

# A SOCIOECOLOGICAL ANALYSIS OF PARTICIPATION IN PHYSICAL ACTIVITY BY RURAL-DWELLING OLDER ADULT WOMEN

by

MARY PATRICIA SHOTWELL  
(Under the Direction of Sharan B. Merriam)

According to Wilcox et al. (2000), rural women are more sedentary than urban women and they identify more personal barriers to engagement in physical activity. Despite the use of tailored interventions, older adults have not improved their adherence to or adoption of physical activity behaviors over the past decade (CDC, 2002). The use of a socio-ecological framework similar to one proposed by McLeroy et al. (1988) may increase our understanding of individual, social, and environmental factors that influence physical activity in rural older women.

The purpose of this study was to identify individual, environmental, and social factors that influence physical activity participation for older adult women living in rural Georgia. This case study employed the constant comparative method to analyze data collected from interviews, observations and document analysis. The community for the case was a moderate sized rural town in South Georgia. Findings indicate that there are individual, environmental, and social factors influencing physical activity participation. Individual factors include health, life context and personal attributes. Environmental factors are comprised of natural and structural characteristics of the community. Social factors include interpersonal support, organizational factors, and public images of older adults.

Three conclusions were derived from this study. First, a combination of factors influences physical activity behaviors. Second, individual perceptions shape the depiction of a factor as a barrier or a facilitator. Third, women seem to adapt to the presence of barriers by shaping their environment to accomplish desired life activities.

Implications for practice include the need for multilevel community health promotion. Research on the effectiveness of rural community health initiatives is indicated. Future research might also include an analysis of how aesthetics influences physical activity participation. Finally, gaining understanding of how older adults adapt to be able to engage in valued activities may enhance our ability to provide interventions that promote physical activity for older adults living in rural communities.

**INDEX WORDS:** Health promotion and education; Program planning; Educational gerontology; Older women; Physical activity and aging; Environmental determinants; Social ecology; Rural health; Community analysis; Qualitative case-study research

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## CHAPTER 1

### INTRODUCTION

Claire is a jovial 77-year-old Caucasian female who was born and raised in a rural north Georgia County. She has been a widow for 10 years; lives alone in a five room one-story home located on a busy rural road. She has never driven a car and is dependent on friends and family for transportation. She attends the local Senior Center, which is her major source of physical and social activity throughout the week. Claire particularly enjoys the craft activities and the singing lessons at the Senior Center.

Although Claire participates in the center based physical activity programs, she states that the chair activities are not vigorous enough for her but she has no other options for going to another fitness facility or for walking safely in her neighborhood. Claire states that during the week, because she spends her day and takes her midday meal at the Senior Center, she has little need to cook or clean her home very often. Since she lives alone, she no longer keeps a garden, for fear she would waste all of the fruits and vegetables. Claire has hypertension and arthritis, and though her doctor has instructed her to walk, she states that she does not have a safe place to walk in her community. Although Claire has an interest in being more physically active, she has many barriers within her community context that inhibit her participation in physical activity.

## Background and Need

According the National Center for Health Statistics (NCHS), by the year 2030, individuals over the age of 65 will comprise 20 % of the population in the U.S. (USDHHS, 1996). It is projected that the segment of the population over age 85 will triple during this same period and by the year 2050 will comprise almost 5% of the population. According to the Robert Wood Johnson Foundation, *National Blueprint: Increasing Physical Activity Among Adults 50 and Older* (2001), many older adults enjoy reasonably good health as they advance in years, but there are also many concerns that illustrate how some Americans are aging. For example, 88% of people over age 65 have at least one chronic health condition. Twenty-one percent of people over 65 have disabilities because of chronic conditions. Lastly, 35 to 50% of women aged 70-80 years have difficulty with tasks such as walking a short distance, doing housework, and climbing a flight of stairs. The *Blueprint* states, “In many cases, physical activity can have a positive impact reducing or helping to manage many of these health conditions” (p.13). With the increase in longevity and the presence of chronic health conditions among older adults, there is increased attention in all areas of social and natural sciences in finding ways to reduce disease and disability to help individuals “add life to years rather than adding years to life.”

The *Healthy People 2000 Progress Report* (USDHHS, NCHS, 2001) indicates that at all ages women are generally less active than men are. Additionally, adults of African American and Hispanic origin are generally less active than are Caucasian adults. Income and education also contribute on some level to physical activity participation, with people having lower income and less education being less active than people are



with higher income and education levels being more active. Apparently, geography may also influence our physical activity status with adults in the northeastern and the southern states being less active than adults in other parts of the U.S.. This report also notes that individuals with disabilities are significantly less active than are people without disabilities.

Particularly important to my study is the fact that older adults (more specifically, older women) are the most sedentary segment of the U.S. population. For example, the *Healthy People 2000 Progress Report (USDHHS, 2001)* points out that by age 75, one in three men and *one in two women engage in no* regular physical activity. Wilcox and colleagues (2000) found that rural older women when compared to urban older women are more sedentary and they describe more barriers to participation in leisure time physical activity (LTPA). Data reported by Wilcox et al. (2000) and the Behavioral Risk Factor Surveillance Survey (BFRSS), which is used for compiling the *Healthy People* statistics, indicate that older adults identify lack of time to be active, lack of convenient facilities to be active, and lack of a safe environment in which to be physically active. (USDHHS, 2001) The last two barriers may be particularly important to older adults living in rural communities.

According to Pullen, Walker and Fiandt (2001), in comparison to their urban counterparts, rural older women have a higher risk of disability because they are more likely to be in poorer health, have more limitations in functional abilities, and they are more likely to be uninsured. Factors such as lower income and education levels (when compared with their urban counterparts) may have a negative influence on the health of rural older women in terms of limiting their knowledge of or access to optimum

healthcare. There is also limited availability of preventive services. These authors (Pullen et al., 2001) also report that rural older women, when compared to urban older women, were much less likely to receive counseling regarding diet and exercise.

For the most part, studies of physical activity and aging have explored rates of participation, intensity, frequency, or various physiological and functional outcome measures. Many studies of physical activity in older adults focus on the type of intervention such as strength training, flexibility, endurance, or balance activities to improve fitness. Benefits of participation in physical activity for older adults that have been clearly demonstrated include: increased strength, improved cardiac function, reduced obesity, improved abilities in daily life tasks, and enhanced psychological well being (USDHHS, 1996; Robert Wood Johnson Foundation, 2001)

While we know that adoption of physical activity behaviors promotes health (USDHHS, 1996), we are still uncertain as to what helps individuals begin and maintain engagement in physical activities. One line of research that helps us gain some appreciation for why people engage in physical activity is “determinants” research (i.e. research that helps predict likelihood of behavior). King and colleagues (King, Rejeski, & Buchner, 1998) identify determinants research as being a promising avenue of understanding what older adults perceive as barriers or enticements to participation in physical activity. Determinants which may be more pertinent to older adult populations consist of both individual and contextual factors such as: transportation, medical concerns, fear of injury, limited or lack of physician advice to exercise, self-efficacy, and beliefs about exercise. The majority of the studies regarding determinants relate to

individual factors, with only a few looking at determinants among various subgroups of older populations and even fewer studying factors in a community or a societal context.

While outcomes and components of programs are important to understand, we still have limited understanding of what factors predict older adult participation in and maintenance of physical activity behavior. Health behavior theory and research informs us about variables that predict action; however, limited research is available using theory-based interventions to guide specific behavioral, social, educational, or cognitive strategies for promoting physical activity in older adult populations.

King and colleagues (1998) found that only 13 out of the 29 studies (45%) they reviewed regarding physical activity interventions targeting older adults were theoretically based. Stokols (1996) notes that many health promotion programs (which include physical activity programs) often are void of clearly articulated theoretical models. Dignan and Carr (1992) state that effective program planning in health promotion requires understanding of parts of programs and how they intend to produce an outcome. Theory can help to predict behavior and therefore, can help the program planner to target interventions appropriately. Many of the theories used in health promotion, such as the Health Belief Model (Becker, 1974) and Bandura's self efficacy (1986) theory predict likelihood of behavioral action based on individual factors but seem to neglect attention to the social and environmental context of the individual.

Another problem with the status of research in physical activity and aging stems from the fact that few intervention studies are "population-based" and instead, are focused on individual outcomes. Stewart (2001) asserts that the current body of research comes from psychological and medical models rather than a public health perspective,

which would tend to look more toward health of a whole community or specific sub-populations such as older adults. She notes that few studies address population-based interventions and even fewer studies demonstrate theoretical foundations of any population-based interventions.

One possible exception to a lack of theoretical work specifically focused on physical activity in older adults is proffered by O'Brien-Cousins (1998). She proposes a "composite framework" specifically targeting physical activity in older adults that addresses behavior, cognitive beliefs, and situational factors. Some of the contextual factors she includes in this model that influence participation in physical activity are socioeconomic status (SES), culture, and education. Although her model attempts to explain factors that specifically influence physical activity in older adults, she still appears focused at the level of the individual while neglecting the environment of the individual within his or her community. For example, her model does not discuss community-based programming, the physical environment of the individual, nor does it discuss policy factors that might influence physical activity in older adults.

While O'Brien-Cousins model and other research (King et al. 1998; Dziewaltowski, 1994) exploring behavioral or psychological factors associated with physical activity are helpful for understanding some of the factors that influence older adult participation in physical activity, there has been little research addressing contextual factors that influence physical activity participation in older adults. Additionally, there appears to be limited research using models or theories that incorporate context or environmental factors in the promotion of physical activity in older adults (Stewart, 2001; Sallis, Bauman, & Pratt, 1998).

