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A Qualitative Pilot Study Of Aging Women's Physical Activity Experiences In One University Fitness And Wellness Center

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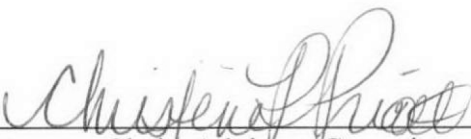
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A QUALITATIVE PILOT STUDY OF AGING WOMEN'S PHYSICAL
ACTIVITY EXPERIENCES IN ONE UNIVERSITY FITNESS AND WELLNESS
CENTER

By


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EXPERIENCES IN ONE UNIVERSITY FITNESS AND WELLNESS CENTER

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Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE

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DEDICATION

This thesis is dedicated to my parents
Anita and Chuck Hobbs
for their unwavering support.

ACKNOWLEDGMENTS

I would like to thank my thesis chair and professor, Dr. Christine Privott, for her guidance and patience. I would also like to thank the other committee members, Dr. Dana Howell and Dr. Melba Custer, for their support and assistance over the past four years. I would like to express my thanks to my family, for their understanding and patience during those times when there was no light at the end of anything.

Abstract

Physical inactivity is one of the driving risk factors for developing health problems such as obesity, diabetes, and cardiovascular diseases (World Health Organization, 2003). The prevalence of these diseases increases with the aging process, which renders participation in physical activity crucial among the aging population. There is strong evidence that physical activity reduces the risk of these health disparities and disabilities (Young & Dinan, 2005), however despite these well-documented benefits, aging women still remain sedentary. This study examined the phenomenon of women 55 years of age or older and their lived experiences of participating in physical activity within a university of fitness and wellness center. An interview protocol was derived from the Theory of Planned Behavior (Blue, 1995). Interview data from three participants were transcribed and analyzed through open and axial coding and emergent themes following the Colaizzi Method (1978). The findings discovered three major themes: *connecting with peers, diverse barriers to physical activity*, and “*expected motivators and physical activity*”. One minor theme that emerged was *consequences to “if I don’t”*. For these women, the phenomenon of participating in physical activity is at once familiar and unexpected.

Keywords: aging women, physical activity

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CHAPTER 1

INTRODUCTION

Background & Need

This study explores the relationship between aging women and physical activity. In the last decade there has been an increased appreciation for the health value of physical activity. The health benefits of physical activity have been demonstrated for individuals in research trials and subsequent studies have reported physical activity decreases risk factors associated with heart disease and stroke, as well as reduce overall morbidity and mortality (Berkman, Seeman, Albert, Blaszer, Kahn, Mohs, & Rowe, 1993; Schutzer, 2004). The World Health Organization (WHO) has identified physical *inactivity* as a primary risk factor for mortality; approximately 3.2 million deaths each year are attributable to inadequate physical activity (WHO, 2003). Research conducted on the correlation between physical activity and adults indicates that adults over the age of 55 are a population that may not be sufficiently active (Kaplan, Strawbridge, Camacho, & Cohen, 1993). Extensive research exists on the benefits of physical activity related to specific diagnoses and populations, however, minimal evidence exists regarding the significance of physical activity and the lived experiences of aging women. Specifically, there is a lack of research on why aging women choose to engage in physical activity and what this means in their daily lives. By beginning to understand the phenomenon of physical activity and aging women, health professionals, and particularly Occupational Therapists, can support overall health and well-being for women. The purpose of this study was to identify aging women's beliefs about physical activity in order to understand their participation in physical activity as a lived experience. The

research questions were are *why do women over the age of 55 participate in physical activity at a university fitness and wellness center* and *why do women over the age of 55 continue to participate in physical activity at a university fitness and wellness center?*

LITERATURE REVIEW

This literature review is organized first by the relationship of physical activity to aging individuals and then to aging women. Within each of these categories a chronological overview of relevant studies is presented. For the literature on physical activity and aging women, the investigator's intent is to reflect pertinent gender-based studies to provide context for this study.

Physical Activity & Aging

According to Healthy People 2020 (2014), no amount of physical activity can stop the aging process and physical activity is one of the leading health indicators of the aging process across the life span. There is a growing body of literature that supports the idea that regular physical activity benefits a person's health and well-being throughout the aging process (Berkman, Seeman, Albert, & High, 1993; Camacho, Strawbridge, Cohen, & Kaplan, 1993; Hubert, Bloch, & Fries, 1993). In support of this, physical activity has been shown to positively influence physical function and prevent functional limitations during the aging process and decreases many of the health problems that accompany aging (Brawley, Resjeski, King, 2003; Cooper, Mishra, & Kuh, 2011, Jaurbe, Turok & Perez-Stable, 2002). Other studies find that physical activity can prevent premature death, reduce risk of cardiovascular disease and improve overall quality of life (Bouchard & Shepard, 1994; Paffenbarger, Hyde, Hsieh & Wing, 1986). In an early study, physical activity was found to prevent a number of functional declines during the

aging process (American College of Sports Medicine, 1998). Studies that followed identified several issues adults face while participating in physical activity such as, environmental barriers, physical ailments, and lack of resources (Cunningham, Paterson, Himann & Rechnitzer, 1993; Kaplan, Strawbridge, Camacho & Cohen, 1993). More recent studies describe the basic benefits of physical activity for aging adults. Brawley, Rejeski and King (2003) focused on adults diagnosed with chronic disease and at risk for physical disabilities. They examined subjects' behavior change strategies and how this influenced lifestyle choices. They also discussed the importance of applying exercise interventions to aging adults' life and proposed population-based health promotion activity programs for the U.S. healthcare system.

Earlier research also assesses the facilitators of physical activity for different age groups and reveals that physical activity enablers such as social support, beliefs and knowledge of physical activity, and physiological motivators and factors are common facilitators of physical activity (Caspersen, Powell, & Christenson, 1985; DiPietro, 2001; Schutzer, 2004). Schutzer (2004) studied facilitators of physical activity in relation to the aging population; results indicate that a one-size-fits-all strategy to physical activity does not address specific needs for a given population, but rather identifies reliable exercise essential for the aging population. Physical activity which may work for one population may not work for another population because the needs vary from individual to individual.

Culture and personal beliefs also shape attitudes towards physical activity. Several studies explored the role of personal, familial and cultural attitudes and social norms for physical activity (Jaurabe, Turok, & Perez-Stable, 2002; Ramanathan &

Crocker, 2009). More recently, Buman, Yasova and Giacobbi (2010) studied inactive adults and explored personal attitudes and beliefs towards physical activity. They concluded participation in physical activity is influenced by traumatic experiences, financial costs, fear of injury and time management. Matthews, Ladtika, Ladtika, Wilcox, Corwin, Liu, and Logsdon (2010) studied an ethnically and geographically diverse group of aging adults and found that lack of knowledge about physical activity, health concerns, environmental challenges and lack of motivation played a role in their ability to participate in physical activity. Matthews et al. (2010) provided a multicultural view of participants and how they define, perceive and correlate physical activity within their lifestyle. The authors call for implementing community activity programs and being aware of cultural impact. Borschmann, Moore, Russell, Ledgerwood, Renehan, Lon and Sison (2010), also investigated aging adults and impediments to physical activity based on participants self-identified culture. They found that through the implementation of individualized physical activity programs a participant's personal and cultural inhibitions decreased.

