (mean)	63	64	64
Live Alone (%)	29	86	48
Total Comorbidities (mean)	4	5	4
Participate in Exercise (%)	93	29	71

Data Collection Methods

In order to address the research questions, qualitative data were analyzed from the open-ended, structured post-test interviews conducted between December 7, 2007, and January 23, 2008. These interviews were designed to gain an in-depth understanding to how UPRIGHT participants felt about fall prevention. Questioning began by asking the participant to talk about why they chose to be involved in the program (e.g., Why did you choose to participate in the 10-week UPRIGHT program?) and then went on to address the areas of falling (e.g., Do you think that falling is a part of normal aging?) and social relationships (e.g., Was your family supportive of your participation in UPRIGHT?). A copy of the interview guide is found in Appendix A.

All interviews were conducted face-to-face and ranged in length from 10 to 30 minutes. Dr. Leslie Taylor, Director of the Division of Physical Therapy at Georgia State

University, and I (P.H.) conducted all of the interviews. With participants' permission, interviews were tape-recorded and subsequently transcribed verbatim. A general mobility and health questionnaire was used to gather characteristics about the participants (e.g., age, sex, height and weight, past medical history, rate of activity, and level of education). A copy of this questionnaire is attached as Appendix B.

Data Analysis

In this study, data collection and analysis occurred simultaneously as described in grounded theory methods (Strauss & Corbin, 1998). Grounded theory is a technique for analyzing qualitative data that was developed by sociologist Anselm Strauss and Barney Glaser in the 1960s (Strauss & Corbin, 1990). Briefly, it is a research approach designed to allow theorists to build variation into theory, thus enhancing its explanatory potential (Strauss & Corbin, 1998). This form of analysis primarily consists of three coding stages: open coding, axial coding, and selective coding (Strauss & Corbin, 1998).

Open Coding

After multiple readings, open coding was applied to the data in order to break it down into discrete parts and to allow for closer examination and comparison of its similarities and differences. Line-by line coding was used to aid in uncovering "new conceptual and novel relationships and to systematically develop categories in terms of their properties and diminutions" (Strauss & Corbin, 1998, p.71). During the process, words, sentences, critical issues, and thoughts identified by the participants were highlighted in order to identify preliminary patterns in the data. Codes were then attached to the relevant highlighted information to avoid fragmentation of meaning. As the codes

emerged, they were grouped into categories. Codes were defined and refined numerous times before being sorted into their final categories. For example, several codes relating to physical, mental, and emotional well-being emerged (e.g. feeling better, enjoyment of exercise, increased exercise participation, feeling stronger); these codes were grouped into the category of health.

Axial Coding

Next, axial coding was used to form more precise and complete explanations about the categories. Strauss and Corbin (1998) describe axial coding as "the act of relating categories to subcategories along the lines of their properties and dimensions" (p. 124). During this process data were reassembled, and categories were related to their subcategories. For example, my study examined the relationship between health and program participation. The category of "health" was related to UPRIGHT participation due to factors such as increased strength, decreased pain, decreased stress, and improved mood.

Selective Coding

Selective coding, the "process of integrating and refining categories" (Strauss & Corbin, 1998) was then used to select and identify the core category within the data set. The core category is the central phenomenon that encompasses all other categories. In this study the theme *empowerment* surfaced as the central comprehensive theme holding all of the data together.

Memo Writing

Memo writing is a central part of analysis in Grounded Theory Method. Accordingly, memos consisting of the analysis, interpretation, and questions were kept

throughout the entire research experience. Analyst triangulation was used in both data collection and data analysis (Patton, 2002). Three researchers (P.H., L.T., and A.C.) independently examined the data and separated it into constituent elements before coming together to discuss its meaning. Researchers (P.H., L.T., and A.C.) independently analyzed the interview transcripts to aid in the reduction of personal bias. Additionally, the use of multiple interviewers assisted in ensuring that emerging findings were not a reflection of personal bias. A process of discussion was used to mutually resolve any discrepancies or concerns with the thematic analysis.

Human Subject Consideration

IRB approval was obtained prior to commencement of UPRIGHT, and consent forms clearly explaining the study's purpose, benefits and risks, and participant's rights related to voluntary participation and withdrawal, maintenance of confidentiality, and anonymity were administered prior to the initiation of the program. Additionally, verbal consent was obtained by the researchers (P.H. and L.T.) upon administration of the post-test follow up interviews. For the purpose of this study, no ethical principles were jeopardized, and there were no foreseeable risks to participation in this study.

CHAPTER 4

WOMEN'S PERSPECTIVES ABOUT, AND EXPERIENCES WITH, FALLING

Fall Occurrences

Of the 21 women interviewed, all had either fallen themselves or knew of someone who had. Regarding personal experiences with falls, 75% of the women (all 8 of the home-based and half of the center-based) had fallen. A fall was defined to the participants as having experienced a loss of balance that resulted in coming to rest at a lower level. For instance, losing balance in the kitchen, but being able to grab onto and sit on a chair, would be categorized as a fall. All falls reported by the women in this study, however, involved a fall to the floor.

Participants discussed falling for a variety of reasons. Some attributed their falls to extrinsic risk factors alone, such as environmental hazards, associated with weather changes for example,"[I fell] on the ice, coming out of the car," or tripping on curbs and stairs. More frequently, however, were stories of falls that were associated with a combination of intrinsic (e.g. muscle weakness, vision loss) and extrinsic factors. One participant, said:

> I had been to the store and I had to come up six steps to my door. But it ain't but two steps in the back, and I should have went to the back, but I always come up the front, and time I got inside the door, bam, I fell. I give away in my leg, my left leg, and I fell to the floor.

When describing an event that occurred while trying to navigate her way down the aisle of a county van that was transporting her from a doctor's appointment, a participant said:

> When she picked me up from the doctor, I had the hardest time to get into that van because somebody was in the front, and I had to go in the back, and it was so hard to get up in there. And they didn't have a stool to stand up on, so it was hard. And coming out of the van, was hardest because I drop on my butt onto the floor of the car.

A few participants also discussed falling while performing routine household activities and not being sure why they had fallen. They seemed surprised that it happened and believed it had occurred with no real warning or precursor. One participant commented, "It was so odd. I was taking a bath, I was finished with my bath, and I fell into the bathtub, [while] trying to wipe out the bathtub…it gave me a fear." Overall, regardless of their previous falling history (fall vs. no fall), more center-based participants believed that increasing exercise participation, maintaining a proper diet, and being more cautious could prevent most falls. One center participant commented, "I think that taking exercise, it helps you a lot to prevent you from falling." Another said, "…a lot of it [falling] is carelessness and they don't prepare themselves not to fall." Conversely, several home-based participants believed that increased falling was a normal event linked to aging or an event that they did not have control over. One home-based participant stated, "I think that when you get old like that, you're going to fall." Another said, "I figure it is some kind of sickness, why I'm falling down."

Fear of Falling

Approximately half of UPRIGHT participants verbalized a fear of falling, while others reported that they had none. Of those who professed a fear of falling, some had

fallen prior and their fear was directly related to their previous fall. A participant who had fallen several times prior to participating in UPRIGHT commented, “I knew that if I walked too far, I would just fall and stumble.” Another said, “I still dread falling, and I always have my cane… I walk with caution, because I fall so many times. I always look out for things, and you know, try not to fall.” Other participants discussed how prior falls had given them a negative association of falling, saying “It [falling] was very scary. I pulled myself over to a chair so I could get up,” and:

> Yes, [I have fallen] several times. Last one was three years ago. It frightened me very much because I couldn’t get up and I couldn’t use my knees. I was there long and I called housing authority and they came and tried to help me. I couldn’t even roll over. The fireman came and they forced my knees to bend and they pulled me up. I cried because I was happy to get up. I fell on my tailbone and that’s where I was injured.