A body of evidence is emerging which suggests that social and environmental factors play a key role in health promotion (Minkler, Schauffler & Clements-Nolle., 2000). Nesse and Williams (1996) concluded that more than 80% of the factors determining our state of health have to do with our environment, social relations, education, status in the community, and self-concept. Dzewaltowski (1994) advocates that we must examine participation in physical activity as a dynamic system in which the components (person-environment) of the system interact. Stokols (1996) notes that many health promotion programs neglect environmental components of health and illness, and he advocates for a more comprehensive approach “that integrates psychologic, organizational, cultural, community planning, and regulatory perspectives” (p. 283).

Stokols (1996) asserts that many health promotion programs typically emphasize individually focused behavioral strategies and neglect the environmental components of health and illness. He posits that a shift from person-focused to community-oriented health promotion programming is emerging. These community-based intervention programs are often based on a model of social ecology. This shift toward community and toward using models of social ecology is increasing because:

The growing recognition that most public health challenges (e.g. encouraging people to exercise regularly, improve their diet, and refrain from smoking) are too complex to be understood adequately from single levels of analysis and, instead, require more comprehensive approaches that integrate psychologic, organizational, cultural, community planning, and regulatory perspectives. (p.283)

Social ecology theory offers a framework for understanding the dynamic interplay among persons, groups, and their sociophysical milieus (Stokols, 1996). McLeroy,

Bibeu, Steckler, and Glanz (1988) propose an ecological planning model for health promotion/ disease prevention that addresses specific levels and targets of change that include: intrapersonal, interpersonal, organizational, community, and factors related to public policy within a given community. This model offers the health educator a structure to design programs that focus on individuals, groups, or on whole communities. Despite the apparent utility of viewing the environment from this perspective, little theoretical work or interventions have been proffered that use the environment as a context for the study of older adults living in rural communities.

When considering the community context and how it facilitates or creates barriers to older adult participation in physical activity, studies are limited to the physical and to a lesser extent the social environment within a community. In a review done by Humpel, Owen, and Leslie (2002), five clusters of physical attributes in the environment had a relationship to physical activity in adults that include: accessibility to facilities, opportunities for activity, weather, safety, and aesthetics within the neighborhood environment. Another study by Grzywacz and Marks (2001) found that there was a link between neighborhood safety and participation in physical activity. These authors also found a link between social status and exercise participation and suggest, “future health behavior research needs to consider determinants from multiple contexts and multiple levels of the human ecology” (p. 216).

Balfour and Kaplan (2002) found that general health of older adults who lived in neighborhoods with excessive noise, inadequate lighting, and heavy traffic had more health risks. For example, older adults living in inner cities where there was reportedly more problems related to safety, noise, and physical environment demonstrated increased

risk of functional deteriorations over one year compared with those elders living in less urban neighborhoods. Frank (2000) found that communities where people can more readily walk to shops and gain to access services have higher rates of participation in physical activities. Frank's study is particularly important in rural communities where, due to lack of infrastructure and public transportation, citizens are quite "auto-dependent." This may be one reason why there are higher rates of sedentary behavior in rural communities. Additionally, older adults living in rural communities report higher rates of disability and functional difficulties, so there may be a connection between being more auto-dependent (i.e. less opportunity for physical activity) and higher rates of chronic health conditions in rural communities.

Sallis, Bauman, and Pratt (1998) did a literature review on environmental and policy interventions promoting physical activity. Their review found seven studies specifically looking at environmental and policy interventions to promote physical activity in adults, though, none of these specifically addressed the impact for older adults. Additionally, no studies have been found that study the impact of the environment in promoting physical activity among rural-dwelling older adults. People in rural communities have a higher incidence of chronic disease and disability (Gesler, Rabiner, & DeFries, 1998). While reduced access to health care may be one factor that contributes to this higher incidence, other environmental barriers may exist that prevent rural older adults from participating in health promoting behaviors. For example, lack of facilities, activities, or resources that promote and provide opportunities for physical activity, may be more of a barrier in rural communities than in non-rural communities.

Booth and colleagues (2000) studied the perceived environmental influences associated with physical activity in older Australians. Their survey data from 2374 seniors aged 60 plus revealed that access to parks and the perception that footpaths were safe were significantly associated with participation in physical activity. In addition, they found that accessibility of local facilities was positively associated with leisure time activity in older adults. Their survey instrument consisted of yes/no responses to pre-determined questions; therefore, the researchers may have missed specific barriers or affordances in the respondent's particular environment(s) that may influence participation in physical activity.

Sallis and colleagues (1998) adapted a theoretical model addressing the development of policy and environmental interventions to promote physical activity that considers environments, policies, agencies, and planning to promote physical activity. While their literature review and subsequent proposed model did not specifically target older adults, they suggest that environmental and policy interventions have potential to exert a substantial impact on populations, but no effects have been reported thus far. Sallis and colleagues concede that while there is a growing interest in environmental and policy interventions to promote physical activity, the challenges of designing multifaceted interventions as well as formulating research designs has slowed the accumulation of evidence regarding effectiveness.

### Problem Statement

Georgia has many rural communities and according to Gesler, Rabiner, and DeFries (1998), it has long been recognized that older adults living in rural areas have higher rates of illness, geographic isolation, and limited health care resources. The



southern region of the U.S. is among areas of the country having significantly lower rates of adult physical activity participation (USDHHS, 2001). For the most part, research in physical activity and aging has resided in the psychosocial and behavioral as opposed to the environmental domains of influence (King et al., 2000). The potential importance of environmental factors has been suggested (King et al., 2000; Robert Wood Johnson Foundation (RWJF), 2001; Sallis, Bauman, & Pratt, 1998), yet there is a paucity of literature indicating how environmental factors may influence physical activity participation in rural older adults. Further, despite the fact that older women are the most sedentary segment of the population (USDHHS, 2001), few studies specifically address factors that influence physical activity participation among older adult women, and in particular, women residing in rural communities. The influence of the environment on physical activity participation in older adult women has had little exploration (Pullen, Walker, & Fiandt, 2001). Because women and rural communities have reduced access to health care, more sedentary behavior, and higher rates of chronic health problems, there is a need to better understand the experiences and the environment of this population to appropriately focus interventions that might address their specific health promotion needs.

According to Humpel et al. (2002), components of environmental theories and models have only been articulated in the broadest sense. They state: “Currently, even the most relevant theory does not provide sufficiently detailed conceptual tools for differentiating how the separate domains of environmental influences might impact on different physical activity behaviors.” (p. 197). Clearly, more research to generate and

analyze environmental models or theories of physical activity in older adults is warranted.

### Purpose

The purpose of this study was to identify individual, environmental, and social factors that influence physical activity participation for older adult women living in rural Georgia. This study was designed to look at the “health” of a community in terms of its ability to promote physical activity participation among rural older women. The following questions guided the inquiry:

1. What individual factors influence participation in physical activity in rural-dwelling older women?
2. What environmental factors influence participation in physical activity in rural-dwelling older women
3. What social factors influence participation in physical activity in rural-dwelling older women
4. What are the barriers and facilitators in the community at the individual, environmental, and social levels that influence participation in physical activity in the community?

### Significance

In terms of adult education theory, this community analysis deals with concepts described in critical theory such as empowerment, raising consciousness, and promoting active participant involvement as emphasized by Friere (1973). Wallerstein and Bernstein (1988) state: “Freire’s ideas are similar to health education’s guiding principles: to start from the problems of the community, to use active learning methods

and to engage participants in determining their own needs and priorities” (p. 382). In an ecological approach it is not only important to assess the environment, but it is also critical to ascertain what the perceived needs of communities are from the participants and other concerned stakeholders. This study used ecological theory as a framework for community analysis.

In terms of older adult learning, this study provides a broader view of how the context or the environment may influence effective transfer of learning in older adults. For example, older adults may participate in walking classes or other classes to promote physical activity within the confines of the Senior Center, but they may be unable to transfer skills to their home environment because of individual, environmental, or social factors that hinder activity. King and colleagues (2000) cite a case in point, where caregiving responsibilities (which may be particularly important to older women) often interfere with participation in physical activity and this issue has implications well beyond the level of the individual.

Understanding multiple levels of an issue such as caregiving may help program planners and consumers to advocate for increased funding for respite care programs to promote health for elderly caregivers. It is hoped that this multilevel analysis helps program planners and participants gain deeper insights into the complexities of health promotion for rural elderly women and hence enhance the quality of programming and advocacy for larger social issues related to this population. This multilevel analysis of a rural community provides a guide for program planners to assess the strengths and weaknesses of a community in terms of health promotion. In order to facilitate meaningful participation in physical activity and community life, individuals and groups

may begin to use many concepts familiar to adult education including: peer education, experiential learning, and adoption of politically active roles in the community (McLeroy, Bibeau, Steckler & Glanz, 1988). My hope is that study participants and consumers of my research will be prompted to advocate for community activism to enhance the quality of life in rural communities.

If health promotion professionals are to use multilevel models as suggested by the U.S. Surgeon General (1999) and the Robert Wood Johnson Foundation (2001), it is apparent that more research is needed to guide practice in health promotion and aging. In addition to more research being needed, multilevel approaches to health promotion also require interdisciplinary collaborations where health promotion professionals use different bodies of knowledge to understand and intervene in more effective ways. While the discipline of health promotion has been a leader in adopting a social-ecological approach, the fields of adult education and educational gerontology could inform health promotion practice in planning multilevel interventions for older women living in rural communities because: First, adult education provides us with models of program planning that encourage negotiation in order to accomplish interagency collaboration. Second, educational gerontology guides the program planner in understanding learning and program needs that are specific to older women living in rural communities.