Current studies have also addressed cognitive decline in adults and the role of physical activity in preventing a decrease in cognition (Brawley, Rejeski, Gaukstern, & Ambrosius, 2012; Ever, Klusmann, Schwarzer & Heuser, 2011; Price, Corwin, Friedman, Ladtika, Colabianchi, & Montgomery, 2011; Vance, Wadley, Ball, Roenker & Rizzo, 2005). Supporting this, Taylor, Cable, Faulkner, Hillsdon, Narici and Van Der Bij (2004) concluded that physical activity is positively correlated with a person's emotional, cognitive, social and physical well-being. Price, et al. (2011) explored adults' perceptions of cognitive health related to physical activity. The results indicated that over 70% of the

adult participants stated that participating in physical activity helped improve their cognitive ability. Ever, et al. (2011) studied adults aged 48-71 as they participated in physical and mental activities; pre-test and post-test cognitive scores revealed that physically or mentally demanding activities counteracted a decline in cognitive performance.

According to Healthy People 2020 (2014), fifteen percent of the U.S. adult population meets the recommended 30 minutes of physical activity per day. Although most of these studies look at adults (particularly men) and physical activity, a few studies address the idea that physical activity can help avert premature mortality in women. More than 40% of American women do not engage in the recommended amount of physical activity (United States Department of Health and Human Service, 1996). The next section explores this further.

Physical Activity & Women

Multiple studies over the last decades have helped determine the relationship women have with physical activity and the benefits women receive from participating in physical activity (Fox, 2000; Marsh, 1998; McAuley, Blissmer, Katula, Duncan, & Mihalko, 2000). Studies have explored the psychological benefits of regular exercise for women, such as alleviation of depressive symptoms and improved sense of self-concept and self-efficacy (Bosworth, Bastian, Kuchibhatla, Steffens, McBride, & Skinner, 2001; Stewart, Mills King, Haskell, Gillis, & Ritter, 1997). In an early study, Stewart et al (1997) explored physical activity and self-esteem of lower income women who participated in physical activity as part of a community wellness program. Results

indicated that over a six-month period, the women's self-esteem improved in the areas of anxiety, depression and overall psychological health.

Following Stewart et al (1997), Marsh (1998) found that with increased age and experiences, women's self-esteem becomes more altered due to various life adjustments. One of these life adjustments is menopause, which is defined as, "a biological process that women experience through the ages of 40-60 (Marsh, 1998, p. 238)". Another study looked at the correlation between women's self-esteem and the menopausal transition. It was found that physical activity counteracts the negative consequences of menopause, increases self-esteem and improves mental health (McAuley, et al., 2000).

Older research (Kowal & Fortier, 2007) on the relationship between the environment and physical activity explored impacts on women's physical activity participation explored; women and the barriers to participation in physical activity were also investigated. The authors discovered that supports such as sidewalks, low crime rates, presence of streetlights, and exposure to other individuals participating in physical activity, increased women's participation in physical activity. More recently, Toped, Tamura, Whitcomb and Laden (2011) concurred when they examined women who participated in physical activity and the environmental aspects of sidewalks, stores, and the built environment. They concluded that women with access to these environmental elements had higher rates of physical activity participation.

Regular physical activity is beneficial in preventing certain health conditions affecting women such as osteoporosis, heart disease, depressive symptoms and general physical limitations that are explicit in women (WHO, 2015). The diagnosis of depression affects 9.5% of adult women in the U.S. and occurrences of depression for

women are reported to be almost double that of men (National Institute of Mental Health, 2015; WHO 2003). Several studies have explored the correlation between women, depression and participation in physical activity (Loprinzi, Fitzgerald & Cardinal, 2012; Uebelacker, Eaton, Weisberg, Sands, Williams, Calhoun & Taylor, 2014; Uffelen, Gellecum, Burton, Peeteres, Heesch & Brown, 2013). Uebelacker, et al (2012) discovered that social support and physical activity are associated with lower levels of depressive symptoms among women. More specifically, the lack of social support (spousal support, religious groups, civic groups, etc.) increases the risks of depression. Uffelen et al (2013) studied women between the ages 50-55 who previously experienced depression and used physical activity as an intervention to counteract depressive symptoms. They concluded that women who participated in physical activity experienced decreased depressive symptoms. Additionally, women who continued to participate in physical activity after the intervention prevented future onsets of depressive symptoms.

Conclusion

As a whole, existing literature confirms the importance of participation in physical activity during the aging process. The literature describing the benefits aging adults receive from participating in regular physical activity reinforces the ideas of physical activity and that it is considered a valuable intervention for the health and well-being of aging adults. Having said this, scarce evidence exists that looks at the meaning of physical activity for aging women.

CHAPTER TWO

JOURNAL MANUSCRIPT

This study explores the relationship between aging women and physical activity. In the last decade there has been an increased appreciation for the health value of physical activity. The health benefits of physical activity have been demonstrated for individuals in research trials and subsequent studies have reported physical activity decreases risk factors associated with heart disease and stroke, as well as reduce overall morbidity and mortality (Berkman, Seeman, Albert , Blaszer, Kahn, Mohs, & Rowe, 1993; Schutzer, 2004). The World Health Organization (WHO) has identified physical *inactivity* as a primary risk factor for mortality; approximately 3.2 million deaths each year are attributable to inadequate physical activity (WHO, 2003). Research conducted on the correlation between physical activity and adults indicates that adults over the age of 55 are a population that may not be sufficiently active (Kaplan, Strawbridge, Camacho, & Cohen, 1993). Extensive research exists on the benefits of physical activity related to specific diagnoses and populations, however, minimal evidence exists regarding the significance of physical activity and the lived experiences of aging women. Specifically, there is a lack of research on why aging women choose to engage in physical activity and what this means in their daily lives. By beginning to understand the phenomenon of physical activity and aging women, health professionals, and particularly Occupational Therapists, can support overall health and well-being for women. The purpose of this study was to identify aging women's beliefs about physical activity in order to understand their participation in physical activity as a lived experience. The research questions were *why do women over the age of 55 participate in physical*

activity at a university fitness and wellness center and why do women over the age of 55 continue to participate in physical activity at a university fitness and wellness center?

Review of Literature

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Early research assessing the facilitators of physical activity for different age groups reveals the idea that physical activity enablers such as social support, beliefs and

knowledge of physical activity, and physiological motivators and factors are common facilitators of physical activity (Caspersen, Powell, & Christenson, 1985; DiPietro, 2001; Schutzer, 2004). Schutzer (2004) studied facilitators of physical activity in relation to the aging population. He found that a one-size-fits-all strategy to physical activity does not address specific needs for a given population, but rather identifies reliable exercise essential for aging individuals. Physical activity, which may work for one population, may not work for another because needs vary from individual to individual.

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Although most of these studies looked at adults (particularly men) and physical activity, a few studies address the idea that physical activity can help avert premature mortality in women. The next section explores this further.