Participants who had not previously fallen themselves also discussed having a fear of falling. A participant who had not fallen prior to the program said, “Sometimes you are scared, but you have to be brave.” In some cases, fear of falling was based on hearing about the experiences of their friends and/or peers. One participant commented, “I had a friend of mine, she’s taken a fall and she’s in a coma now. This is been about a third time having a fall in her home, and one time she broke her wrist.”

Fear of falling was associated with activity avoidance. Participants stopped performing certain activities that they felt would put them at risk for falling. One participant commented:

> I can't climb up… I use to climb up and do this and do that, but I can't do that no more. I can't even change my own curtains in the house, because I can't climb up. And I cannot wash the bathtub because I can't bend. Bend down to scrub. I can't use the vacuum that much.

Not all participants who had fallen voiced a fear of falling again, nor did they alter their behaviors because of past falls. Instead, they viewed their falling experience(s) as eye-opening and/or educational events. One participant who had previously fallen commented about the incident, saying that it, "Make[s] you wiser." Another said, "It helped me to be a little more careful to what I am doing." And one more said she did not fear falling again, because she knew if she would "just take things slowly," she would be fine.

Participants' Thoughts Regarding Older Adults and Falling

Study participants varied in their thoughts about why older adults fall. While several of the participants viewed falling as a normal event linked to aging in general ("I think that when you get old like that you're going to fall"), most drew direct connections to specific issues such as decreased strength, lack of exercise, and inactivity. One participant said:

> If you are inactive, falling is a part of it [aging] because some seniors who don't do anything but sit on their butt and [don't] do anything whatsoever. And I'm one of those people who I've always did something. And I love doing.

A number of participants associated falling with being inattentive and contributed falling to an individual being unaware of their actions. They felt that older adults could avoid falls by taking their time, being cautious, and thinking about their actions. A center participant stated, "…a lot of it [falling] is carelessness and they don't prepare themselves not to fall."

There was a certain ambivalence voiced around discussions of falling as a normal part of aging. Most participants spoke about both sides of the issue. For example, when discussing whether or not she thought falling was a normal part of aging, one participant commented, "Maybe it could be when you get up in age you can lose your balance. You forget to stop and think. You just need to take your time." Another participant commented:

> Not really. But I guess it is, though. Because I can see the older you get the more you know your bones and things wear out if you don't really eat right, you will [be more likely to fall].

CHAPTER 5
FACTORS INFLUENCING WOMEN'S PARTICIPATION IN A FALL PREVENTION PROGRAM (UPRIGHT)

Program Enrollment

The results of the axial coding revealed that both home-based and center-based participants enrolled in UPRIGHT for three key reasons. These reasons focused around three conceptual categories: 1) the desire to learn, 2) the desire to improve overall health, and 3) the desire to increase motivation to exercise. Figure 5.1 outlines factors influencing program participation.

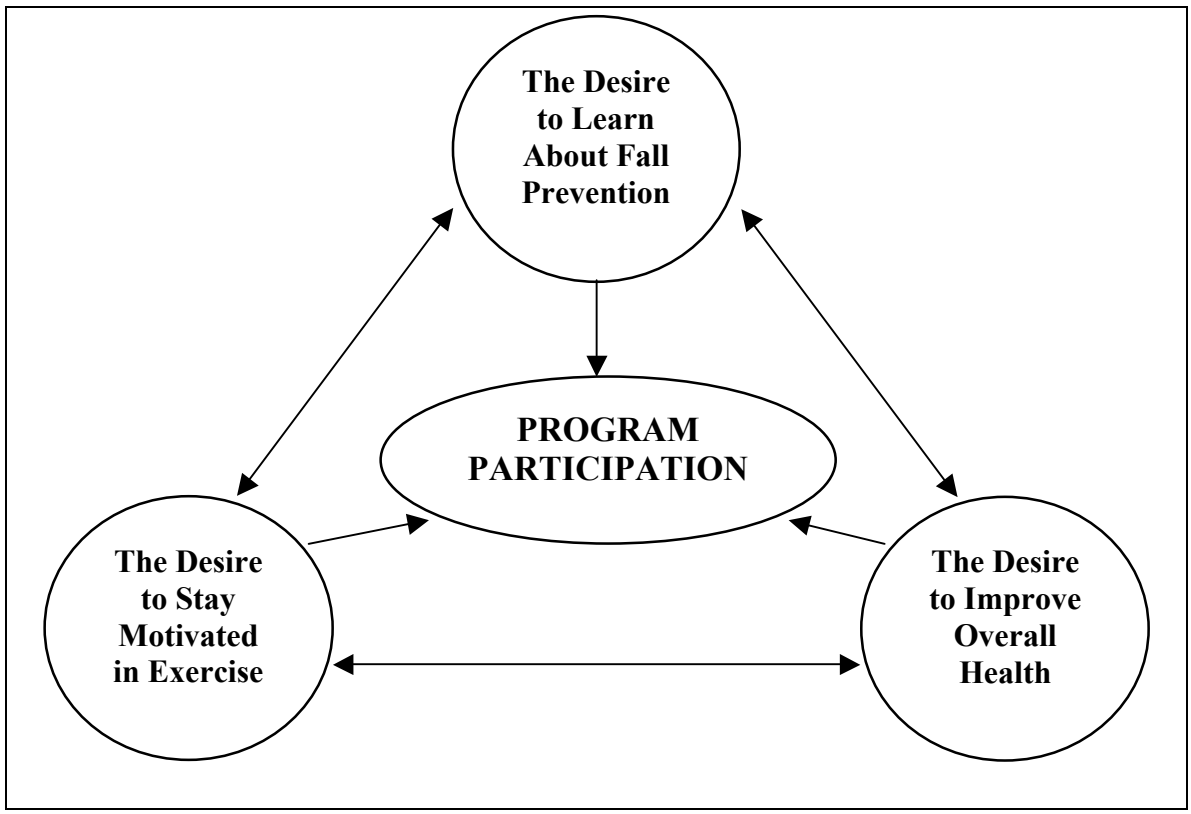


Figure 5.1 Factors Influencing Program Participation

The Desire to Learn

Approximately one-third of the participants verbalized the concept of a "desire to learn." For instance, when discussing why she joined the program, a participant stated, "Some things I needed to learn how to do, good exercise. I realized I wasn't really doing what I was supposed to do. Doing exercises, that's what I really needed." Another participant said, "I thought that I was maybe getting a little unsure of myself, about falls, and I wanted to learn more about how to prevent falls and what to do,"

The Desire to Improve Overall Health

The second theme, the desire to improve overall health, was reported by almost half of the participants. Participants discussed enrolling into the program to hopefully benefit from its overall health benefits. In particular, several women commented on their desire to improve their ability to walk. One participant commented, "I got to the point where I could barely walk. I wanted to increase my health so I asked if there was anything I could do and I had heard about this prevention program and I gave it a try." Another participant, when discussing the same topic, replied, "I wanted to participate because I was told that it would increase my movement and balance and well being."

The Desire to Stay Motivated in Exercise Behavior

The third theme, participants' desire to stay motivated in their exercise behavior, was evident in their responses. This theme was identified less often than the first two but still was deemed an important factor during the analysis. Participants were clear in their hopes that joining the UPRIGHT program would help them stay motivated regarding physical activity. When asked why she decided to participate in UPRIGHT, one

participant simply stated, “Because I wanted to stay motivated in doing exercise.” Another participant when answering the same question commented, “[UPRIGHT] teaches you how to get up and do things you wouldn’t normally do.”