Humpel and associates (2002) note that public health strategies to promote physical activity stress the importance of environmental factors to provide and reduce barriers of the national objective to reduce sedentary behavior in the U.S. They state: “While the importance of such influences would seem to be self-evident, the assertive pursuit of advocacy for physical activity opportunities must be strengthened by relevant

empirical evidence” (p. 197). This study will add to empirical evidence by expanding our knowledge of factors that may influence participation in physical activity within a rural setting. Knowledge of these factors may lead to conceptual models that we might test in order to explain how the separate domains of influence impact on different physical activity behaviors. These conceptual models and/or predictive pathways may also help practitioners provide more tailored interventions that target individual, environmental, and social factors ultimately leading to more effective outcomes.

Employing a more comprehensive model might help service providers to develop and to tailor more effective educational interventions that: 1) are grounded in theoretical frameworks, 2) take into account sociopolitical factors, and 3) attend to an integration of individual and contextual factors which might influence participation in physical activity. Ultimately, implementation of an “integrated” model will help program planners, policy makers, and older adults to develop and participate in programs that are more effective and thus, reduce sedentary behavior in older adults.

### Definitions

For the purpose of this study, I am using the following definitions:

#### *Physical activity*

According to Pratt (1993, as cited in USDHHS, 1996), the definition of “physical activity is something you *do*. Physical fitness is something you acquire, a characteristic or an attribute one can achieve by being physically active and “exercise is structured and tends to have fitness as its goal” (p.5). For the sake of providing variety in writing within this document, I will use the terms physical activity and exercise interchangeably.

### *Older adult*

The term older adult may also require a context for the reader. Although the AARP and many of the studies used in this review consider the age of 50 to be “older adulthood,” this study will use the age 65 and over to refer to older adulthood. I chose the age of 65 because it is commonly the age that individuals would be eligible to participate in many social services and community-based programs for older adults. I will use the terms elder, older adult, elderly, senior interchangeably during this paper.

### *Environment*

Cheadle, Wagner, Koepsell, Kristal and Patrick (1992) describe the term environment as including anything external to individuals shared by members of the community. They state that their definition includes the social, legal, economic, and the physical environment. Cheadle et al. (1992) state that their use of the term environment also includes community norms. Although the definition put forth by Cheadle et.al (1992) is comprehensive, it may be too broad for research purposes.

For the purpose of my study, the term environment refers generally to physical features of the community environment. In this study, the environment is broken into two categories of the natural and the structural or the “built” environment. The natural environment includes the weather, the geography, and the overall natural aesthetics of a community environment. Factors in the structural environment include housing, building accessibility, availability of facilities and environments in which to be physically active, transportation infrastructure, recreation infrastructure, and the quality of roads or walking structures such as sidewalks. The term structural environment will be used

synonymously with the terms built, man-made, and constructed environment as described by Frank and Engelke (2001).

### *Social ecology*

Social ecology will be defined further within Chapter 2. However, the term is used to describe a systems model explaining the dynamic interaction of the individual and all aspects of their environment. According to Stokols (2000), this model goes beyond behavioral and environmental change strategies by offering a theoretical framework for understanding the mutual influence of persons, groups, and their sociophysical milieus.

## CHAPTER 2

### REVIEW OF THE LITERATURE

The purpose of this study was to identify individual, environmental, and societal factors that influence physical activity participation for older women living in rural Georgia. This goal of the study was to look at the “health” of a community and its influence in promoting physical activity participation. The study was accomplished by assessing the community environment and by understanding the perceptions about the community through the eyes of older female residents and service providers living or working in this rural community.

This chapter reviews relevant literature, which comes from adult education, educational gerontology, health promotion, health education, public health, nursing, exercise science, social psychology, and urban planning. The chapter is divided into four sections. The first section presents a review of literature on health promotion and aging. The second section will discuss physical activity and older adults. The role of the community in health promotion for older adults is explored in the third section of this chapter. Finally, drawing from the literature, I will discuss how social ecology theory might be used as a framework for analysis of a rural community.

#### Health Promotion and Aging

It is estimated that by 2030 the population of people over the age of 65 is expected to double to around 70 million Americans. Even more startling is the estimate that the number of people over the age of 85 is expected to triple in the same period.



Since our “definition” of what it means to be an older adult can begin as early as 55 years old (according to the AARP), it is apparent that there is a significant amount of diversity among older adults groups. There may be a vast difference, for example, in the health status of a 65 year old compared to a 95 year old. Even with this diverse a population, one thing these individuals will likely share in common is an intensified demand for health care services as they live longer with more and more chronic health conditions (Haber, 1999). In fact, it is estimated that 88% of those over the age of 65 have at least one chronic health condition (Hoffman, 1996 as cited by King et al., 1998). The presence of these chronic health conditions combined with advances in technology and increased longevity mean that we may spend some time of our increased lifespan with impaired function and well-being.

Rowe and Kahn (1998) note that with increases in longevity and increasing awareness of risks and the fact that some conditions may be reversible, health promotion, not disease prevention is becoming more popular. Delaying the onset of a chronic health condition can dramatically reduce disability, the cost of health care, and suffering. The main goal of prevention efforts is to delay or reverse the onset of these chronic health conditions that can be quite disabling. It should be noted however that the presence of a chronic condition does not necessarily imply disability (Minkler, Schauffer & Clements-Noelle, 2000). We must, however, be very careful about the use of the term “disability” because it tends to indicate many stereotypes and some sense of “personal responsibility” for the disabling condition.

A positive finding of the MacArthur study (Rowe and Kahn, 1998) is that some of the same lifestyle changes people make can cut the risk of multiple diseases (Rowe and

Kahn, 1998). The concept of intentionally “compressing morbidity” points out that the goal of health practitioners, policymakers, and older adults is to reduce the period of life we spend in a state of disability resulting from chronic health conditions. Said more simply, we want to add “life to years” rather than years to life.

A useful model for looking at disability in older adults is provided by the Institute of Medicine whereby disability is understood in terms of the interaction of “the individual, the physical, and the social environments” (Minkler et al., 2000, p. 372). The goal in health promotion is to focus on enabling processes rather than disabling processes (Chiriboga & Ottenbacher, 1999). Verbrugge (1994) also emphasized the importance of addressing the social environmental aspects of the “disablement process” as a mismatch between the person’s ability and the demands of the environment. The goal of preventing disability is often addressed through health promotion efforts.

#### *Current practice in health promotion*

Haber (1999) reports that the percentage of the federal health budget dedicated to health promotion is only two to three percent of the national spending on health care. More important is the fact that spending for older adults related to health promotion is even more limited than health promotion programs for younger adults. According to Minkler et al. (2000), most health promotion efforts have been directed toward behavioral risk reduction in the individual but there is increasing recognition of the contribution of the physical and social environments as valuable tools for health promotion efforts.

In an individual focus on health promotion, the goal is risk reduction through adoption of healthy behaviors that may include, for example, smoking cessation, physical activity, and weight loss (Minkler, et al., 2000). It is recommended that individuals

participate in disease screening as part of the risk reduction efforts, but these national goals are not being met, primarily due to lack of Medicare reimbursement for these preventative services (Minkler et al., 2000). Research is ongoing with Medicare HMO enrollees to ascertain if these efforts toward behavioral risk reduction have positive outcomes with respect to improving health and reducing disability (Minkler et al., 2000).

The area of the physical environment is also included in health promotion efforts with older adults. When we think about the impact of the physical environment on health promotion with older adults, factors like neighborhood safety, accessibility, and housing must be considered. An ecological model of aging “is one where behavior is a function of the competencies of the individual person, the demands of the environment, and the interaction or adaptation of the person to the environment” (Minkler et al., 2000, p 374). Relatively inexpensive adaptations to the environment such as fixing stair railings, or installing grab bars in a bathroom can significantly reduce the risk of falls and enhance self-efficacy for movement (Plautz et al., 1996 as cited by Minkler et al., 2000).

Minkler and colleagues (2000) state that funding for this ecological approach to health promotion for older adults is even more problematic than are interventions directed toward the individual. They indicate that many of the changes to “physical environments” may require changes from a policy perspective, advocating that health promotion efforts be directed toward mobilizing older adults and their communities to lobby for changes in housing, crime reduction, and pedestrian safety. Minkler et al. (2000) state: “The emphasis on individual responsibility for health typically is not accompanied by an emphasis on “response-ability” or the capacity of individuals and communities for building on their strengths and responding to challenges posed by their

environment” (p. 374). This focus on community empowerment requires attention to the last aspect of health promotion, which is consideration of the social environment.

A major criticism of health promotion efforts in the U.S. is the focus on the individual and lack of focus on socioeconomic and cultural context in which health behaviors occur. According to Minkler et al. (2000), low SES is among the most important risk factors for functional limitations in old age. Older Americans require a basic level of economic health in order to promote physical health. Race and ethnicity is another factor that plays into health outcomes. Studies have found that even after controlling for lower SES and reduced access to health care in minority populations of older adults, there were disproportionate risks of disease in older communities of color (Minkler et al., 2000).

Social isolation of older adults is another factor that influences health in older adults. Elders who have strong social ties are more confident and competent in implementing health behavior changes. According to Minkler et al. (2000), consideration and inclusion of social groups such as family members and or church organizations has potential to influence health of many older adults. Involvement in volunteer work also contributes to improved functional abilities and health. Groups like SCORE (Senior Corps of Retired Executives) and RSVP (Retired Senior Volunteer Program) not only provide the service recipient with valuable and needed services, but there is evidence of an association in “successful agers” who enjoy good health, that volunteerism is a contributing factor to their positive health (Rowe & Kahn, 1998). Life-long learning also seems to have a positive impact on health and well being of older adults.