Physical activity and women

Multiple studies over the last decades have helped determine the relationship women have with physical activity and the benefits women receive from participating in physical activity (Marsh, 1998; Fox, 2000; McAuley, Blissmer, Katual, Duncan, &

Mihalk, 2000). Studies have explored the psychological benefits of regular exercise for women, such as alleviation of depressive symptoms and improved sense of self-concept and self-efficacy (Bosworth, Bastian, Kuchibhatla, Steffens, McBride, Skinner et al., 2001; Stewart, Mills, King, Haskell, Gillis, & Ritter, 1997). In an early study, Stewart et al. (1997) explored physical activity and self-esteem of lower income women who participated in physical activity as part of the Community Healthy Activities Model Program for Seniors (CHAMPS). Results indicated that over a six-month period, the women's self-esteem improved in the areas of anxiety, depression and overall psychological health.

Older research (Kowal & Fortier, 2007) looking at the relationship between how environment and physical activity impact women's participation and investigated environmental factors that contributes to engagement in physical activity. Results showed that supports such as sidewalks, low crime rates, streetlights, and exposure to other individuals participating in physical activity, increased women's participation in physical activity. Toped, Tamura, Whitcomb & Laden (2011) concurred when they examined women who participated in physical activity and the environment of sidewalks, stores, and the built environment. They concluded that women with access to these accessible environmental elements had higher rates of physical activity participation.

Regular physical activity is also beneficial in preventing certain health conditions afflicting women such as osteoporosis, heart disease, depressive symptoms and general physical limitations that are explicit in women (WHO, 2015). The diagnosis of depression affects 9.5% of adult women in the U.S. (National Institute of Mental Health, 2015) and several studies have explored the correlation between women,

depression and participation in physical activity (Loprinzi, Fitzgerald & Cardinal, 2012; Uebelacker, Eaton, Weisberg, Sands, Williams, Calhoun & Taylor, 2014; Uffelen, Gellecum, Burton, Peeteres, Heesch & Brown, 2013). Uebelacker et al. (2012) discovered that social support and physical activity are associated with lower levels of depressive symptoms among women. More specifically, the lack of social support (spousal support, religious groups, civic groups, etc.) increases the risk of depression.

As a whole, existing literature confirms the importance of participation in physical activity during the aging process. The literature describing the benefits aging adults receive from participating in regular physical activity reinforces the idea that physical activity can be considered a valuable intervention for the health and well-being of aging adults. Having said this, scarce evidence exists that looks at the meaning of physical activity for aging women.

Definition of Terms

Physical Activity: some type of body movement that produces the contraction of skeletal muscles and increases energy expenditure (Bethancourt, Rosenberg, Beatty, & Arterburn, 2014; McAuley, Blissmer, Katual, Duncan, & Mihalko, 2000; Price, Corwin, Friedman, Laditka, Colabianchi & Montgomery, 2011; World Health Organization, 2015).

Aging: A progressive functional decline or a gradual deterioration of physiological function with age (Partridge & Mangel, 1999, p. 440).

Quality of life: the degree of satisfaction an individual has regarding a particular style of life (Miller-Keane Encyclopedia and Dictionary of Medicine).

Dysfunction: the condition of having poor and unhealthy behaviors and attitudes within a group of people (Merriam Webster, 2015).

Aging Women: A female between the ages of 25 years to 64 years who is experiencing progressive functional decline of the physiological function as their age increases.

Theoretical Framework

The Theory of Planned Behavior (Blue, 1995) [TBP coined by the author] frames this study. The TBP postulates that one's intention to perform a behavior and its actual performance are determined by three concepts: attitude toward the behavior, subjective norms and perceived control. This theory has been applied extensively to adults and exercise. The concepts are diverse and can be understood within a physical activity domain. The three main constructs are 1) attitudes toward the behavior are determined by the person's belief associated with behaviors, 2) subjective norms are based on the person's approval or disapproval of the performance of the behavior and 3) perceived control is based on the person's belief about the perceived easiness or difficultness of performing the behavior. Research conducted with the TBP has contributed to literature about physical activity and adults. In this study, the TBP was used to develop the semi-structured interview protocol and reflect these theoretical concepts as the data was examined and results were analyzed.

Methods

A qualitative research framework is ideally appropriate to cultivate an understanding of the relationship between aging women (55+) and physical activity. Creswell's (2003) phenomenological approach was used to help understand the lived experiences of aging women. The study provides a better understanding of women's participation in physical activity by listening and learning about their lived experiences.

Participants

Three women, aged 55 years and older, were recruited from the Eastern Kentucky University (EKU) Fitness and Wellness Center. Eligibility criteria included: (1) must be a female and 55 years of age or older, (2) possess a valid membership to the ECU Fitness and Wellness Center, (3) engage in any form of physical activity, at the ECU Fitness and Wellness Center for three or more days a week, and thirty minutes per session. Exclusion criteria consisted of: (1) any male participants, (2) women under the age of 55, (3) women who engaged in physical activity less than three days a week, and (4) women who did not possess a valid membership to the ECU Fitness and Wellness Center.

To gain a greater sense of understanding of the participants, Table 1 below describes the women's age, physical activity routine, and the amount of days they generally participate in physical activity. The participants' are identified by a pseudonym to ensure confidentiality.

Table 1
Participants Description by Age, Occupation, Routine, and Frequency

Pseudonym	Suzie	Polly	Ann
Age	55	56	55
Occupation	Professor of Business at ECU	EKU Parks and Recreation Administrative Staff	Faculty of the ECU Counseling Center
Physical Activity Routine	Cardio and/or aerobic exercise for 30 minutes 5x/week times a week, strength training 3x/week	Cardio and/or aerobic exercise for 30 minutes 5x/week, attends 3+ fitness classes	Strength training 5x/week, 2+ /week group fitness classes, swims 3x/week
Average number of days a week participating in physical activity	5	5	6

The Principal Investigator (PI) distributed written information about the study, in the form of a flyer, to the Director of Facilities, ECU Fitness and Wellness Center, and each participant received the flyer prior to agreeing to be interviewed. Information provided included the purpose of the study, eligibility criteria, and the PI's contact information. Purposeful sampling allowed for the PI, who works at the ECU Fitness and Wellness Center, to select women who were experiencing aging and engaged in physical activity at the fitness and wellness center. Written informed consent was obtained from each participant with an Institutional Review Board (IRB) approved Informed Consent Form.

Data Collection

The ECU Institutional Review Board (IRB) approved the study before the data collection was initiated. One semi-structured, in-depth interview was conducted with

each participant to generate open responses. Interviews were conducted in the EKU Fitness and Wellness Center and ranged from 12 minutes to 20 minutes. The PI initiated social conversation prior to the interview to build rapport and enhance subject's willingness to participate openly. An interview protocol was created using the TBP and its central tenants (Blue, 1995). The interview protocol allowed the participants the opportunity to present their own opinions and perspectives associated with physical activity and aging. The PI negotiated dates and times for each interview. Each interview was audio-recorded, transcribed verbatim, and checked for accuracy. To remain unbiased, the PI maintained a reflectivity journal throughout the analysis process to record biases, concerns, and perceptions related to the research (Bloomberg & Volpe, 2008). A transcriptionist was hired by the PI to ensure trustworthiness and accuracy. Each transcript was assigned an identification number and participants' identifying information was removed from transcripts. All audio-recordings were destroyed after completion and verification of transcripts' accuracy. All raw data and transcripts were stored in a password protected computer file; these steps were taken to guarantee privacy and participant confidentiality.