Program Participation

Continued program participation was associated with four major themes: 1) program design, 2) participants’ perceptions of progress, 3) social interaction, and 4) familial support. Figure 5.2 depicts factors leading to program participation and withdrawal.

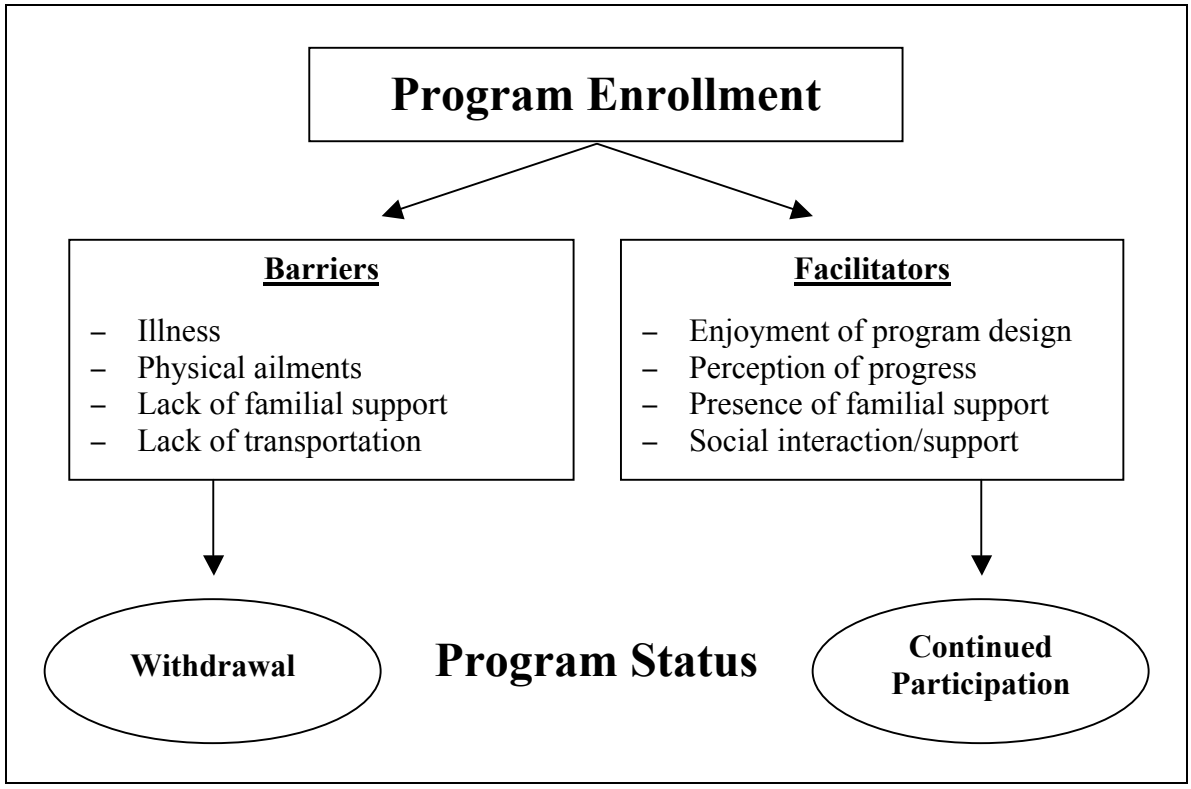


Figure 5.2 Factors Associated with Program Participation & Withdrawal

Program Design

UPRIGHT's design enhanced participants' personal motivation to stay involved and engaged in the program. Program participants reported favorable impressions of the program's delivery system, versatile exercise options, and the recording method of using activity logs to track progress. When discussing UPRIGHT's delivery system, most participants appreciated having the choice of either performing the program in their homes or at the senior center and reported that this provided them with being able to choose a method that best fit their lifestyle. A home-based participant commented, "I chose to do it at home, rather than come to the center each week." Another participant when discussing why she enjoyed performing the program at the center said, "If it was an individual thing I don't think I would have motivated myself and it really help me because I am a social person. I like people."

The program was designed so that weekly exercises could be performed either sitting or standing. This allowed participants to have a choice about which exercise position to use based on their own assessment of how they were feeling. Additionally, the versatility was associated with greater adherence as learning new exercises and new ways to do them became evident; "I liked them all. Both sitting and standing. It was all new to me but I found that doing the exercises sitting gave me a good start because I was very weak…" Another participant commented, "I liked knowing that I could stand for some and sit for others. I wasn't worried that I would hurt myself."

Monitoring progress through weekly logs was also a motivator for continued program participation for many participants. When discussing what inspired her to continue in the program, one participant commented, "I liked the exercise and the idea to

get up and do them. I didn't want to have any blank boxes on my log." Another participant, when talking about the role of the exercise log stated, "The activity log was a helpful tool because it gave me an idea of where I went up and down and where I needed to improve."

Further, participants often commented about the UPRIGHT book as being an informative and useful reference tool and discussed referring to it for reminders on how to correctly perform exercises or review chapter lesson plans. One participant commented, "This [the UPRIGHT book] is helpful information to refer back to, especially the barriers and how people get bored." Participants also discussed how the book acted as a memorization tool and helped them in retaining program information. A participant said, "You can memorize them [the UPRIGHT lessons], and you know how to go through them, and if there's something you're not sure of, you can pick the book back up, read again, and continue. So that's a good thing with the exercise book."

Participants' Perceptions of Progress

Both home- and center-based participants talked about continuing to take part in the program because of "seeing results." Several participants who remained enrolled in UPRIGHT discussed noticing positive changes in their health and physical abilities. During week 7 of the program, one home-based participant commented to the program facilitator, "I can tell a difference since I've been doing exercise." Another home-based participant, also during week 7 of the program, stated, "I can now walk to my mailbox without huffing and puffing and that is progress, progress, progress." She further commented, "I feel good about myself." Additionally, during the class interaction of Week 5, a center-based participant said, "I'd like to share a testimony. I was able to get

out of the bathtub yesterday, by myself, for the first time in a long time. It's because of this program. I know how to move my body better and I feel stronger."

Social Interaction and Support

Participants often spoke about social interaction as playing an important role in motivating them to participate in UPRIGHT. Specifically, interaction with program facilitators and other program participants was associated with being motivated to continue participating in the program.

Positive interactions with program facilitators were connected to continued participation in the program. Participants spoke highly about the support and instruction provided by UPRIGHT facilitators. One center-based participant commented, "The people that were teaching us were real good and were helpful to us, and that makes a whole lot of difference." Also, when referring to the interaction at the pre-and post-testing, a home-based participant said, "The people in the prevention [program] had the most beautiful smiles and they are so kind that it makes you want to do what they say." Further, when describing what they enjoyed most about the program, many participants, both center- and home-based, discussed reasons connected to social interaction. When explaining what she liked most about the program, one center-based participant stated, "The people who ran the program." A home-based participant responded:

> I like the exercise baby, the walking, the standing, and trying to reach out. I think that's good. I do that at home, there's one of them out here that calls me once a week, and tells me what to do. Crawl up the wall, and stand up on one foot. So I do that, I do the exercises at home too. So she calls me, we do it together, she tells

> me that she be doing it too. So I think that's beautiful.

Several participants also discussed being motivated to continue program participation as a result of interactions with program facilitators. However, the type of social interaction varied between center- and home-based groups. Center-based participants often associated program participation with the pleasure that arose from attending the senior-center, while home-based participants usually associated program participation with the weekly telephone contact they received from their program facilitator. For instance, one center-based participant commented:

> Being at the center motivated me to keep it up, and to tell other people about the program because I have met some people and I've talked about it and they say, 'Oh, we don't have that our center,' and I say, 'well, we have it at ours, we really enjoy it.'