*Community-based learning as a strategy for health promotion in older adults*

Courtenay (1990) asserts that there is a long history of community-based learning programs for older adults. Universities, social service organizations, churches, recreation and leisure programs, and libraries provide the settings for many older adult-learning opportunities. The providers of these programs are often in a position to interact with older adults and therefore in a good position to understand the specific needs of this population.

Courtenay (1990) describes some characteristics of community-based older adult learning programs in terms of four factors that considered important to older adults: a) Accessible location for the participants (usually within their neighborhood or accessible by public transportation), b) Convenient schedule (older adults tend to prefer programs in the late morning to mid afternoon), c) Meets the diverse needs and interests of older adult learners (arts, humanities, health, legal and insurance issues), and d) Provides a variety of learning formats (formal and informal).

According to Eisen (1998), the field of older adult learning has a variety of delivery systems for formal and informal education. She notes that there is no single model of education that applies to all older adults regarding their diverse interests, abilities, and access to learning opportunities. Eisen (1998) proposes a model to explain the commonality and diversity among older adult learning programs. Her four-part typology makes the distinction between credit and non-credit learning options and makes the distinction between learner-centered versus teacher-directed programs. Four other components that help distinguish programs are: credentialing, convenience, socialization, and personal interest.

In her typology of program models, Eisen (1998) notes that teacher-directed programs tend to have more of an educational emphasis whereas peer-led programs focus on social interaction combined with intellectual stimulation. In this model, senior centers, which are a key organization of interest in my study, are considered “not-for credit” and “teacher-centered” programs. Eisen (1998) asserts that programs in this quadrant are almost always elective in nature. Educational offerings range from educational to creative to informational. She states:

Some [older adults] value the expert-teacher as a source of knowledge, others enjoy the group learning setting, and others look forward to a predictable routine that will fill their leisure time in a meaningful way. The diversity in older learner preferences indicates variation in the definition of what is meaningful. Intellectual stimulation is usually part of it, but many offerings in this quadrant are attractive because of their other features, such as travel, health promotion, or recreation. The one common denominator of the programs in this quadrant, then, is *socialization*. (p.45).

Haber (2000), reports that for some 25% of older adults, the senior center is a major source for accessing health information. A national survey revealed that of the estimated 12,000 senior centers in the U.S., all provide some type of program for health education and screening (Leanse, 1986 as cited by Haber (2000)). This survey also found that 80% of the senior centers have some relationship with physicians, hospitals and the public health departments within their communities. For many older adults, senior centers are one of the best places to go to for a variety of health promotion activities

including: nutrition programs, medical screenings, exercise programs, and health education seminars.

While some senior centers function as a congregate meal site and a place for socialization, the more progressive senior centers promote active community involvement on the part of seniors as well as other members in the community. Using networks through the Area Agency on Aging (AAA), many centers partner with healthcare organizations, academic institutions, and with civic or political groups to promote health and overall well-being within the community. Because rural communities typically have reduced access to healthcare and limited resources for formal and informal education, the senior center may have a more critical role in rural communities by acting as a “hub” for community organization.

Haber (2000), reports that the past decade has seen an increase in low-cost or free education programs for older adults within their community. Some of these low cost opportunities may include the YWCA (Young Women’s/Men’s Christian Association, AARP (American Association of Retired Persons) programs, hospital and church-based health fairs, self-help groups, community college programs, shopping center programs, and Elderhostel programs. According to Haber (2000), older adults are more active at seeking health information than are younger adults.

Haber (2000) states that it is important for participants and professionals to consider content of the health promotion programs as well as other important factors such as cost, transportation and physical access, and instructor competency. These factors may be more critical in rural communities where consumers of services have: reduced access, fewer facilities and learning opportunities, lower SES, and lower levels of education.

Because rural communities have higher rates of disability and chronic disease, it is even more critical that the programs in these locations demonstrate effectiveness if they are to reduce health disparities that marginalized groups often experience.

To summarize this section, it is clear that our population is aging and that through health promotion efforts we can reduce disability in older adults and hence facilitate more “healthy aging.” While health education and promotion for older people takes place within formal and informal educational and clinical settings, a significant amount of health promotion occurs through senior centers. Within these facilities, health promotion may take the form of screenings, education, and activities such as exercise programs to help older adults gain more control over their own health and well-being. No matter, the location or the facility, it is important that program planning for older adults consider the following issues: convenience in scheduling and location, physical and emotional access to information and facilities, and consideration of the diverse needs of specific sub-groups of older adults. Often sponsored by the local senior center, one type of programming that has considerable potential to enhance the health of older adults is physical activity programming.

#### Physical Activity and Older Adults

According to the Robert Wood Johnson Foundation, *National Blueprint: Increasing Physical Activity Among Adults 50 and Older* (RWJF, 2001), many older adults enjoy reasonably good health as they advance in years, but there are also many concerns that illustrate how some Americans are aging. For example, 88% of people over age 65 have at least one chronic health condition. Twenty-one percent of people over 65 have disabilities because of chronic conditions. Lastly, 35 to 50% of women



aged 70-80 years have difficulty with tasks such as walking a few blocks, doing housework, and climbing a flight of stairs. Their *Blueprint* states, “In many cases, physical activity can have a positive impact reducing or helping to manage many of these health conditions” (RWJF, 2001, p.13). With the increase in longevity and the presence of chronic health conditions among older adults, there is increased attention in all areas of social and natural sciences in finding ways to reduce disease and disability to help individuals add life to years rather than adding years to life.

*Healthy People 2000 Progress Report* (USDHHS, 2001) indicates that gender, race, income level, education, geography, and age have an association with rates of physical activity participation. This report notes that at all ages women are less physically active than men. In addition, people with lower incomes and education levels typically have lower rates of physical activity participation than people with higher income and education levels. Minority groups also have lower rates of physical activity participation than do Caucasian groups. For example, African Americans and Hispanic Americans are generally less physically active than Whites. People with disabilities are less physically active than people without disabilities. Adults in Northeastern and Southern states tend to be less active than adults in other parts of the U.S.. Lastly, this report states that by age 75, one in three men and one in two women engage in *no* regular physical activity (p.4).

Physical activity is associated with preventing or reducing disease and disability (USDHHS, 1996). Findings of many studies support the notion that adoption of physical activity behaviors improves health and well being in older adults and yet, older adults are the most sedentary group of Americans. Older adult women are more sedentary than

older men, and because women tend to live longer and suffer from more chronic health conditions, their participation in physical activity is crucial in helping to reduce the rates of disability. *Healthy People 2000 Progress Report* (USDHHS, 2001) identified barriers that individuals face when trying to increase physical activity that include time, lack of access to convenient facilities, and lack of safe environments in which to be active (USDHHS, 2001).

*Healthy People 2000 and Healthy People 2010* (USDHHS, 1990, USDHHS, 2001) provide statistics about current health issues in the U.S. and put forth goals for how to address these current problems in our country. These reports address educational and community-based programs by establishing indicators by which to measure the status of U.S. citizens with respect to some 20+ health-related issues. While the goal of *Healthy People* is to enhance the quality of life for all Americans, health and quality of life rely on much more than a well-functioning health care system. The *Healthy People 2010* report recommends that communities take a social ecology approach to health promotion in their communities (USDHHS, 2001).

In a social ecology approach, communities draw on many components of public health, faith organizations, local governments, parks and recreations, civic groups, and private citizens to work within existing systems to improve the health within a given community. Many community-based programs address specific health issues while others have a more comprehensive approach to health and healthy communities that are less “disease-specific.” Generally, disease specific interventions within communities have an individual focus based on behavioral and social psychological theories. Although social ecological models to health promotion are advocated (Stokols, 1992, 1996), the

current state of research in physical activity continues to be targeted at the level of the individual rather than the community. A review of the current state of theory and research-based interventions promoting adult and older adult physical activity is necessary for a full understanding of the underpinnings of why this study may be significant.

*Theoretical basis of physical activity interventions*

Stokols (1996) notes that many health promotion programs often are void of clearly articulated theoretical models. The use of theory-based interventions guiding specific behavioral, social, educational, or cognitive strategies to promote physical activity in older adults have had limited study. King and colleagues (1998) found that only 13 out of the 29 studies (45%) they reviewed regarding physical activity interventions targeting older adults were theoretically based. For the most part, studies of physical activity and aging have explored rates of participation, intensity, frequency, or various physiological and functional outcome measures. Many studies of physical activity in older adults focus on the type of intervention such as strength training, flexibility, endurance, or balance activities to improve fitness.

In addition to having limited use of theoretical knowledge in the study of physical activity and older adults, there has also been limited focus on communities or populations of older adults. Coming from psychological and medical models rather than a public health perspective much of the current literature focuses on individuals rather than specific populations of older adults. Stewart (2001) notes that few studies address population-based interventions and even fewer demonstrate theoretical foundations of any population-based interventions. One area in physical activity that has had significant

study is the area of looking at perceived barriers and enticements to participation in physical activity, which is often called “determinants” research.

While we know that adoption of physical activity behaviors promotes health (USDHHS, 1996), we are still uncertain as to what helps individuals begin and maintain engagement in physical activities. “Determinants” research (i.e. research that helps predict likelihood of behavior) and certain individually-oriented health behavior models have helped us understand some of the factors related to illuminating individual factors that influence health behavior, there appears to be limited research using models or theories that incorporate contextual factors and environmental determinants in the promotion of physical activity in older adults. King, Rejeski, and Buchner (1998) identify determinants research as being a promising avenue of understanding what older adults perceive as barriers or enticements to participation in physical activity.