Data Analysis

The Colaizzi Method (1978) was used by the PI for data analysis using a phenomenological approach. The Colaizzi Method (1978) aids in identifying and interpreting meaning of lived experiences by categorizing fundamental themes among the participants' stories by facilitating explanation and illustration of the meaning of the phenomenon that is being studied (Munhall, 2007). The PI performed a review of the data

and sixty-eight significant statements related to physical activity, women, and aging were gleaned from the transcripts. Meanings were formulated from the significant statements; key theme words or statements, and bracketing were developed. An experienced qualitative researcher collaborated with the PI to reexamine all of the meaning of the data. Themes from clustered data were identified. Seven theme clusters resulted in an emergent phenomenon describing physical activity and aging women. The PI then reduced data further after duplicate themes were identified. Three major themes and one minor theme were discovered and are represented next in the results section.

Results

Three major themes and one minor theme relating to physical activity and aging women emerged through coding and thematic analyses. The three major themes were: *connecting with peers*, *diverse barriers to physical activity*, and “*expected*” *motivators and physical activity*. Themes were considered major if the code clusters contained significantly more words and phrases than other clusters. The minor theme derived was, *consequences to “If I Don’t”*. The minor theme was recognized as substantial because of multiple words and phrases that the PI identified as potentially significant.

Major Themes

I. Connecting with peers. A primary theme that became evident is the women engaged in physical activity for *social participation*. All of the women identified that though socialization was not the main reason they participated in physical activity, they felt it had an influence on their physical activity experiences. One significant social

support for these women were their family members. Ann and Suzie expressed they had a child or a spouse that encouraged them to be physically active. Ann stated, “I think, this [participating in physical activity] is a better way to stay connected with my husband because we do this together everyday and so it’s a really neat way to kind of connect with your spouse, as well as your friends and stuff.” Alongside family support, Suzie and Polly also discussed having partners that participated in physical activity with them. Suzie stated, “but I enjoy walking and I really enjoy the socialization, it’s time to catch up when we’re doing that. And you don’t realize, like I said, how far you’ve walked when you have a partner.” Suzie engages in socialization with a partner to support her as she participates in physical activity. Cultural involvement also impacted their socialization during physical activity. One woman (Polly) described the connection and cultural exposure that physical activity afforded them by stating, “I participate in fitness, exercise, and play for a variety of reasons... to stay connected with the culture, and make new friends, to feel good.” Suzie also stated, “I think it opens up sort of a culture and a community of people getting together for the same reasons or similar reasons and I think that you even make friends with people you might not ordinarily because you have the passion of physical fitness together in common.” For these women, culture is defined as the socialization that occurs when they engage in physical activity.

II. Diverse barriers to physical activity. The women identified diverse *barriers* that interrupt engagement in physical activity. Broadly defined, barriers refer to real or perceived individual, interpersonal, or contextual factors that prevent individuals from engaging in an activity or hinder their ability to do so (Sallis & Owen, 1999). The women expressed three types of barriers: (1) environmental barriers, (2) personal health barriers,

and (3) institutional barriers; all of which hindered their ability to engage in physical activity.

Suzie described environmental barrier that hindered her physical activity experience, “I don’t mind the heat and the humidity in the mornings but the rain and the snow in the opposite time of the year can be a little bit taxing.” The women described several other types of environmental barriers such as low prevalence of sidewalks, inadequate hours of operations at public parks, and few biking paths. The women felt this had a negative impact on their physical activity experiences.

All three participants discussed institutional barriers that impact their ability to partake in physical activity. All of the women were members of the ECU Fitness and Wellness Center; this became a barrier when the Fitness and Wellness Center was closed. Ann shared, “so there’s all kinds of things I think that limit our ability to do things when Eastern is closed.” The women reported they had limited resources when ECU closed. Ann also referenced environmental challenges by stating, “there are barriers, Richmond doesn’t have good walking or biking trails or a community center or a good indoor pool with adequate hours of operation.” The environmental and institutional barriers are closely entwined and pose issues for the women as they engage in physical activity.

All of the participants discussed personal health setbacks they overcame in order to participate in physical activity. Polly expressed, “there are periods that I don’t get to exercise, what, a couple of years ago I disappeared from the gym for about three months. I had bilateral mastectomy. And so I had to work on moving my arms up and down, that’s what I was doing at home, and so I kind of felt like I started from scratch, there.

And so there are setbacks like that.” Ann also stated, “as I have aged, I have had to deal with injuries such as pulled tendons and broken foot bones. I think it’s even more important to be active and to keep your our body healthy, and maintain or slow down the loss of our muscle mass”

III. “Expected” motivators and physical activity. A third theme involved the facilitators and motivators that impacted the women’s ability to participate in physical activity. The women found themselves to be relatively healthy compared to others their age. They all conveyed they used physical activity to prevent disease and dysfunction; however, they have different physical activity interests that affect their motivation to participate in physical activity. Ann revealed, “You know, when I was young I worked out because I wanted to look good, and now I work out because I want to feel good.” Polly indicated, “As we age, I think it’s even more important to be active and to keep your hearts healthy, and it helps us maintain or slow down the loss of our muscle mass.” The idea of well-being was also expressed by the women; specifically the mental and spiritual benefits they receive while engaging in physical activity. Ann described her physical activity experience while outdoors, “I think especially if you’re outdoors in physical activity, it really enhances your spiritual connection with the world and with life and your faith even, it can enhance your faith.”

Additional motivators are convenience and institutional factors. The women disclosed how convenience plays a vital role during physical activity experiences, “This fitness center is actually good, a good fitness center. It’s convenient, it’s accessible, it’s easy to get to, it has good machines.” Convenience for these women means having access

to an affordable and accessible fitness and wellness center and with adequate resources. The women were quite vocal that this institutional factor of convenience impacts their ability to participate in physical activity.

Minor Theme

I. Consequences of “if I don’t”. This minor theme concerns the consequences of not being able to participate in physical activity. The participants were critically aware of consequences that could occur if they could not engage in physical activity – they knew that this inability to participate in physical activity could lead to increased dysfunction and disease, and an experience of failing to receive benefits in other areas of health and well-being. The aging process can be accompanied by a variety of health concerns of which the participants’ seemed informed. All of the women discussed the idea of how participating in physical activity helped them to maintain and improve upon their current health levels. These consequences were conveyed through the following quotes: “If I don’t, I’m going to be more prone to that list of ailments. I’ll probably gain weight. I won’t feel as good about myself,” and “so without it [physical activity], I think I’d be in bad shape. I have arthritis, I’m pre-diabetic, I found out recently, so those are just some really good reminders for me that I had better stay with this thing.” All the participants were aware that if they are unable to participate in physical activity, there could be physical repercussions and an increased risk of disease.