Another center-based participant said:

> The young ladies who are here, they are very cordial. They're very sympathetic with us, and understanding. They don't push us. They let us do it and they listen to us, which is very important. They listen to us, and help us to want to do more. I'll say it like that. They encourage us to do more.

Participants living alone, usually home-based participants, seemed to be particularly inspired to continue program participation because program facilitators uplifted them emotionally and decreased their feelings of loneliness. When discussing the weekly UPRIGHT calls, one home-based participant commented, "See, when you age,

people don't have as much concern, so this made me think that someone was thinking of me. I would like to have more calls per week." Another home-based participant said, "It was nice to feel like someone was concerned."

Additionally, continued program participation, for center-based participants, was often connected to the enjoyment that came from being able to interact with other program participants in a group setting. When asked if being part of a group motivated them to participate in the program, most responded affirmatively. Specific answers included being with others, talking with others, meeting new people, and receiving help from peers. One center-based participant, commented, "… When you're a part of a group, when you come in and everybody's there doing the same thing, it makes a difference. You feel, you feel good about being with the people you're with." Another center-based participant said, "Yeah. I like to do things in a group. I [like] action, I function more. But if I were in here by myself, I would have dropped out." Moreover, peer interaction was evident among many center-based participants, and several of them discussed feeling motivated to participate in the program because they felt that others were "dependent" on them to show up each week. Additionally, many of the center-based participants discussed the importance of other group member's attendance and participation in the program on their engagement.

Interestingly, several home-based participants also discussed experiencing enjoyment from feeling like they were part of a group. Most of these responses seemed to be based on their positive experiences during visits to the senior center for pre-and post-testing. For instance, one home-based participant commented:

You know I feel better when I comes out here. I'm like a different person. I can

> walk better, and you know everything. Then I gets home and I say, 'How come I can walk out there, but not in here.' It is something to just lift me up you know, to see a lot of people, and the people talking, and everybody, the nurses and everybody, so nice.

Another home-based participant, when expressing her feeling about being part of a group said, "Seeing what I see here, I know it's a group, and we work together, because she tell me what to do and you tell me what to do, and I do it, it's a group. I'm not alone." Additionally, when contemplating the idea of having another home-based participant as a telephone buddy and program partner, one in-home participant said, "I would like that because there would be more to do and not as lonely and to exercise your brain. And you can do things together."

Familial Support

Familial support was an important component of continued participation in the program. Support from family members was clearly evident in the responses given by center-based participants. The majority of them lived with family members and consistently spoke of receiving motivation to participate in UPRIGHT from their families. For example, one center-based said, "… My granddaughter. She was always asking me, 'Did you go to class?' and 'Did you do your exercises?'" Another center-based participant said, "My daughter helps me… She always motivates me."

Conversely, all but one home-based participant lived alone and rarely did this group discuss receiving familial support. Only two of the home-based participants identified receiving support from their family members to participate in UPRIGHT. One

said, “She [daughter] says mama I’m glad you’re going, you need to go to these places…” and another, “[My] daughter and granddaughter were very supportive.” However, most of the home-based participants discussed experiencing the lack of familial support. One participant commented, “Well. I ain’t got no family to participate or nothing. It’s just me. But whether I do it or not, it depends on me. I only have the church people, and they don’t, they don’t know.” Another home-based participant stated, “Well, I don’t have nobody but my son that lives, you know, well, whatever I do, it doesn’t matter to him.”

Participants often discussed receiving support from female family members (e.g., daughters, daughter-in-laws, and granddaughters); however, a few participants did identify their sons as being primarily or secondarily involved in motivating their continued program participation. One center-based participant commented, “My son is very supportive. He’s going to the gym now trying to get himself in shape.” Another center-based participant described the joint support she received from both her son and daughter-in-law.

> They encourage me to keep active. They do that… she’s my daughter-in-law, but she’s more like a daughter to me. She and my son, like my son said to me, ‘Mom, go.’ I said, ‘Okay, Gene.’ Because he says anything I say, ‘If you don’t have the money, I will give you the money.’ But they always encourage me to keep going.

Program Withdrawal

Three participants withdrew during the program for two site-specific reasons. The lack of reliable transportation was a problem for one center-based participant who

was forced to drop out of the program when her son became unable to transport her to and from the center on program days. Additionally, complications surrounding illness and physical problems resulted in two home-based participants withdrawing from the program. One participant experienced a neurological incident, and the other developed congestive heart failure.

While the majority of home-based participants stayed in the program for the duration of the intervention, several of them reported being unable to complete a particular weekly assigned program task due to experiencing pain, weakness, and/or sickness. When discussing the program during week 8 with the facilitator, one home-based participant commented, "I'm tired, and my breaths have been short. I've been sick, but I did some of the exercise." Another participant when talking about the program during post-testing said, "For a while I was sick and couldn't do it, so I lost some weeks."

Overall Factors Influencing or Inhibiting Program Participation

Participants reported being inclined to enroll into the program for one of three major reasons. These reasons included the desire to: 1) improve their overall health, 2) learn more about the topic, and 3) increase their motivation to exercise. Continued participation in the program was based on five themes, the first, program satisfaction, encompassed the three themes of enrollment. The remaining themes of continued program participation were program design, perceived program results, social interaction, and social support. Transportation problems, illness, and physical ailments acted as barriers to participation among program participants, and on occasion, necessitated their stopping the program.

CHAPTER 6
PARTICIPANTS' PERCEIVED OUTCOMES OF PROGRAM PARTICIPATION

Initial analysis of UPRIGHT's post-test interviews on participants' perceived outcomes revealed eight themes (e.g. fear of falling, increased knowledge, improved health, improved confidence, social support, motivation, awareness, and strength). These eight themes were then categorized and reduced, using the methods described in Chapter 3. The three remaining major categories were as follows: 1) Knowledge, 2) Health, and 3) Confidence. Selective coding revealed an overarching theme of empowerment that will be discussed in more detail later in this chapter. Table 6.1 provides an outline of the three categories of perceived outcomes and the descriptive themes within the categories.

Table 6.1 Perceived Outcome Categories and Examples

Category	Relationship to Program Outcome
Knowledge	• Better understanding about falling, and ways to prevent falls • Better understanding about falling techniques • Better understanding about exercise • Better understanding about health • Change in participants' views about exercise and falling • Change in participants' behaviors
Health	• Improved physical functioning • Improved visual health • Improved moods • Decreased stress • Increased focus on health and exercising
Confidence	• Noticing improvements in physical abilities • Decreased fear of falling • Gaining a better understanding of their bodies • Establishment of fall preventative strategies and devices

Knowledge

During UPRIGHT, participants were presented with one new exercise and fall prevention topic per week. The exercise and fall prevention information included in the program was based on an extensive literature review and evidence-based practice

findings regarding fall prevention (Taylor et al., 2008). The topics addressed each week are available for review in Table 3.1, as participants' responses often related back to learning something from a specific week of the program.

Based on the post-intervention interviews, the information presented in UPRIGHT appeared to be associated with increasing participants' knowledge and understanding about overall health, exercise, and fall prevention. While some participants reported only one specific area where their knowledge was enhanced (e.g. "I learned to leave a light on at night."), many commented about having an increase in knowledge across several topic areas, simultaneously. An example of a more comprehensive increase in knowledge was evident in the following participant's comment:

> I learned how to workout, so I'm not still. I learned how to turn my neck, and I learned how to use the weights, and I can see it in my muscles. I learned how to sit down and exercise my feet, because they are numb from diabetes, and [that] helps me to walk. I continue to do it until I get tired. I do some exercise when I stand up with my walker too. I was not able to do it in the beginning. I walk slow, because I'm unbalanced, but I do the marching, which I couldn't do before. Sitting and standing.