Determinants that have been found to be more pertinent to older adults include transportation problems, medical concerns, fear of injury, physician advice to exercise, self-efficacy, and beliefs about exercise. Few studies are evident regarding determinants among various subgroups of the older populations (i.e. rural older women) and even fewer studies address factors in a community or a societal context with older adult populations.

#### *Person-environment models of promoting physical activity*

O’Brien-Cousins (1998) posits that most exercise studies have not advanced our theoretical understanding of older adult exercise motivation. She concludes that findings from many studies confirm what we already know from Social Cognitive Theory (Bandura, 1986) and she indicates that a new model is needed to better understand older

adult participation in physical activity. Her “composite model” (O’Brien-Cousins, 1998, p.192) incorporates theoretical elements of Social Cognitive Theory (Bandura, 1986), Locus of control theory, and the Health Belief Model (Rosenstock, 1974). This tripartite model looks at the relative influence of situational environment, cognitive beliefs, and behavior in terms of promoting adult participation in physical activity.

In looking at this model (Figure 2.1) it is evident that while she attempts to address environmental determinants of physical activity, she is for the most part addressing the intra and interpersonal factors (as defined by McLeroy et al., 1988) and seems to miss the organizational, community and public policy factors that might influence physical activity participation. One could argue, however, that addressing cultural factors and SES might be addressing community factors, but I would argue that these are still in a “person-environment” view where seems to view the person as passive recipient of their environment.

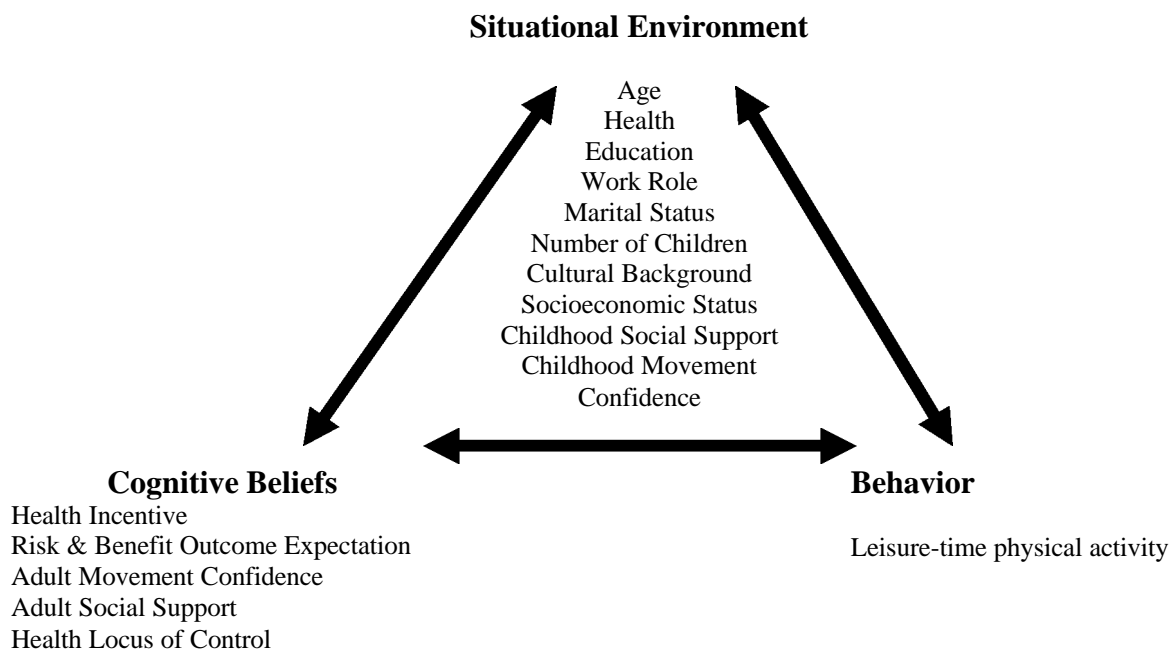


Figure 2.1: Integrated model of late-life exercise (O’Brien-Cousins 1998, p.192)

O'Brien-Cousins tested this model surveying 327 Canadian women age 70 and over. She claims that this model was supported as "being more effective than other theories advanced so far that have focused exclusively on either situational barriers, or cognitive determinants" (O'Brien-Cousins, 1998, p204). In this study, both contextual variables and cognitive variables explained 26 percent of the variance in motivations for late-life exercise. Further, the results suggest bi-directional causation and thus support Bandura's (1986) concept of reciprocal determinism where internal and external factors have mutual influence on behavior and attitude. O'Brien-Cousins asserts: for the Composite Theory to have wide applicability to different populations and health behaviors, inclusion of a full contextual list of variables might be necessary to account for a variety of "life situations" of older adults.

O'Brien-Cousin's work is applauded for including situational factors, but her discussion of contextual factors for the most part does not go beyond the older adults' front door. While her model looks at influence of education, SES, and culture via collection of demographic data, she does not analyze neighborhood factors such as accessibility, safety, facility availability, and local ordinances that might promote physical activity. Although she claims that her model reflects mutual influence of the person and the environment, her research does not indicate how the environment might have shaped the behavior of an older adult (other than demographic factors which in many cases are more passive measurements) nor how the individuals might adapt or change their environment to be engaged in physical activity.

*Environmental context of physical activity in older adults*

Although physiological measures and individual behavioral determinants of physical activity have predominated the research in physical activity and aging, a body of evidence is emerging which suggests that social and environmental factors play a key role in health promotion (Minkler et al., 2000). Dzewaltowski (1994) notes that physical activity must be examined as a dynamic system in which the parts interact with each other. Stokols (1996) notes that many health promotion programs neglect the environmental components of interventions that address health and illness. He encourages a more comprehensive approach “that integrates psychologic, organizational, cultural, community planning, and regulatory perspectives” (p. 283). Nesse and Williams (1996) concluded that more than 80% of the factors determining our state of health have to do with our environment, relations, education, status in the community, and self-concept.

When considering the environment and how it facilitates or provides a barrier to older adult participation in physical activity, studies mostly investigate the physical, and to a lesser extent, the social and community environment of the individual. One study regarding the physical environment conducted by Balfour and Kaplan (Balfour & Kaplan, 2002) found that general health of older adults who lived in neighborhoods with excessive noise, inadequate lighting, and heavy traffic had more health risks. They found that older adults living in inner cities who report more problems in their neighborhoods had increased risk of functional deteriorations over one year compared with those who report living in better neighborhoods. Another study found that there was a link between neighborhood safety and participation in physical activity (Grzywacz & Marks, 2001).

These authors also found a link between social status and exercise participation. They suggest, “that future health behavior research needs to consider determinants from multiple contexts and multiple levels of the human ecology” (p. 216).

Sallis, Bauman and Pratt (1998) indicate that the study of environmental and policy interventions may be useful for promoting physical activity because they are designed to influence large groups and even populations. Sallis et al. (1998) contend that environments can restrict the range of behaviors by promoting certain actions and prohibiting other behaviors. They assert that environmental and policy variables can have an impact on physical activity behavior, but that environment by itself is not the only influence of behavior. In their opinions, the rhetoric of health promotion has long endorsed the value of environmental and policy interventions, but there is still little research available regarding the effectiveness of these interventions.

Booth and colleagues (2000) studied the perceived environmental influences associated with physical activity in older Australians. Their survey data from 2374 seniors aged 60 plus revealed that access to parks and perceiving footpaths to be safe were significantly associated with physical activity. In addition, they found that accessibility of local facilities was positively associated with leisure time activity in older adults. Unfortunately, their instrument consisted of yes/no responses to pre-determined questions therefore; the researchers may have missed specific barriers or affordances in their particular environments that influenced participation in physical activity.

In their review of literature in urban planning and physical activity, Frank and Engelke (2001) declare that studies linking physical activity and public health are consistently “aspatial.” That is, they do not attempt to relate measurements of health and



adherence to physical activity regimes with availability of “walkable” environments. This may be critical with adults and older adults because research indicates that these populations (particularly non-exercisers) are resistive to participation in program-centered or facility-based programs for physical activity (Laitakari et al., 1996, as cited by Frank & Engelke, 2001). Booth and colleagues (1997) found that older adults preferred walking as their primary physical activity; therefore, assessment of the built environment is essential to planning physical activity programs for adults and older adults.

After completing a review of the literature regarding environmental and policy interventions to promote physical activity, Sallis and colleagues (1998) modified a theoretical model looking at the development of policy and environmental interventions to promote physical activity that discusses environments, policies, agencies, and planning to promote physical activity. While this literature review did not specifically target older adults, the authors suggest environmental and policy interventions have potential to exert a substantial impact on populations, but no effects are apparent thus far. The authors concede that while there is a growing interest in environmental and policy interventions to promote physical activity, the challenges of designing multi-faceted interventions as well as formulating research designs has slowed the accumulation of evidence regarding effectiveness.

There is a natural dimension of politics when trying to change policy regarding the environment. According to Sallis and colleagues (2001), there is considerable support for policy regarding smoking, alcohol consumption, and nutrition, but there is limited study of and/or support for policies to promote physical activity. They put forth

the notion that our choices for physical activity have been unjustly restricted. For example, how often do we find it difficult to locate a stairwell, only to find that they are unattractive or even “scary” places to get our physical activity? One can see this in communities where bicycle lanes have been put in dangerously busy streets. Sallis et al. (2001) note that lobbying by oil and automobile companies has led to government subsidies, but that producers and promoters of equipment or services that promote physical activity have had little support in the legislative arena.