Discussion

The study findings, while perhaps not surprising, provide a valuable understanding of aging women's experiences with physical activity. To better understand the findings, this discussion is organized by three major themes and one minor theme presented earlier in the results section.

Connecting with peers influences the women's social participation and cultural involvement. This supports the evidence that claims that social participation is an influencing factor for physical activity engagement (Buman, Yasova, & Giabcobbi, 2010; Caspersen, Powell, & Christenson, 1985; DiPietro, 2001; Schuzter, 2004). Engagement in physical activity provides opportunities that contribute to a person's social and cultural well-being and these women concur. A concept of TBP describes a person's attitude toward a behavior, such as participating in physical activity, which is determined by their beliefs associated with it (Blue, 1995). These aging women's beliefs are that socialization has an impact on their defined culture and a positive influence on their physical activity experience.

The women face a variety of barriers that hinder their participation in physical activity. Perceived control, a concept of the TBP, became evident when the women identified environmental, personal and institutional barriers that they had no control over. These women feel that participating in physical activity is difficult when the Fitness and Wellness Center is closed. The women's acknowledged barriers are similar to findings by Kowal & Fortier (2007) and Toped, Tamura, Whitcomb, & Laden (2011); school closures, inadequate hours of operations and lack of resources are examples of

institutional barriers that made participating in physical activity challenging for the women.

Summary

According to these women, the availability of institutional resources not only poses obstacles to physical activity, but plays a significant role in motivation levels for participation in physical activity. The women view the brick and mortar institution, where they exercise, as a primary motivator. It is affordable, convenient, and provides them with a variety of amenities to support their engagement in physical activity. The women also appear to understand familiar motivators such as maintaining health, improving fitness (strength, weight management), and psychosocial and social benefits - the literature claims these motivators positively impact physical activity participation (Uebelacker, Eaton, Weisberg, Sands, Williams, Calhoun & Taylor, 2014; Uffelen, Gellecum, Burton, Peeteres, Heesch & Brown, 2013). These familiar motivators for the women resulted in a new motivator: *institutional* resources dictate their participation in physical activity.

The women's attitudes towards participating in physical activity were positive. All of the women participants' conveyed that they engage in physical activity on a consistent basis because it improves their health and prevents disease and dysfunction. The TPB not only measures a person's attitude toward a behavior, but also the person's subjective norms. These women conveyed their subjective norms, or support systems (family, spouses, friends), who found their engagement in physical activity to be equally important as they did. The women were all aware of the consequences if they were

unable to participate in physical activity. To these women “if I don’t”, means they will experience a decrease in self-confidence and increase health risks. They use these consequences as motivation to continue to participate in physical activity.

Future Research

Future research could examine a larger population of males and females and their relationship to physical activity. Geographical locations could also be considered especially rural areas and institution accessibility. These potential studies could lead to new understandings of interventions for women seeking to participate in physical activity. It is ultimately important to note that the results reported are unique to the women of this study and future research could expand on these findings to increase generalizability.

Limitations

Study limitations, not inclusive, include the small sample size and the purposeful sampling strategy even for a phenomenology. This pilot study does not account for all women who have lived experiences with physical activity. A sampling bias may have occurred in participant selection since the PI was a employee of the ECU Fitness and Wellness Center and knew the women from shared experiences of physical activity. Despite these limitations, the women’s narrative of their physical activity experiences may contribute to future research about the phenomenon of physical activity.

Conclusion

This study identifies three major themes describing aging women's physical activity experiences: *connecting with peers*, *diverse barriers to physical activity*, and *"expected" motivators and physical activity*. Different motivations for physical activity provide support for aging women's engagement in physical activity. Furthermore, the motivators are primarily institutional aspects: the brick and mortar institution itself is seen as a critical resource for participating in physical activity because of convenience, affordability and accessibility. The phenomenon of institutional resources and the availability of institutional resources that dictate women's participation in physical activity became apparent. This study can help readers more fully understand why women 55+ participate in physical activity and broaden the views of aging.

REFERENCES

- Allender S, Cowburn G, Foster C (2006) Understanding participation in sport and physical activity among children and adults: a review of qualitative studies. *Health Education Research*, 21(6), 826-835. doi:10.1093/her/ cyl063
- American College of Sport Medicine. (1998) Exercise and physical activity for older adults. *Journal of Medicine Science & Sports Exercise*, 30(1), 992-1008. doi: 10.1249/MSS.0b013e3181a0c95c.
- Berkman, L., Seeman, T., Albert, M., Blazer, D., Kahn, R., Mohs, R., & Rowe, J. (1993). High functioning, usual and impaired functioning in community-dwelling older men and women: Findings from the MacArthur Foundation Research Network on successful aging. *Journal of Clinical Epidemiology*, 46(4), 1129-1140.
- Bethancourt, H., Rosenberg, D., Beatty T., & Arterburn, D. (2014). Barriers to and facilitators of physical activity program use among older adults. *Clinical Medicine & Research*, 12(1/2), 10-20, doi: 10.3121/cmr.2013.1171
- Blue, C. (1995). The predictive capacity of the theory of reasoned action and theory of planned behavior in exercise research: An integrated literature review. *Research of Nursing and Health*, 18(2), 105-121.
- Biddle, S., Goudas, M., & Page, A. (1994) Social-psychological predictors of self-reported actual and intended physical activity in a University workforces sample. *British Journal of Sports Medicine*, 28, 160-163.

- Bloomberg, L., & Volpe, M. (2008). *Completing your qualitative dissertation: A roadmap from beginning to end*. Los Angeles, CA: Sage Publications.
- Bosworth, H.B., Bastian, L.A., Kuchibhatla, M.N., Steffens, D.C., McBride, C.M., & Skinner, C.S. (2001). Depressive symptoms, menopausal status, and climacteric symptoms in women at midlife. *Psychosomatic Medicine*, 63(4), 603–608. doi: 10.1097/00006842-200107000-00013
- Borschmann, K., Moore, K., Russell, M., Ledgerwood, K., Renehan, E., Lon, X., & Sison, J. (2010) Overcoming barriers to physical activity among culturally and linguistically diverse older adults: A randomized controlled trial. *Australasian Journal of Ageing*, 29(2), 77-80. doi: 10.1111/j.1741-6612.2009.00390.x
- Bouchard, C., & Shepard, R. (1994). Physical activity and psychosocial outcomes. *Human Kinetics*, 15(6), 551-568.
- Brawley, L., Rejeski, J., & King, A. (2003). Promoting physical activity for older adults. *American Journal of Preventative Medicine*, 25, 172-183. doi:10.1016/S0749-3797(03)00182-X
- Brawley, L., Rejeski, W., Gaukster, J., & Ambrosius, W. (2012). Social cognitive changes following weight loss and physical activity interventions in obese, older adults in poor cardiovascular health. *Annals of Behavioral Medicine*, 44(3), 353-364. doi: 10.1007/s12160-012-9390-5