Falling and Ways to Prevent Falls

Beginning during week 2 of UPRIGHT and threaded throughout the remainder of the program, participants were provided with information and diagrams explaining factors that may contribute to falling and were given suggestions and techniques to use in order to avoid and/or recover from a fall. Participants commented on diverse, but

interrelated topics that they learned about during the program, including falling, exercising, nutrition, and medications. One participant stated:

> It [UPRIGHT] teaches you how to prevent yourself from falling, and shows us different ways to do it. And then, they tell us about some of the foods we eat, and some of the other things we need to watch for… falling, medications…. learning about some that you shouldn't take this way, and some that you shouldn't take that way, and some that will make you kind of dizzy. Cause I take some that make me kind of dizzy.

Falling Techniques

UPRIGHT also covered techniques to use if a fall occurs, to minimize injury, and how to get up from the floor. Several participants discussed specific points learned during this session. One participant said, "I'm more knowledgeable about how to fall…" Another participant commented:

> I know that coming through this program it really has helped me to understand about, in case you fall, how to do it properly, or reach your hand out. Or they showed us how to lay down and roll over and get up, crawl to the phone and all of that has really helped.

Benefits of Exercise

UPRIGHT emphasized the importance of exercising to decrease the risks associated with falling. The program covered the various types of exercise, barriers to exercise, such as lack of time, and ways to overcome those barriers. Participants were introduced to the different types of exercises and why each type was important to

improving balance and decreasing falls risks. Specifically, strengthening, balance, stretching/ flexibility, and endurance were addressed. Participants discussed gaining a better understanding about the role and function of exercise. One participant commented, "Well, the exercises, and then the part where they talked to us about different things. I found out that the exercise strengthens your muscles." Another said:

> It [UPRIGHT] did give us some more insight on the exercises, and concentrating on the exercise [while we are doing it]. Whereas before we were exercising, like, you know, following everyone else, but this way we were more concentrated on the exercise to strengthen us.

Additionally, several of the participants discussed learning new ways of exercising. Participants mentioned learning how to exercise while sitting as well as standing. One participant said, "It [UPRIGHT] has changed how I exercise. How to exercise without standing, one thing, and how to get up and down." Another commented, "It was all new to me, but I found out that doing the exercises sitting gave me a good start because I was very weak." Further, participants learned about techniques to use in order to make exercising more accommodating. One participant commented:

> I liked doing the exercises, learning the new exercises, and the suggestions that they gave us to make the exercises easier. Say for instance, the fact that you warm up. I'm not talking about stretching, but warm your body up with like a heating pad, and it made it much easier.

Better Understanding of Health Conditions

Participating in UPRIGHT was associated with participants' increased knowledge about their overall physical and mental health and ways to improve their general health and well-being. One participant commented, "…[UPRIGHT] helped me to learn how to take care of myself better… I'm learning more and more." Another participant stated, "It [UPRIGHT] has [helped] so far. I'm a diabetic, and it helps to me know what to eat, what to do to make it better. As well as exercise to help." Further, participants learned about body systems influential in maintaining balance, including the visual, vestibular and proprioceptive systems. The impact of these systems on balance was cited as being particularly informative. A participant commented, "I didn't know about the vision and with the ear [vestibular system], that all of that was involved."

UPRIGHT's Impact on Participants' Views

Learning about the benefits of exercise, why falls occur, and ways to prevent falling influenced how UPRIGHT participants viewed exercise. Participants reported starting to view exercise as a beneficial player in their fight against fall prevention, and many of them discussed adopting new exercise behaviors. Also, several women talked about incorporating exercise into their daily routines. A participant said, "… It [the UPRIGHT program] keeps you in shape, and it's helped me mentally, because I know I have to get up, get the exercise done."

Likewise, learning about fall prevention in this comprehensive, multi-faceted way seemed to be successful in increasing participants' understanding about why they may fall, and several participants discussed changing their behaviors to reflect a decreased chance of falling. One participant said, " I use to fall a lot because I was moving too

quick and not taking my time, but I've learned now, I just take my time, that's all." Other participants identified specific strategies that they learned about and implemented into their lives. Another participant commented:

> I know coming down the steps, well coming down the steps I don't walk straight. I walk sideways, because with socks on you can easily slip. And now, since I've been going through the program, I know to walk sideways down the steps, hold on to the rail, and I don't have any problems.

Health

The second category of program outcomes that emerged focused on health improvements. UPRIGHT seemed to influence participants' physical and mental health. Most participants mentioned that they could, "tell a big difference," in their physical bodies since participating in the program; also, participants mentioned being able to tell a change in their emotional and mental well-being.

Physical Health

Improvements in physical health were associated with reports of increased muscle strength, decreased pain, improvements in other health problems, and better vision. Participants discussed noticing improvements in their physical strength brought about by performing the UPRIGHT exercises. One participant commented, "It was neat because it [performing the exercises] made the muscles in my arms and legs strong, because I [had] got to the point where I could barely walk." Another participant said:

> The only health problem, as what I said, was getting me to walk better. Uh, I was in the hospital rehab practice… They would give us a half-hour of exercise. But not like here, here I'm more concentrated on what I am doing. So I'm able to strengthen that muscle in the hips, the hips and the knee, and all that much better.

Decreases in physical pain, particularly joint pain, were also reported. Given the prevalence of osteoarthritis and the high degree of disability associated with chronic joint pain, this finding is important. Participants also reported that exercising helped to increase lower body strength and flexibility which resulted in less joint pain when walking. One participant commented:

> It's helped quite a bit in my health problems, because I have arthritis in my leg, and with participating in the program, doing these different exercises, I noticed I don't have as much pain, and I know exactly how to do the exercise to help eliminate some of the pain.

Another said, "I have less pain in my feet because of the exercises. I can do more because of that." Additional physical health improvements such as reduced blood pressure and better control of blood sugars were also reported. One participant said, "I tend to keep high blood pressure, but I measure it after resting from exercise, and I find that it has come down. I'm trying to get off of the medication."

Prior to implementation of the program, visual health screenings were conducted to evaluate participant's eyes for potential vision problems. After being assessed, program participants were given appropriate recommendation for identified concerns (e.g. new prescription glasses, referral for cataract removal surgery, referral for treatment

of suspected glaucoma). One participant commented, “This program made me get my eyes fixed, and I’m just amazed that I can see so well. I can see clear, all the big and small letters, without my glasses.”

Mental/Emotional Well-being

Participating in UPRIGHT influenced participants’ mental/emotional outlooks. They credited the program for improvements in their moods and decreased levels of stress and anxiety. One participant said, “…You feel better, after taking the exercise, you feel better than before.” Participants also commented on how the positive changes in their moods were associated with improvements in other health problems. A participant commented, “I noticed that my blood pressure has come down a little, and I’m not as stressful.”

Participants spoke about the positive effect that UPRIGHT had on their thoughts about exercise and discussed how the program provided an atmosphere that allowed them to concentrate on improving their health. A participant commented:

> It helped me focus on my health, and that’s what helped me during the 10-weeks course. During that 10 sessions, I have really been conscious, well I had been conscious, but this really helped me to focus on doing the right thing, and eating the right foods, and keeping your balance. And all that really helped.