Sallis and colleagues (2001) site an Australian focus group study where the participants suggested that access to more facilities, parks, open spaces, and convenient shopping within walking distance would promote physical activity within ones own community. According to a telephone survey done in the U.S., perceived environmental barriers to physical activity are associated with lower income levels. Participants, who have lower SES, express more concern about: neighborhood safety; lack of sidewalks; and limited access to retail within their neighborhood, which acts as a contributing barrier to physical activity.

In their review of the literature on environmental interventions, Sallis et al. (1998) cite one study concluding that placing signs at elevators encouraging people to use the stairs doubled the rates of people using the stairwells. In addition, when the signs were taken down, rates of using the stairs declined. Other environmental interventions that Sallis and his co-researchers found in their review included more complicated modifications such as installing bicycle trails, putting showers and changing rooms in workplace bathrooms, and placing sports and activity centers in low-income areas. Although these studies demonstrated improvements in physical activities, they note that

there are many limitations to their designs and that much more research is needed in the area of environmental modification to promote physical activity.

Successes using environmental and policy interventions for anti-smoking campaigns can inform organizations attempting to promote physical activity at the level of the community. Because policy interventions might influence entire populations, this area of research is promising. One organization attempting to influence policy and research is the National Coalition to Promote Physical Activity (NCPA). This coalition is building a network of organizations with an interest in promoting physical activity and the group advocates for public policy regarding the promotion of physical activity. Organizations such as the Robert Wood Johnson Foundation (2001) have recently been encouraging the implementation of multi-level interventions using interdisciplinary teams to enhance the quality of life for all Americans through engagement in physical activity.

Green, Richard and Potvin (1996) state that disciplines of public health, sociology, psychology, and education have each attended to the concepts of person-environment in their theoretical work and that more recently, this work is becoming integrated with our increased understanding of systems theory as well as the influence of social, cultural, economic, and political contexts on human behavior. They note that the Epp framework and the Ottawa Charter for Health Promotion both clearly advocate for health promotion that goes beyond the individual in her immediate environment to work on interpersonal environments, health and community services, organizational collaboration, and public policy for both individuals and populations.

One cannot fully understand an individual and her environment without looking to the community. Where someone lives will have an impact on her ability to implement

or carry-over a program of physical activity in his or her home environment. Stewart (2001) states: “More research of physical activity protocols is still needed, but to increase physical activity in our older adult population, more community-level interventions of all types are needed” (p. 85). She notes that very few individual-level physical activity programs have been implemented in community settings and few of those that have been implemented have been specifically targeted to the needs of older adults. She states that there is a paucity of literature that speaks about interventions that are implemented at the level of specific population groups. One approach that helps us understand the community context is a social ecological approach.

Many of the intervention models currently employed in the field of physical activity and aging such as the lifestyle approach to physical activity described by Dunn et al. (1998) and home-based programming advocated by Atienza (2001) as well as Stewart’s call for community-based programming are complementary to a Social Ecological Approach (SEA). The difference in the SEA, however is that an intervention is implemented and evaluated at multiple levels of a population or within a community.

This section on physical activity and aging has discussed individual and community based approaches to promoting physical activity in older adults. It specifically discusses determinants of physical activity, person-environment models, and introduces the socio-ecological model, which has more recently been advocated in the area of physical activity promotion. In order to understand the socio-ecological approach, we must first have some understanding of the theory behind this approach and the concept of community analysis.

### Role of Community in Health Promotion for Older Adults

Because rural older women define the presence of more barriers within their communities (Wilcox et al, 2000), it is important to understand how communities influence participation in health promoting behaviors. This section will provide some literature that assists in defining what a “community” means and what is meant by the term “rural.” This section will also review literature discussing methods and models of community analysis.

According to Pullen, Walker and Fiandt (2001), in comparison to their urban counterparts, rural older women have a higher risk of disability because they are more likely to be poorer, have less education, have poorer health, have more limitations in functional abilities, and they are more likely to be uninsured. Rural communities have a high proportion of elderly women and reduced access to healthcare services, more specifically, limited availability of preventive services. These authors (Pullen et al., 2001) also report that rural clients when compared to urban older women were much less likely to be counseled regarding diet and exercise.

#### *Definition of community*

There are many definitions of the term community. Glanz, Lewis and Rimer (1997) assert that although the term is often described with regard to geography, communities may be described based on shared characteristics of individuals such as ethnicity, occupation, and sexual orientation. Green and Kreuter (1999) describe community in terms of structural and functional characteristics. Functionally, a community is a setting where participants have a sense of identity, group belonging,

shared norms and values, and communication patterns. Structurally, a community is defined as a geographic area with boundaries such as a city, town, and neighborhood.

McLeroy, Bibeau, Steckler, and Glanz (1988) state that community has historically held a prominent role in public health. They note that the meaning of community has become quite vague as many definitions of the term are put forward. For example, “community” is used in the sense of a psychological community, a political entity, a unit of patterned social actions or simply an aggregate of individuals in a geographic location.

In their social ecological model of health promotion, McLeroy et al. (1988) define community in three ways. First, community is a mediator in terms of the primary groups to which individuals belong. The implication here is that interventions attending to the individual’s support system(s) will have increased likelihood of success. Second, community is defined as the relationships among organizations and groups within a defined area. This may include voluntary organizations local governmental health providers and schools. McLeroy et al. (1988) assert that this definition of community is particularly important in rural communities where there may be limited resources for health and human services and thus effective programming requires collaboration of different organizations in a community.

The third definition proffered by McLeroy et al. (1988) is that a community is a geographical and political entity such as a county, city, or borough. This definition takes into account power and politics within a community. McLeroy et al. (1988) assert that those with the most severe health problems within a community are often those with the least access to community power. These groups typically include people who are: poor,

minority status, rural, uneducated, unemployed, homeless, disabled, and those with stigmatized medical or mental health conditions. This third definition of community is important in an ecological model because underprivileged groups are often labeled as “non-compliant” or “hard to reach.” Therefore, the goal in a community-based model of health promotion is to establish contacts among divergent community groups, including representation from “hard to reach” groups in the planning process, to implement community organizing strategies.

### *Defining rural*

Although there is no single accepted definition of “rurality”, concepts that are common to most descriptions of rural communities include sparse population density, long distance from urban areas, and reduced amount of urbanization and commercial enterprise. Ryan (1996) notes that there are a variety of standards used to define rural areas. She states that the definitions most often used in health planning are based on data from the U.S. Census Bureau. The data from the U.S. Census classifies areas as being part of a Metropolitan Statistical Area (MSA) and those not belonging to this category as being non-MSA. Boatwright and Bachtel (2001) explain that since 1993 the U.S. Office of Management and Budget (OMB) set standards for classifying communities along a rural-urban continuum based on their proximity to metropolitan areas, population of places of 2,500 or more persons, and distance commuting between home and work. This classification further subdivides metropolitan status into four categories and non-metropolitan status into six categories and perhaps this has added to confusion about what we mean by the terms “rural” and “metropolitan.”

Ryan (1996) notes that in Georgia, non-MSA areas are represented by 117 out of the 159 counties in Georgia, representing 31% of the population of the state living in non-metropolitan areas. Since these ten categories for determining the “urban-rural” nature of a community can be confusing and perhaps difficult to appropriately classify all 117 of Georgia non-metropolitan counties, Boatwright and Bachtel (2001) proffer a more easily understood distinction of the urban-rural continuum. *The Georgia County Guide* (Boatwright & Bachtel, 2001), which is an annual publication from the University of Georgia College of Family and Consumer Science, makes use of data from the U.S. Census, retail sales figures, building permits issued, health data, education data, labor statistics, motor vehicle registrations, and other vital statistics from each county in Georgia to describe four types of communities present in Georgia as consisting of metropolitan, suburban, rural growth, and rural decline regions in the state. These terms will be further defined in Chapter 3 when discussing the selection criteria for the community of study.

Health promotion in rural communities is influenced by economic development, education, transportation, ecology, and other political factors in a community (Ryan, 1996). Sparse population, presence of small and often unincorporated communities, and an agricultural tradition typically characterize rural communities (White, 1987). As the economy of the U.S. shifted from agricultural to industrial and now from industrial to information and service-based economies, younger and more-educated individuals have migrated to urban areas, leaving older people and those with less education and economic power behind in rural communities.



Ryan (1996) notes that in Georgia, poverty rates in rural communities exceed those of urban areas by 58%. Although rural communities make up only 32% of Georgia's population, 40% of residents who die each year are residents of rural communities. Rural counties have twice as many adults with educational levels less than 9<sup>th</sup> grade when compared to urban areas. Rural areas contain a higher percentage of older adults and 53% of the nursing home beds in Georgia are located in rural areas. Despite higher rates of illness and death, rural counties have far fewer health care providers and preventive healthcare is a luxury. Numerous studies have shown that rural residents are more likely to be without a source for health care and they are less likely to have health insurance (Ryan, 1996).

### *Community Analysis*

According to Dignan and Carr (1992), successful program planning in health promotion requires an appreciation for the community context. The program planner in health promotion seeks a broad understanding of the health problems of a community by gathering data about the individual, group or a system. The overall goal of a community analysis is to better understand people and environments in order to provide a basis for identifying needs of target groups, evaluate and improve services, or most important, to help individuals within the target population to understand their own problems (Dignan & Carr, 1992). Communities that enhance their awareness of health problems and other social issues within their community can become empowered to expand leadership and take community action to address health and social issues. Community analysis can be the foundation for consciousness raising (Dignan & Carr, 1992).

The results of a community analysis related to health issues inform health educators, public health officials, and other concerned groups about the specific needs of target groups ultimately influencing decisions regarding program development. The process of doing a community analysis consists of many activities such as: gaining background knowledge of the community; analyzing the “health” of a community as well as the status of healthcare; analysis of the community’s social assistance system; and finally, constructing a community diagnosis describing resources, needs, and target populations for program planning.