- Buman, M., Yasova, L., & Giacobbi, P. (2010). Descriptive and narrative reports of barriers and motivators to physical activity in sedentary older adults. *Psychology of Sport and Exercise, 11*(3), 223-230. doi: 10.1016/j.psychsport.2010.02.002
- Camacho, T., Strawbridge, W., Cohen, R., & Kaplan, G. (1993). Functional Ability in the Oldest Old: Cumulative Impact of Risk Factors from the Preceding Two Decades. *Journal of Aging and Health, 5*(3), 439-454.
- Caspersen, C., Powell, K., & Christenson, G. (1985). Physical activity, exercise, and physical fitness: Definitions and distinctions for health-related research. *Journal of Public Health, 100*(2), 126-131.
- Center for Disease Control and Prevention. (2015). Physical Activity Reports and Adults. Retrieved October 30, 2015, from <http://www.cdc.gov/physicalactivity/resources/reports.html>
- Center for Disease Control and Prevention. (2010) National health and nutrition examination survey (NHANES 2003, 2004, 2005-2006). Retrieved October 1, 2015. From <http://www.cdc.gov/nchs/nhanes.htm>
- Cohen-Mansfield, J., Marx, M., & Guralnik, J. (2003) Motivators and barriers to exercise in an older community-dwelling population. *Journal of Aging & Physical Activity, 11*(3), 242-253.
- Colaizzi, P. (1978). *Reflection and Research in Psychology; A Phenomenological Study of Learning*. Dubuque, Iowa: Kendall/Hunt Pub.

- Conn, V., Tripp-Reimer, T., & Maas, M. (2003). Older women and exercise: Theory of planned behavior beliefs. *Public Health Nursing, 20*(2), 153-163. doi: 10.1046/j.1525-1446.2003.20209.x
- Colcombe, S., & Kramer, F. (2003) Fitness effects on the cognitive function of older adults: A meta-analytic study. *Journal of the Association for Psychological Science, 14*(2), 125-130. doi: 10.1111/1467-9280.t01-1-01430
- Cooper, R., Mishra, G., & Kuh, D. (2011). Physical activity across adulthood and physical performance in midlife: Findings from a british birth cohort. *American Journal of Preventive Medicine, 41*(4), 376-384. doi: 10.1016/j.amepre.2011.06.035.
- Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed method approaches* (2nd ed.). Thousand Oaks, Calif.: Sage Publications.
- Cunningham, D., Paterson, D., Himann, J., & Rechnitzer, P. (1993). Determinants of independence in the elderly. *Canadian Journal of Applied Physical Therapy, 18*(2), 243-247.
- DiPietro, L. (2001). Physical activity in aging: Changes in patterns and their relationship to health and function. *Journals of Gerontology Series A-Biological Sciences & Medical Sciences, 56*(2), 13-22. doi: 10.1093/gerona/56.suppl_2.13
- Dysfunction. (2015). *Merriam Webster Dictionary*. Retrieved November 16, 2015, from <http://www.merriam-webster.com/>

- Elavesky, S. (2010). Longitudinal examination of the exercise and self-esteem model in middle-aged women. *Journal of Sport & Exercise Psychology*, 32(6), 862-880. doi:10.1249/MSS.0000000000000323
- Ever, A., Klusmann, V., Schwarzer, R., & Heuser, I. (2011). Improving cognition by adherence to physical or mental exercise: A moderated meditation analysis. *Aging & Mental Health*, 15(4), 446-455. doi: 10.1080/13607863.2010.543657
- Fox, K.R. (2000). Self-esteem, self-perceptions and exercise. *International Journal of Sport Psychology*, 31(2), 228-240. doi: 10.1080/17405629.2013.777663
- Healthy People 2020. Physical activity guidelines for Americans. (2014). Retrieved October 8, 2015, from <http://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Nutrition-Physical-Activity-and-Obesity>
- Hubert, H., Bloch, A., & Fries, J. (1993). Risk factors for physical disability in an aging cohort. *Journal of Rheumatoid Arthritis*, 20(3), 480-488.
- Jaurbe, T., Turok, X., & Perez-Stable, E. (2002). Perceived benefits and barriers to physical activity among older latina women. *Western Journal of Nursing Research*, 24(8), 868-886. doi: 10.1177/019394502237699
- Kaplan, G., Strawbridge, W., Camacho, T., & Cohen, R. (1993). Factors associated with change in physical functioning in the elderly: A six-year prospective study. *Journal of Aging Health*, 5(2), 140-153.

- Kasen, S., Chen, H., Sneed, J. R., & Cohen, P. (2010). Earlier stress exposure and subsequent major depression in aging women. *International Journal Of Geriatric Psychiatry*, 25(1), 91-99. doi: 10.1002/gps.2304.
- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry*, 51, 8–19.
- Kleiman, S. (2004). Phenomenology: To wonder and search for meanings. *Nurse Researcher*, 11(4), 7–19. doi:10.7748/nr2004.07.11.4.7.c6211
- Kowal, J., & Fortier, M. (2007) Physical activity behavior change in middle-aged and older women: The role of barrier and of environmental characteristics. *Journal of Behavioral Medicine*, 30, 233-242. doi:10.1007/s10865-007-9102-y
- Lees, P., Clark, P., Nigg, C., & Newman, P. (2005) Barriers to exercise among older adults; a focus-group study. *Journal of Aging & Physical Activity*, 13(5), 35-45. doi:10.1017/S1463423613000017.
- Lim, K., Taylor, L. (2005). Factors associated with physical activity among older people -- a population-based study. *Preventive Medicine* 40(1), 33-40. doi:10.1016/j.ypmed.2004.04.046
- Loprinzi, P., Fitzgerald, E., & Cardinal, B. (2012). Physical activity and depression symptoms among pregnant women from the national health and nutrition

- examination survey 2005-2006. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 41(2), 227-235. doi: 10.1111/j.1552-6909.2012.01340.x
- Marcotte, D. E., Wilcox-Gok, V., & Redmon, P. D. (1999). Prevalence and patterns of major depressive disorder in the United States labor force. *Journal of Mental Health Policy and Economics*, 2, 123–131.
- Marsh, H.W. (1998). Age and gender effects in physical self-concepts for adolescent elite athletes and nonathletes: A multicohort-multioccasion design. *Journal of Sport & Exercise Psychology*, 20(3), 237–259.
- Matthews, A., Ladtika, S., Ladtika, J., Wilcox, S., Corwin, S., Lui, R., & Logsdon, R. (2010). Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *Journal of Aging & Physical Activity*, 18(2), 119-140. doi: 10.1249/01
- McAuley, E., Blissmer, B., Katula, J., Duncan, S.C., & Mihalko, S.L. (2000). Physical activity, self-esteem, and self efficacy relationships in older adults: A randomized controlled trial. *Annals of Behavioral Medicine*, 22(2), 131–139. doi: 10.1007/BF02895777
- Mensink, G. B., Ziese, T., & Kok, F. J. (1999). Benefits of leisure time physical activity on the cardiovascular risk profile at older age. *International Journal of Epidemiology*, 28, 659– 666.
- Munhall, P. (2007). *Nursing research: A qualitative perspective* (4th ed.). Sudbury, Mass.: Jones and Bartlett.