Additionally, participants spoke of how the program mentally motivated them to continue exercising. A participant said, “It’s helped me mentally, because I know I have to get up, get the exercise done, and it makes me feel, once I’ve finished it, it makes me feel I can make it through the day.”

Confidence

Gaining an increased sense of confidence was the program's third emerging outcome theme. Several participants discussed experiencing a gradual rise in their levels of confidence while participating in UPRIGHT. One participant commented, "The confidence that you have since you started [UPRIGHT], you didn't have it before [participating in UPRIGHT]." Another participant said:

> The program has been a good program, and it makes you feel more confident in yourself, in whatever you're doing. Whether walking, bending, or what, the program was something that built up your confidence. Made you feel better.

Comments about increased confidence among program participants seemed to be related to participants noticing improvements in their physical abilities, gaining a better understanding of their bodies, and using fall preventative devices. Noticing positive changes in their physical abilities was also associated participants developing a heightened sense of trust in actions and a corresponding decreased fear of falling. Increased strength, improved balance, and less stumbling were all identified as factors for an increase in confidence among program participants. One participant commented, "I feel doing the exercise… let us know just how much strength we had, and how much we could move… I felt that it gave me more strength to move." Another participant said, "It has given me more balance, and more confidence in myself." When discussing an improvement in her physical capabilities, an additional participant stated, "A lot of times I wouldn't feel that I could participate in some of the programs [at the center]. And since I been doing exercise and not stumbling, doing it the right way, it helped me."

Participants discussed feeling more self-assured and associated that with their newly-acquired better understanding about their bodies. For instance, one participant commented, "You're better able to understand yourself and your body, and the movements of your body, and it [UPRIGHT] gave you confidence in certain areas, to do what you wanted to do." Participants also discussed gaining a better sense of control about the actions of their bodies, which made them more confident in their ability to prevent themselves from falling. One participant said:

> Made me think more [participating in UPRIGHT]. Like when I go to move now, I think about my movements. Before, I just got up and moved, and it would put me off balance a bit. Whereas now, I try to think before I get up to move. You don't think your thinking, but you're thinking, you know. But it makes me think a little more about my movements.

Another participant commented, "I think I've just throwed it out of my mind about falling. Now I just got confidence that if I watch what I'm doing that I won't accidentally fall."

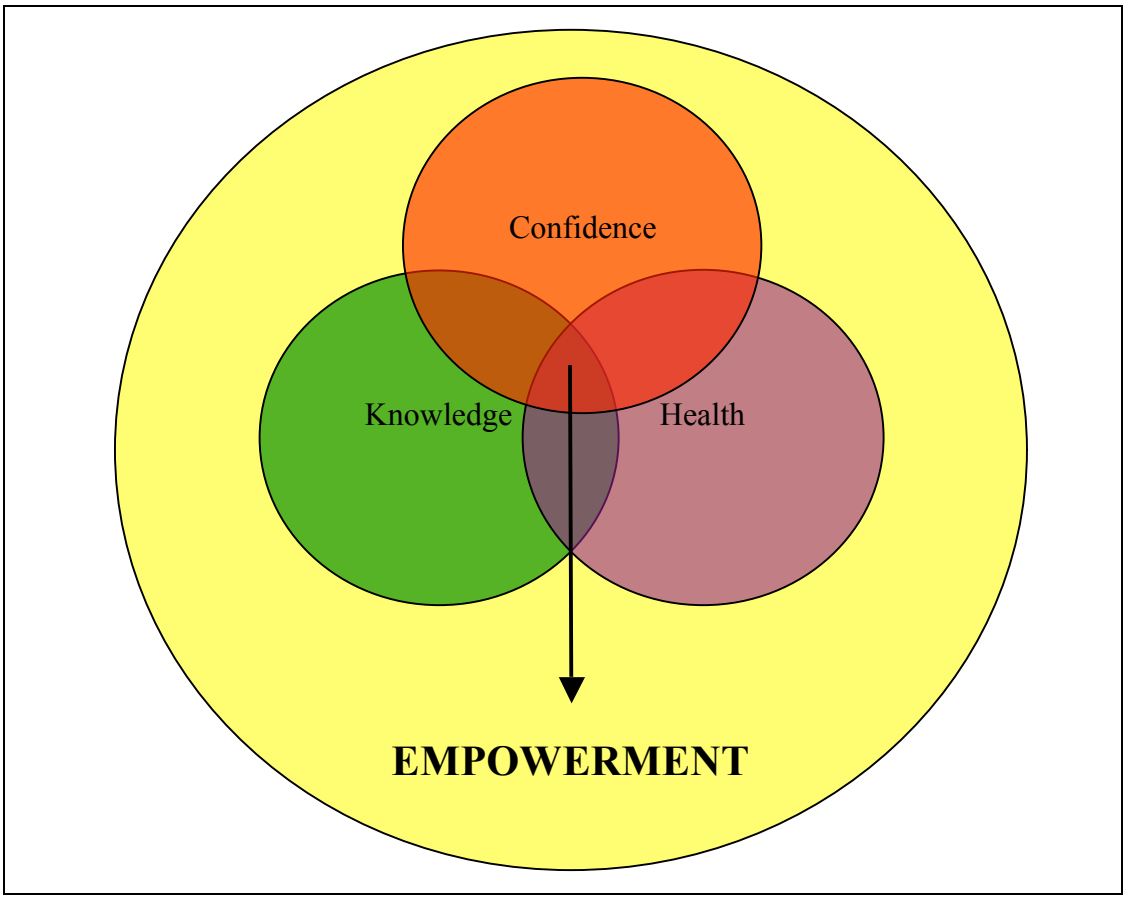
Further, several participants discussed how participating in UPRIGHT provided them with the necessary assistive devices and tools to function confidently. Whether understanding more about devices like walkers and canes or the importance of correctly-installed grab bars, participants were more confident about choices they might make to minimize their likelihood of falling, particularly in their own homes. A participant commented, "I feel more secure when I'm getting up and down, that's a biggie right

there, and getting out of the bathtub with the rails. That's really helped me. Yes, I think that's the reason why I don't use the cane all of the time."

Connections Between Empowerment and the Three Outcomes of Participation

The purpose of UPRIGHT was to provide a comprehensive fall prevention program to older adults. During data analysis, three interrelated themes (knowledge, health, and confidence) were evident in reference to outcomes of program participation (see Figure 6. 1). Additionally, during selective coding a sense of individual empowerment emerged as the overarching link between these three themes. For instance, learning how to get up from the floor after a fall, experiencing physical and/or mental health improvements, knowing what types of exercises are helpful, and being confident in personal safety during exercise appeared to be interconnected within participants' lives. The result of this interconnection of themes resulted in a broader theme that we called personal empowerment. Figure 6.1 provides a visual representation of the interconnectedness and interrelatedness between the three themes and the larger theme of empowerment.

The information provided by the program and the knowledge gained through participating in UPRIGHT empowered participants in a way that resulted in improved overall health and well-being, and instilled a sense of hope. Zimmerman (1995) stated that people become empowered when they, "create or are given opportunities to control their own destiny and influence the decisions that affect their lives" (p. 583). Similarly, Kieffer (1984) argued that the generation of knowledge is empowering, and stated, "empowerment is not a commodity to be acquired; but a transforming process constructed through action" (p. 27). Further, Narayan (2005) suggested that



empowerment leads to an increase in self-confidence.