Dignan and Carr (1992) purport that a community analysis describes the lives of community members and they state: “It is essential to become knowledgeable of the felt needs of the community during the early phases of the community analysis” (p. 20). They describe strategies for doing a community analysis that include: a) direct community observations to understand the area and to locate: businesses, parks, schools, health care facilities, types of housing and living conditions, and other services; b) locating documents and viewing local media such as newspapers, television, radio, advertisements that inform one about a community; c) using public documents and databases such as the U.S. Census, epidemiological data, as well as state and local vital statistics to gain a sense of the health and social issues within an area; and d) interviews or discussions with key informants including target population, health professionals and community leaders who can provide insight and suggest possible resources to address health issues. These analysis strategies vary in complexity, cost, and feasibility so the researcher and/or program planner must select strategies carefully to gain the greatest information given the limitation of resources.

When doing a community analysis in a rural community specifically looking at factors that influence health promotion efforts of older adults, researchers may be even more targeted in their investigation of a community. According to Beier (1997) an “elder-friendly community” provides or enables meaningful activities, affordable housing, is neighborly (safe), and has convenient access to goods and services. Unfortunately, this is often not the case in rural communities as there is limited availability of health care facilities, outlets for leisure, and educational and self-enrichment opportunities in small municipalities. In many cases, the senior center, or the local health care facility are the only sources for health promotion programs for the elderly. This limitation of services further widens the gap of resources and health disparity between rural and more urban communities.

In summary, the role of the community in health promotion for older adults is quite important because, as Wilcox and colleagues (2000) imply, the rural community may provide more barriers to physical activity than do urban settings in promoting physical activity for older women. Ryan (1996) points out that in rural communities, there is reduced access to health care resources including services for health promotion. The reduced access to health care and related higher rates of death and disabilities in this community as Ryan (1996) notes is influenced by economic development.

In doing a community analysis or using Social Ecological Theory to guide research, one needs to clearly define the terms “community” and the term “rural” because literature proffers so many different definitions. Factors that are important to consider in doing a community analysis include the ability of the community to provide services that are: 1) appropriate to a target population, 2) that meet the needs of population, and 3) in

the case of the elderly provide for safety, convenience, and provide for health as well as enrichment. The goal of a community analysis is to better understand people and their environment, which will ultimately enhance program planning.

### Social Ecology as a Framework for Community Analysis

Social ecology theory offers a framework for understanding the dynamic interplay among persons, groups, and their sociophysical milieus (Stokols, 1996). McLeroy, Bibeau, Steckler and Glanz (1988) propose an ecological planning model for health promotion/ disease prevention that addresses specific levels and targets of change that include: intrapersonal, interpersonal, organizational, community, and factors related to public policy within a given community. This model offers the health educator a model to design programs that focus on individuals, groups, or whole communities. Despite the apparent utility of viewing the environment from this perspective, no theoretical work or testing of this model with older women in rural communities appears in the literature.

Bronfenbrenner (1979) described key definitions in the study of human ecology. In his view, the individual is seen as a dynamic entity that progressively moves into and restructures the setting in which it lives. At the same time, the environment influences the individual and thus, a process of mutual accommodation occurs in the interaction between the person and the environment.

The ecological environment is an arrangement of nested structures referred to as the micro-, meso-, exo-, and macrosystems. The microsystem is a pattern of roles, activities, and relationships experienced by an individual in a specific setting with particular physical characteristics. A mesosystem comprises the relationship among two or more settings in which the individual participates (e.g. school, work, home, peer

group). The exosystem refers to one or more settings that do not involve the individual actively, but in which events affect the individual on some level. The individual is also affected by macrosystems, which refers to the consistencies that exist at the level of the subculture, or the culture.

Brofenbrenner (1979) states that ecological transition occurs whenever a person's position in the environment is altered because of change in role, setting or both. His study of the developing individual revealed that individuals acquire a more extended differentiated and valid conception of the environment and becomes motivated and able to engage in activities that reveal the properties of, sustain, or restructure the environment at levels of similar or greater complexity in form and content.

Using many concepts described by Brofenbrenner (1979), Stokols (1992) outlined core assumptions of the social ecology in health promotion. These assumptions are as follows: 1) Healthfulness of a situation and participants are influenced by multiple facets of the physical and the social environment; 2) Analysis of health and health promotion should address the complex nature of human environments. Environments are described in terms of physical or social components using objective or subjective qualities; 3) The participants in an environment can be studied at varying levels including individual, groups, organizations, and populations. Methodologies in this approach incorporate multiple levels of analysis and a variety of methodologies. This perspective assumes a multidisciplinary approach to research and intervention strategies and; 4) The social-ecological approach incorporates components of systems theory to understand the dynamic and mutual relationship of people and their environments.

Social ecology theory offers a framework for understanding the dynamic interplay among persons, groups, and their sociophysical milieus (Stokols, 1996). McLeroy, Bibeau, Steckler and Glanz (1988) propose an ecological planning model for health promotion/ disease prevention that addresses specific levels and targets of change that include: intrapersonal, interpersonal, organizational, community, and factors related to public policy within a given community. This model offers the health educator a model to design programs that focus on individuals, groups, or whole communities. Table 2.1 represents typical activities that might occur at each of the levels within this model. These levels provide the framework for my analysis of a rural community.

Guided by an ecological framework, many community-based health promotion programs emphasize the importance of individual, interpersonal, community, organizational and governmental factors and their effect on health. Programs focusing on individual health changes may include strategies such as education, training, counseling, and self-regulation. Objectives for individually based interventions include changing knowledge, attitudes, behavior, physiology, and abilities. At the interpersonal level, interventions usually include development or strengthening of social ties, the use of lay peer teachers, and the use of support groups to promote health. Objectives for improving interpersonal factors regarding health include attending to social supports and networks, health practices, and reinforcement for positive health changes (USDHHS, 1999).

At the level of the community, intervention approaches include media advocacy, community development, resource development, environmental change, and social change. Interventions at the community level include dealing with programs, practices, policies, resources, facilities, and the norms within a given community. At the

organizational level, objectives are similar, but they attend less to the “behavioral norms” within a given community. Approaches at this level might include organizational change and development, providing consultation, and developing organizational networks to promote health. Finally, at the policy level in a social ecological approach issues such as programs, practices, legislation, ordinances, resource allocation, regulation, and enforcement are addressed. Interventions at this level include political action, lobbying, and advocating for policy or policy changes (Baker & Brownson, 1999).

These five levels discussed each have different objectives and intervention approaches and programs may use one or all levels within a given program. The use of all five levels in a given community-based program, however, requires great resources and organization and it is quite difficult to monitor effectiveness of interventions when all levels happen concurrently (Green, Richard & Potvin, 1996). One example of a successful multi-level community-based health promotion intervention is the *Healthy Cities/Healthy Communities* initiative. Based on a mandate from the World Health Organization (WHO), these programs strive to ensure that citizens have access to the “basics” needed for health; the physical environment supports healthy living; and the communities control, define, and direct action for health. This approach resulted in efforts to address, employment, housing, smoking, AIDS, hunger, transportation, air quality, safety, and physical activity (Baker & Brownson, 1999).

Green and Kreuter (1999) propose the PRECEED-PROCEED model as an ecologically based program-planning tool for health promotion. In this model the PRECEDE section of the model is the assessment phase where the planner assesses

Table 2.1: Application of McLeroy et.al's Social Ecological Program Planning Model

Ecological Level	Factors under consideration	Related theories and concepts	Interventions
Intrapersonal level	Attitudes, knowledge, behavior, and developmental history of the individual	Psychological models such as: <ul style="list-style-type: none"> <li>• Theory of reasoned action</li> <li>• Value-expectancy theories</li> <li>• Health belief Model</li> <li>• Personality theories</li> </ul>	<ul style="list-style-type: none"> <li>• Techniques to modify social influences</li> <li>• Educational programs, mass media</li> <li>• Support groups</li> <li>• Organizational incentives</li> <li>• Peer counseling</li> </ul>
Interpersonal level	Formal and informal social network and social support systems including work, family, friends	<ul style="list-style-type: none"> <li>• Social support theories</li> <li>• Social support as a mediator for stress</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on changing individuals through social influences (i.e. change group norms, create alternate networks)</li> </ul>
Institutional or Organizational factors	Social institutions with organizational characteristics and formal (and informal) rules and regulations for operations	<ul style="list-style-type: none"> <li>• Focus more toward environmental factors such as the effects of interpersonal relationships</li> <li>• Diffusion of innovation</li> <li>• Reciprocal causation</li> <li>• Community as mediating structures (includes social networks, churches, voluntary associations and neighborhoods)</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on large groups of people</li> <li>• Group competitions</li> <li>• Incentives</li> <li>• Institutional/ organizational policy</li> <li>• Four phases on intervention:               <ul style="list-style-type: none"> <li>○ Commitment</li> <li>○ Changes in policy and procedure</li> <li>○ Changes in the roles and actions of staff</li> <li>○ New learning activities</li> </ul> </li> </ul>
Community factors	Relationships among organizations, institutions, and informal networks within defined boundaries	<ul style="list-style-type: none"> <li>• Community mediator, as relationships, and as power</li> <li>• Diffusion of innovation</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing access by disadvantaged populations</li> <li>• Establishing contacts among divergent community networks</li> <li>• Including representation from the disadvantaged population on community boards</li> <li>• Community organizing strategies</li> <li>• Coalition building</li> </ul>
Public policy factors	<ul style="list-style-type: none"> <li>• Legislative and regulatory approaches at local, state, and federal levels</li> <li>• Policies that provide a structure for governing organizations</li> </ul>	<ul style="list-style-type: none"> <li>• Social marketing theory</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt a highway program</li> <li>• Evaluate tax rebates for bicycles</li> <li>• Incentives to build new fitness facilities</li> <li>• Enact zoning policies to encourage development of more walkable communities</li> </ul>



social, epidemiological, behavioral and environmental, educational and ecological, and administrative and policy assessment that influence health of individuals and their communities. The PROCEED phase of the model consists of implementation and evaluation of a program. Thought to be a more holistic model, because it considers factors well beyond the level of the individual, this model attends direct (behavioral) causes and indirect (physical, social, environmental, health care) causes of health. Although the model has some components that appear to influence one another (e.g. behavior and lifestyle mutually interact with environmental factors), all factors lead to health as an outcome. The model does not account for how health status might also influence behavior and lifestyle, for example. In short, my criticism of the model is the lack of a dynamic systems approach.