Murray, C., Vos, T., & Lozano, R. (2012). Disability-adjusted life years for 291 disease and injuries in 21 regions, 1990-2010; A systematic review for the global burden of disease study 2010. *Lancet*, 380 (19), 2197-2223. doi:

10.1371/journal.pntd.0002865

National Institute of Mental Health (2009). The numbers count: Mental disorder in America. Retrieved October 1, 2015. from

<http://www.lb7.uscourts.gov/documents/12-cv-1072url2.pdf>

Paffenbarger, R., Hyde, R., Hsieh, C., & Wing, A. (1986). Physical activity, other life-style patterns, cardiovascular disease and longevity. *Acta Medica Scandinavica*, 85-91.

Partridge, L., & Mangel, M. (1999). Messages from mortality: the evolution of death rates in the old. *Trends in Ecology and Evolution* 14(11), 438-442.

Price, A., Corwin, S., Friedman, D., Laditka, S., Colabianchi, N., & Montgomery, K. (2011). Older adults' perceptions of physical activity and cognitive health: Implication for health communication. *Health Education & Behavior* 38(1), 15-24
doi: 10.1177/1090198110369764

Prohaska, T., Belansky, E., & Belza, B. (2006). Physical activity, public health, and aging: Critical issues and research priorities. *Journal of Gerontology*, 61(5), 267-273. doi: 10.1093/geronb/61.5.S267

Quality of life. (n.d.) *Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition*. (2003). Retrieved November 16 2015 from <http://medical-dictionary.thefreedictionary.com/quality+of+life>

Ramanathan, S., & Crocker, P. (2009). The influence of family and culture on physical activity among adolescents. *Qualitative Health Research*, 19(4), 492-503.
doi:10.1177/1049732309332651

Sallis, J., & Owen, N. (1999). *Physical activity & behavioral medicine*. Thousand Oaks, Calif.: Sage Publications.

Sanders, C. (2003). Application of Colaizzi's method: Interpretation of an auditable decision trail by a novice researcher. *Contemporary Nurse*, 14, 292–302.
doi:10.5172/conu.14.3.292

Schoenborn, C., & Barnes, P. (2002) Leisure time physical activity among adults in the united states. *Safer Healthier People* 325(2), p. 1-23. doi:
10.1001/jamainternmed.2015.0533

Schutzer, K. (2004). Barriers and motivations to exercise in older adults. *Preventive Medicine*, (39), 1056-1061. doi:10.1016/j.ypmed.2004.04.003

Seeman, S., Crimmins, M., & Karlamangla, A. (2010). Disability trends among older Americans: National Health and Nutrition Examination surveys, 1988–1994 and 1999–2004. *American Journal of Public Health*, 100(1), 100-1007.

- Stewart, A., Mills, K., King, A., Haskell, W., Gillis, D., & Ritter, P. (1997) CHAMPS physical activity for older adults. *Medical Science and Sport Exercise* 33(7); 1126-1141.
- Taylor, A., Cable, N., Faulkner, G., Hillsdon, M., Narici, M., & Van der Bij, A. (2004). Physical activity and older adults: A review of health benefits and the effectiveness of interventions. *Journal of Sport Sciences*, 22(8), 703-735. doi: 10.1080/02640410410001712421
- Toped, P., Tamura, K., Whitcomb, H., & Laden, F. (2011). Perceived built environment and physical activity in U.S. women by region. *American Journal of Preventive Medicine*, 41(5), p. 473-479. doi:10.1016/j.amepre.2011.07.023
- Tucker, J., Welk, G., & Beyler, N. (2011). Physical activity in US adults; Compliance with the physical activity guidelines for americans. *American Journal of Preventative Medicine*, 40(4), 454-461. doi: 10.1016/j.amepre.2010.12.016
- Uebelacker, L., Eaton, C., Weisberg, R., Sands, M., Williams, C., Calhoun, D., & Taylors, T. (2013). Social support and physical activity as moderators of life stress in predicting baseline depression and change in depression over time in the women's health initiative. *Social Psychiatry & Psychiatric Epidemiology*, 48(12), 1971-1982. doi: 10.1007/s00127-013-0693-z
- Uffelen, J., Gellecum, Y., Burton, N., Peeters, G., Heesch, K., & Brown, W. (2013) Sitting-time, physical activity and depressive symptoms in mid-aged women.

American Journal of Preventive Medicine, 45 (3), 276-281.

doi:10.1016/j.amepre.2013.04.009

United States Department of Health and Human Services. (1996). Physical activity and health: A report of the surgeon general. Retrieved October 7, 2015. from <http://www.cdc.gov/nccdphp/sgr/index.htm>

Vance, D., Wadley, V., Ball, K., Roenker, D., & Rizzo, M. (2005). The effects of physical activity and sedentary behavior on cognitive health in older adults. *Journal of Aging & Physical Activity*, 13(3), 294. doi: 10.1097/01376517-200808000-00008

Physical Activity. (2015). Retrieved October 24, 2015, from http://www.who.int/topics/physical_activity/en/

World Health Organization. (2003). Diet, nutrition, and the prevention of chronic diseases. Geneva, Switzerland. Retrieved October 24, 2015, from / <http://www.who.int/dietphysicalactivity/publications/trs916/download/en/>

Young, A., & Dinan, S. (2005). Activity in later life. *British Medical Journal*, 330(7), 189–191.

APPENDICES

APPENDIX A:
IRB Approval



Graduate Education and Research
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Institutional Review Board

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NOTICE OF IRB APPROVAL

Protocol Number: 15-242

Institutional Review Board IRB00002836, DHHS FWA00003332

Review Type: ☐ Full ☒ Expedited

Approval Type: ☒ New ☐ Extension of Time ☐ Revision ☐ Continuing Review

Principal Investigator: **Alexis Hobbs** Faculty Advisor: **Dr. Christine Privott**

Project Title: **A Phenomenological Exploration of Aging Women Experiences with Physical Activity**

Approval Date: **5/1/15** Expiration Date: **4/30/16**

Approved by: **Dr. Sarah Morris, IRB Member**

This document confirms that the Institutional Review Board (IRB) has approved the above referenced research project as outlined in the application submitted for IRB review with an immediate effective date.

Principal Investigator Responsibilities: It is the responsibility of the principal investigator to ensure that all investigators and staff associated with this study meet the training requirements for conducting research involving human subjects, follow the approved protocol, use only the approved forms, keep appropriate research records, and comply with applicable University policies and state and federal regulations.

Consent Forms: All subjects must receive a copy of the consent form as approved with the ECU IRB approval stamp. Copies of the signed consent forms must be kept on file unless a waiver has been granted by the IRB.

Adverse Events: Any adverse or unexpected events that occur in conjunction with this study must be reported to the IRB within ten calendar days of the occurrence.

Research Records: Accurate and detailed research records must be maintained for a minimum of three years following the completion of the research and are subject to audit.