Figure 6.1 Connection Between Empowerment and Knowledge, Health, & Confidence

Knowledge

Learning new exercises, and knowing how to properly perform the techniques, led to empowerment. Participants discussed how participating in the program provided them with the necessary information to successfully make improvements in their functioning abilities. Additionally, they commented on being able to better understand how to strengthen their muscles in order to achieve their desired health goals. One participant stated:

> The only health problem, as what I said, was getting me to walk better. Uh, I was in the hospital rehab practice, that's tradition. They would give us an half-hour of exercise. But not like here, here I'm more concentrated on what I am doing. So I'm able to strengthen that muscle in the hips, the hips and the knee, and all that much better.

Also, learning about ways to prevent falling made participants feel that they could believe in themselves and their abilities. Participants mentioned the effectiveness of UPRIGHT in teaching them how to lessen their chances falling. One participant commented, "I have learned so many things that I didn't know, and I feel like they will help me to prevent me from falling." Another participant said, "… It's helped me a whole lot because a lot of things I learned involved prevention that I hadn't even thought about…"

Additionally, having a better understanding about falling and knowing what to do if a fall occurs lead participants to increase their feelings of control about their actions an their bodies. Being able to identify the factors connected with falling and knowing how to diminish those potential problems also led to increased feeling of empowerment among participants. For instance, one participant said, "I know what to look for, and I know how to get up, and where to keep the phone and the grab bars."

Health

The program's emphasis on exercise education, instruction, and versatility was associated with physical and mental benefits experienced by participants and a global sense of empowerment. Participants often discussed noticing improvements in their

physical abilities, and making gains that moved them closer to achieving their personal goals for better health. One participant commented, “I do some exercise when I stand up with my walker too. I was not able to do it in the beginning. I walk slow, because I’m unbalanced, but I do the marching, which I couldn’t do before. Sitting and standing.” Another participant discussed how participating in UPRIGHT helped her to reach some of her other fitness goals, “… It strengthened me, and now I’ve advanced to the stationary bike and on the treadmill.” Overall, participants reported developing an increased sense of health resulting from the gained belief that they could perform program exercises.

Confidence

Participants felt that the information and instruction they received while participating in UPRIGHT adequately prepared them to decrease their risk of falling, and several participants discussed feeling more secure about their actions after participating in UPRIGHT. One participant commented, “With the fear of falling, I was very cautious. But with going through the program, it has given me more confidence.” Knowing that they could potentially control their chances of falling filled participants with a sense of empowerment and increased self-confidence.

Further, noticing improvements in their physical abilities was associated with an increase in confidence among program participants. Participants reflected a sense of accomplishment when discussing being able to securely perform tasks (e.g. walking further) that they had not been able to complete prior to program participation. A participant commented, “I feel like I can do things that I could not do before.” Another participant said, “When I first started I couldn’t get out of the bath tub, and along the

way, I did, I was able to get out of the bath tub." Confidence is often a precursor to empowerment. Because the participants gained confidence in their ability to complete the exercises they were also gaining a sense of control over their lives. When this confidence combined with the improvements in health and knowledge, participants seemed to feel more able to take control over their own fall-related well-being.

CHAPTER 7

DISCUSSION AND CONCLUSION

The overall goal of this study was to explore the attitudes, beliefs, and perceived outcomes of older minority women participating in a fall prevention program. The study's main objectives were to: 1) gain an understanding of older minority women's experiences and perceptions about falling and fall prevention; 2) establish what factors motivate older minority women to participate in fall prevention programs; and 3) explore participants' perceived outcomes of program participation. This study provides an in-depth look into the factors motivating a group of older minority women to participate in exercise and explores their beliefs regarding falling and fall prevention. This chapter discusses the findings from the data, limitations of the study, and suggestions for future research.

Discussion

The findings from this study support the use of UPRIGHT to decrease older minority women's preventable risks associated with falling. Post-test interviews provided valuable insight into how older minority women regard exercise, falls, and fall prevention. Overall, this study was successful in gathering and presenting information that allowed for a better understanding of the participants' experiences and perceptions regarding falling and fall prevention. Findings identified reasons associated with falling occurrences and fear of falling among the women. Additionally, the findings allowed for a better understanding about the thoughts that participants had regarding older adults and falling.

This study also identified several themes associated with older minority women enrolling in (e.g. the desire to learn, the desire to improve overall health, and the desire to stay motivated in exercise behavior) and withdrawing from (e.g. transportation problems, lack of familial support, illness, physical ailments) a fall prevention program. Additionally, their reasons for staying involved in the fall prevention program were revealed (e.g. program design, participants' perceptions of progress, social interaction, and familial support). Three specific factors identified as increasing participants' willingness to participate in UPRIGHT were "the desire to learn" and "the desire to improve overall health," and "the stay desire to stay motivated in exercise behavior."

The acquisition of new and beneficial information about exercise and fall prevention methods motivated participation in UPRIGHT. The program's written information (i.e., UPRIGHT book) provided participants with a tool to reinforce learning and retain the information covered in UPRIGHT, and was recognized as useful by the participants. Noticing positive changes in their physical abilities (e.g., less falling, increased strength) inspired participants to continue participating in UPRIGHT. This study's finding that the physical benefits of exercise are prominent motivators for continued exercise participation are similar to findings from other studies examining the exercise behaviors of older minority women (Resnick et al., 2006).

Results of this study did not reveal notable differences in the factors discouraging home-based and center-based participants to participate in UPRIGHT. However, differences between the groups were noted in the context of program motivation. Center-based participants generally received support from female family members to participate in UPRIGHT, while home-based participants relied mostly on program facilitators for

support and encouragement throughout the program's duration. Also, it is interesting to note that whereas falling often contributed to the development of a fear of falling, falling also served as a means of facilitating positive behavioral changes. Falling, therefore, may serve as a cue to adopt safer behaviors. In contrast to other studies that explore factors associated with falling, this study found that certain factors, such as falling experiences, could serve as both barriers to and enhancers of exercise.

UPRIGHT participants experienced barriers to exercise in the form of transportation problems, lack of familial support, illness, and physical ailments. However, unlike other studies where unpleasant sensations were associated with high participant dropout and a decrease in exercise participation (Resnick et al., 2006), most UPRIGHT participants remained enrolled through the entire program, regardless of their negative health experiences, and part of their motivation to continue program participation was based on the desire to decrease unpleasant health sensations.

Further, study findings were successful at identifying the study participants' perceived outcomes of program involvement. Participants had very favorable evaluations about the program, and comments suggested that being a part of UPRIGHT helped them to better understand about why people fall, and ways to prevent falling. There were several instances in which participants described their experiences in UPRIGHT as resulting in increased knowledge (e.g., better understanding about falling, and ways to prevent falls), improved health (e.g., better physical functioning), and confidence building (e.g., noticing improvements in physical their abilities). Additionally, participating in UPRIGHT resulted in an overall increased sense of empowerment among participants.

Participants discussed learning valuable information that altered their wellness perceptions and behaviors, and most women discussed becoming inspired by the program to adopt new forms of activity into their lives. Additionally, several participants expressed intentions to continue implementing those practices upon completion of the program. This study is in agreement with other findings that older adults are motivated to participate in exercise (Schuler et al., 2004; Newson & Kemps, 2007; Norman, 1998; Resnick & Spellbring, 2000). Findings also support Bandura's (1997) theory of self-efficacy, which states that the more a person believes in their capability to perform a particular action and in the positive outcomes of that action, the better chance they will have at being able to initiate and continue that particular activity. UPRIGHT participants were successful at adopting new patterns of behavior (e.g. exercise participation) because they viewed the outcomes (e.g. decreased falling, improved strength) as desirable.

Similar to other studies (Izquierdo-Porrera et al., 2002; Resnick et al., 2006; Young, Gittelsohn, Charleston, Felix-Aaron, & Appel, 2001), participants in this study specifically recognized the importance of social interaction as a source of motivation for continued program participation. The women in UPRIGHT reported that interaction with program facilitators and other participants motivated them to continue performing in UPRIGHT.

Although it is critical to devise effective methods of preventing falling among older adults, research has only recently began examining factors associated with falling among older adults. This study is significant in that it explores the factors associated with the adoption of preventative behaviors among a marginalized group of people. Further, very few studies have been conducted to pinpoint reasons influencing older minority

women to exercise or participate in fall prevention programs. Findings from this study provide critical information useful for the development of programs targeted at fall reduction among women. Even though this study specifically examined older minority women, findings may be representative of other ethnic groups, and both genders.

The makeup of the sample group, all participants being black women, may have contributed to participants having a greater appreciation for the implementation and instruction provided by UPRIGHT. Participants in this study discussed becoming empowered by their gains in confidence, knowledge, and health while participating in the program. This outcome may be connected to the history of oppression, poverty and discrimination surrounding older black women living in the United States. Growing up in a time period when not all individuals were granted equal accessibility to societal resources, the participants' life experiences may have been specific to their expectations and involvement in UPRIGHT.

However, further research is needed in order to identify the similarities and differences that women have regarding falling, exercise, and fall prevention. Future researchers would benefit from conducted similar studies consisting of women from diverse ethnic and racial backgrounds. Additionally, similar to findings from other studies social interaction and support played a significant role in exercise participation among UPRIGHT participants. This may be because minority women particularly value social connections; however, it is possible that the facilitation of similar studies examining other racial and gender groups would yield like findings.

Limitations

This study has several limitations. It is limited by the small sample size and sample selectivity, which included only older adult women from the greater Atlanta area. Participant responses, therefore, are specific to the experiences of older minority women at risk for falling, who may have different expectations for and perceptions of exercise participation than men and people of other racial backgrounds at risk for falling. Another drawback is that the study did not ask questions specifically related to whether minority-status had an impact on the study outcome. Additionally, findings may not be relevant for community-dwelling older adults living in other geographic locations or older adults with different physical abilities. This study was also limited to the implementation of the UPRIGHT program (ten educational topics and ten specific exercises) and findings may not be similar with other fall prevention programs and/or forms of exercise. Further, a longer intervention period may have changed the participants' views regarding participation in UPRIGHT.

Future Research

This study is descriptive and intends to lay the groundwork for future examinations of the many factors that may affect older minority women's views about fall prevention programs. Because both home- and center-based participants often remarked upon the importance of support derived from their instructors and class members when talking about their experiences in UPRIGHT, the role of social support as a motivating factor to engage in fall prevention programs and other health-related programs merits further examination. Special attention should also be placed on methods

of recruiting and training the instructors, as the instructor role was vital in sustaining the participants' motivation to exercise.

Additionally, a more comprehensive understanding of the participants' experiences in UPRIGHT could have been achieved by further analyzing participants' ethnic backgrounds (e.g. some study participants were of Jamaican and Haitian descent) in relation to their qualitative responses. It is likely that cultural variances in exercise beliefs and expectations affect a person's attitudes, beliefs, and outcome expectations to participate in a fall prevention program. Future research needs to examine the ethnic differences among "black" women in order to gain a better understanding about how minority view exercise, falling, and fall prevention.

Further, given the connection between an improved sense of empowerment and participation in UPRIGHT, future research would benefit from incorporating an emphasis on increased knowledge, health, and confidence to facilitate continued participation in fall prevention programs among older minority women. Gaining a better understanding about why falls occur, and knowing ways to prevent falling, may be vital in motivating older women of color to exercise, and engage in fall prevention programs. Additionally, future research would benefit from comparing this study's findings to similar studies (fall prevention programs) consisting of different ethnic and gender groups. Due to the increasing number of older minority women living within the population who are at risk of falling, it is important to continue investigating the attitudes, beliefs, and perceived outcomes that older minority women have regarding falling and fall prevention.

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APPENDIX A

INTERVIEW QUESTIONS

UPRIGHT! Program and Participation

1. Why did you choose to participate in the 10-week UPRIGHT program?
2. What did you like most about being a part of the program?
3. What did you like least about the program?
4. Do you feel that the program was helpful? In what ways?
5. Do you feel that participating in the UPRIGHT helped decrease your risk of falling?
6. Has participating in UPRIGHT influenced/changed how you view exercise? In what ways?
7. Are you more active now than before participating in the program? Why/How or Why not?
8. Has participating in the program increased you confidence level?
9. Has participating in UPRIGHT helped you with any of your health problems?
10. Has participating in UPRIGHT reduced your fear of falling?
11. Are you planning to continue to perform the exercises included within UPRIGHT?
12. Program Design.
    a. Do you feel that the exercises were helpful?
        i. Why/Why not? How did they help you?
    b. Do you feel that the lesson plans were helpful?
        i. Why/Why not? How did they help you?
    c. Do you feel that the program provided enough:
        i. IN HOME: follow-up calls?
            1. Were the calls helpful/necessary?
            2. Would you have liked to have more calls from the team?
        ii. CENTER: classes at the center? Why/Why not?
            1. Would you have liked to attend more classes a week?
13. What would you change about the program?

FALLS/FEAR OF FALLING

1. Do you think falling is a part of normal aging?
2. Have you ever fallen? How did that experience impact the performance of your everyday activities?
    a. Did it make you hesitant about participating in certain activities?
        i. what activities and why
        ii. if not, how did you respond to falling? What did you do?
3. Before participating in UPRIGHT, did a fear of falling prevent you from participating in activities?

SOCIAL NETWORKS

1. Was your family supportive of your participation in UPRIGHT?

    a. How? Why/why not?
2. IN HOME:
    a. Did you like to receive the phone calls about the lessons?
    b. Did you feel that you were a part of a group, or did you feel like you were working on this alone?
    c. Would you have liked to have talked with another person like yourself involved in the program and learning about fall prevention?
3. CENTER:
    a. What did you like most about being part of a group?
    b. What did you like least?
    c. Did being part of a group help motivate you to participate in UPRIGHT?
    d. How did being part of a group influence your participation in UPRIGHT?
    e. Do you feel that other group members were dependent on you to show up for classes?

APPENDIX B

General Mobility and Health Questionnaire

Name: _____ Age: _____ Male__ Female __

Height: _____ Weight: _____ Right / Left Handed (circle)

Do you live alone? _____ If not, who do you live with ? _____

Do you wear glasses? _____ Do you wear a hearing Aid?_____

What was the highest level of formal education you received? _____

Do you have any of the following? Check all that apply:

__ heart disease __ osteoporosis __ diabetes
__ high blood pressure __ arthritis __ epilepsy
__ low blood pressure __ joint replacement __ pain
__ stroke __ paralysis __ muscle weakness
__ chronic bronchitis __ asthma __ emphysema
__ amputation __ Parkinson's disease __ fainting

Other conditions not listed
_____
_____
___

Do you exercise? Yes_____ No _____

If yes: How many times per week? _____ For what period of time? _____

How would you rate the exercise?
Light____ moderate_____ Moderately heavy _____ Heavy ____

How would you rate your general activity level?

Not active _____ Somewhat active _____ Active _____ Very active _____

Are you employed? Yes___ No ____
If yes, what work do you do? _____

Do you drive? Yes _____ No _____

Are you able to do your grocery shopping alone? Yes ___ No ____

Have you ever been taught how to get up from the floor safely? Yes ___ No___

Have you fallen any time in the past year? _____

If yes, how many times? _____

If yes, did you fall in your home ? _____ Outdoors? _____