Changes to Approved Research Protocol: If changes to the approved research protocol become necessary, a description of those changes must be submitted for IRB review and approval prior to implementation. Some changes may be approved by expedited review while others may require full IRB review. Changes include, but are not limited to, those involving study personnel, consent forms, subjects, and procedures.

Annual IRB Continuing Review: This approval is valid through the expiration date noted above and is subject to continuing IRB review on an annual basis for as long as the study is active. It is the responsibility of the principal investigator to submit the annual continuing review request and receive approval prior to the anniversary date of the approval. Continuing reviews may be used to continue a project for up to three years from the original approval date, after which time a new application must be filed for IRB review and approval.

Final Report: Within 30 days from the expiration of the project, a final report must be filed with the IRB. A copy of the research results or an abstract from a resulting publication or presentation must be attached. If copies of significant new findings are provided to the research subjects, a copy must be also be provided to the IRB with the final report.

Other Provisions of Approval, if applicable: None

Please contact Sponsored Programs at 859-622-3636 or send email to tiffany.hamblin@eku.edu or lisa.royalty@eku.edu with questions about this approval or reporting requirements.



Eastern Kentucky University is an Equal Opportunity/Affirmative Action Employer and Educational Institution

APPENDIX B:
Informed Consent

Consent to Participate in a Research Study

A Phenomonological Exploration of Aging Women Experiences with Physical Activity

Why am I being asked to participate in this research?

You are being invited to take part in a research study about aging women's relationship with physical activity. You are being invited to participate in this research study because you are a women ages 55 and above who participate in any form of physical activity at ECU Fitness and Wellness Center, three days a week for thirty minutes or more. If you take part in this study, you will be one of about three people to do so.

Who is doing the study?

The person in charge of this study is Alexis Hobbs (PI) at Eastern Kentucky University Occupational Therapy Program. PI is being guided in this research by Christine Privott (Advisor).

What is the purpose of the study?

By doing this study, we hope to discover aging women's personal beliefs about physical activity. The objectives of this study are to learn more about women's experiences with physical activity, to uncover the meaning of physical activity to aging women and why aging women continue to participate in physical activity. The study will provide a better understanding of the women's participation in physical activity through by listening and learning about their lived experience.

Where is the study going to take place and how long will it last?

The research procedures will be conducted at Eastern Kentucky University's Fitness and Wellness Center. You will need to come one or two times during the study. Each of those visits will take a maximum of 90 minutes. The total amount of time you will be asked to volunteer for this study is once or twice over the next six months.

What will I be asked to do?

This study will take place at Eastern Kentucky University Fitness and Wellness Center. All participants will be recruited through collaboration with the ECU Fitness and Wellness Center, Assitant Director of Facilities. The ECU Fitness and Wellness Center will be provided with this IRB application, including recruitment criteria, and at least three participants will be recruited and identified for the study. Participants will be recruited through word of mouth and use of a flyer posted within the fitness and wellness center.

This study is confined to women ages 55 and above who participate in any form of physical activity at the ECU Fitness and Wellness Center, three days a week for thirty minutes or more. Participants must be female, 55 years of age or older, and obtain a valid membership to the ECU Fitness and Wellness Center. The primary participants will be asked to show their drivers license to confirm their age and gender, as well as present a valid ECU I.D. to ensure they are a member of the ECU Fitness and Wellness Center.

The Principal Investigator will review the Informed Consent Form in-person with each participant. The decision of the participant to sign the document is completely voluntary and this will be made clear prior to signing the Informed Consent Form. The PI will inform participants to bring their drivers license to confirm their age and gender, as well as present a valid ECU I.D. to ensure they are a member of the ECU Fitness and Wellness Center. The PI may need to consult with the Eastern Kentucky University Fitness and Wellness Center for membership checks.

The PI will conduct up to three, semi-structured interviews with the women recruited for the study. Interviews will last up to a maximum 90 minutes and will be scheduled with participants based on their availability. All interviews will be recorded and audio-taped with participant permission.

Are there reasons why I should not take part in this study?

There are no reasons why you should not take part in this study.

What are the possible risks and discomforts?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

You may, however, experience a previously unknown risk or side effect.

Will I benefit from taking part in this study?

You will not get any personal benefit from taking part in this study.

Do I have to take part in this study?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

If I don't take part in this study, are there other choices?

If you do not want to be in the study, there are no other choices except to not take part in the study.

What will it cost me to participate?

There are no costs associated with taking part in this study.

Will I receive any payment or rewards for taking part in the study?

You will not receive any payment or reward for taking part in this study.

Who will see the information I give?

Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about this combined information. You will not be identified in these written materials.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you give came from you.

Can my taking part in the study end early?

If you decide to take part in the study, you still have the right to decide at any time that you no longer want to participate. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to end your participation in the study. They may do this if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the agency funding the study decides to stop the study early for a variety of scientific reasons.

What happens if I get hurt or sick during the study?

Page 2 of 3

If you believe you are hurt or if you get sick because of something that is done during the study, you should call Alexis Hobbs at (270) 945-9167 immediately. It is important for you to understand that Eastern Kentucky University will not pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. That cost will be your responsibility. Also, Eastern Kentucky University will not pay for any wages you may lose if you are harmed by this study.

What if I have questions?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions about the study, you can contact the investigator, Alexis Hobbs at (270) 945-9167. If you have any questions about your rights as a research volunteer, contact the staff in the Division of Sponsored Programs at Eastern Kentucky University at 859-622-3636. We will give you a copy of this consent form to take with you.

What else do I need to know?

You will be told if any new information is learned which may affect your condition or influence your willingness to continue taking part in this study.

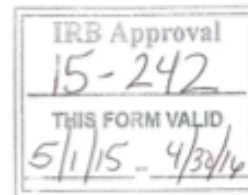
I have thoroughly read this document, understand its contents, have been given an opportunity to have my questions answered, and agree to participate in this research project.

Signature of person agreeing to take part in the study

Date

Printed name of person taking part in the study

Name of person providing information to subject



APPENDIX C:
Semi-Structured Interview Protocol: Interview Guidelines

Semi-Structured Interview Guide

Time of Interview: _____

Date of Interviews: _____

Interviewee Pseudonym: _____

Interview Protocol

1. Explain purpose and nature of study
2. Assure the participants she will remain anonymous
3. Indicate that at any time she can feel free to interrupt and ask for clarification
4. Seek permission to record interview and explain

Interview Questions

1. Describe what the idea of physical activity means to you?
2. Why do you participate in physical activity?
 - a. For example what are the physical, social and mental benefits to participating in physical activity?
3. What is your normal daily, weekly, monthly routine when participating in physical activity?
4. Describe your environmental supports and how it helps or hinders your ability to participate in physical activity?
 - a. For example, what about your social environment? (Family, friend, other and their role)
 - b. Describe where you work out and why this is important to you?
5. Describe your personal beliefs about physical activity?
 - a. How do you feel about physical activity and its impact on the parts of your life?
6. How do you feel when you do not get to participate in exercise?
7. What are some reasons you continue to participate in physical activity?
8. Where or how do you see yourself exercising in the future?