Green and Krueger (1999) point out a limitation of ecological analysis. They state: “The ecological analysis connects these environmental conditions with population health outcomes so that it can suggest public health interventions on the social or physical environment” (p 118). One flaw however, in using epidemiological data to provide an ecological correlation between the prevalence of a condition and the features of the environment is that this data does not “tease out” whether individuals who are affected by a given feature in their environment are the same people who have the health problem associated with the feature (of the environment). In my study, for example, this might mean that this type of ecological analysis could not clearly demonstrate a statistical correlation between poor living conditions in rural areas with lack of physical activity and hence, poorer health in older women who live in these communities. They note that ecological correlations can be useful for drawing attention to social and environmental

conditions associated with health, but they should be interpreted with caution to avoid spurious correlation interpretations at the level of the individual using large population data.

### *Social ecology and community based health promotion*

Given the different definitions of community, it appears that there are also different definitions and descriptions of community-based health promotion. Programs may differ in their targeted community, their focus on a specific disease, or their strategies and approaches, but generally, they have a similar purpose to change individual or social determinants of disease (Baker & Brownson, 1999). Within the broad goal of improving health, community-based health promotion programs may focus on changing health behaviors of individuals, or they may focus on modifying community structures, processes, and policies depending on what type of change is desired.

Creating awareness and providing a range of services far-reaching enough to affect a community often requires more resources than one organization has to offer (USDHHS, 1999). King (1994) states: “A variety of community groups and organizations typically sponsor or support some form of physical activity, yet there has typically been little linkage among such groups or programs” (p. 1409). Partnerships create synergy where people work together to accomplish what no one group could accomplish alone. When diverse segments of the community become involved in efforts, the likelihood of success is increased. King (1994) notes (see Table 2.2) that there are key differences in a model of health promotion focused on the individual versus a model focusing on the community.

Citing the work of Van Hulzen (1992) and Bracht (1990), the USDHHS publication *Promoting Physical Activity: Guide for Community Action* (1999) states that partnerships vary in type and may take the form of a/an: alliance, coalition, advisory council, collaborative, commission, consortium, network, or task force. This publication gives tips for finding partners that complement an organization and for the types of people with whom an organization might want to partner. Partners may come from government, business, education, healthcare and health promotion, transportation, media, religious, voluntary and service organizations and recreation.

*Community-based approaches to promoting physical activity*

King (1994) purports that health risks translate into a substantial number of premature deaths, disabilities and loss of quality of life. In her opinion, this data makes a strong case for the application of community-based approaches to physical activity. These approaches include looking at environmental, organization, and policy-level strategies in addition to individual intervention strategies. Further, King (1994) states that community-based programming increases the probability of reaching the most sedentary segment of the population.

Four main types of community-based programs are discussed in Stewart's (2001) literature review of community-based programs to promote physical activity in older adults. These types of programs include those that: 1) work to change individual behavior within a community setting, 2) work to change contextual factors influencing individual behavior, 3) diffuse or establish programs in new community settings, and 4) integrate efforts to change individual behavior and improve context. Of the four types of community-based programs, the first type that is based on facilitating individual change,

by far, has had the most research. The least amount of research exists in relation to integrating approaches to change individual behavior or improve context.

Table 2.2: Distinction Between Programs at Individual Versus Community Level (King, 1994, p. 140)

Target	The individual	The community
Initial goal:	Individual behavior change	Community change in behaviors, social networks, organizational norms, physical environment, laws
Long term goal	Individual maintenance of target behavior	Institutionalization of programs, structural or environmental change
Level of intervention	Personal, interpersonal	Personal, persona, organizational/environmental, institutional/societal
Theories / perspectives	Personal, behavior theories (focused on the persona or small groups)	Psychosocial, behavioral, public health, social marketing, communication, diffusion, systems approaches
Professional stance	Waiting	Seeking
Location	Setting-based	Settings, non-setting specific
Type of activity targeted	Programmed, leisure	Programmed leisure; household- related, routine activity; transportation activities
Method	Health professional (face-to-face)	Health professional, community agencies or organizations, legislators, mass media
Intervention time frame	Usually time limited	Usually long term

Studies regarding the effectiveness of programs attempting to change contextual factors, have for the most part, focused on the community at large rather than specifically targeting older adults. One program, called “On the move!” which was conducted in California, funded nine communities serving ethnically diverse adults to promote physical activity in their communities. The projects were required to develop community

coalitions to fit the cultural, socio-economic, and geographical characteristics of each community. Each of the nine communities had mixed rates of success, but more importantly, this model demonstrated how communities could be empowered to promote public health.

According to Stewart (2001), community-based programs that attempt to disseminate efforts to real world settings typically involve adapting original research based program to fit within the constraints and practicalities of the target community. Programs can also occur through a blend or integration of individual and community level efforts. Researchers in health promotion and public health have long advocated applying multilevel models to promote positive health behaviors including promoting increased physical activity levels (Dunn, Anderson, & Jakicic, 1996; King, 1994, and King et al., 1998, USDHHS, 1996). One popular approach, that integrates the individual and the social context, is Social Ecology Approach (SEA).

This section on using social ecology as a framework for community analysis described major tenants of Social Ecology Theory describes how an understanding the dynamic between people, groups, and sociophysical contexts. This approach states that interventions generally necessitate coordinated interventions and multilevel analysis. McLeroy and colleagues (1988) describe a planning model that helps us design interventions. This model, which has more recently been applied to the promotion of physical activity, attends to intrapersonal, interpersonal, organizational, community and policy factors that affect a given community. In a true Socioecological Approach (SEA), community coalitions act together implementing health promotion interventions with focus on modifying the structures, process, and policies within a given community to

promote a specific health agenda. This aspect of social ecology is quite consistent with adult education interventions that focus on community development.

### Chapter Summary

This review discussed health promotion and aging, physical activity and aging, the role of community in health promotion for older adults, and social ecology as a model used in health promotion. Health promotion with older adults often focuses on individual change in the area of nutrition and exercise and older adults, who suffer disproportionately from chronic diseases, have a considerable amount to gain from adopting health promotion behaviors.

Interventions for health promotion of older adults take place in many contexts including: senior centers, educational organizations, and clinical settings. Factors to consider in designing educational interventions include convenience, access, and providing for diverse needs of older adults. Although interventions have been designed and implemented that are specifically targeted toward older adults, the physical activity behavior of older adults has not improved within the past ten years.

Because of this lack of success with older adults, current literature advocates the use of community-based approaches using Social Ecology Theory. In order to perform these types of interventions, the literature advises that the terms “community” and in the case of my study, the term “rural” is well defined. Health promotion in rural communities is particularly dependent on economic development and in the case of my study; I focused on a community that is labeled as a declining rural community. This implies that there is limited economic development and resources available for health promotion.

Despite the wealth of information on physical activity and aging, community programming, and program planning, there is a paucity of literature regarding the use of an ecological model to analyze or plan programs for promoting physical activity for older adults. More specifically, the literature is relatively silent regarding an ecological analysis of physical activity participation in rural older women living in rural communities.

## CHAPTER 3

### RESEARCH DESIGN AND METHODOLOGY

The purpose of this study was to explore individual, societal, and environmental factors that contribute to physical activity participation in rural-dwelling older women. This chapter addresses how the research was conducted in order to learn more about the specific factors that influence physical activity participation. A qualitative case study design was chosen as the most appropriate research methodology because it allowed the researcher to explore the issue of physical activity from multiple perspectives of different individuals as well as multiple data sources within the rural community. In order to explore individual, environmental, and social factors, data collection consisted of participant and community observations; interviews with older women and other community members; and analysis of a multitude of documents. Photographs of the community also provided additional data for analysis. This chapter provides an explanation of how the study was conducted. I will explain study design, selection and data collection procedures, data management, data analysis, validity and reliability, as well as management of biases and assumptions.

#### Study Design

This study employed the use of a qualitative case study design in order to explore the topic of physical activity in rural older adult women. According to Arcury, Gaylord and Cook (1998), there is a strong tradition of using qualitative research in gerontology. In particular, they note that qualitative studies have been important in the development of



knowledge of the social life of the rural elderly. Arcury et al. contend, however, that there has been little effort by gerontologists to apply qualitative methods to the study of health behaviors of older adults. In advocating for the use of qualitative research in gerontology, they state:

Qualitative research is a distinct research methodology. ...[It] can produce empirical results from which general statements about human behavior, beliefs, and organizations can be made. These empirical results can be descriptive or they can be analytical statement reporting relationships among different factors....

Qualitative research is neither the precursor to the “real science” of a quantitative investigation, nor is it simply a handmaiden that supplies interesting quotes to soften hard numbers. (p. 110)

Denzin and Lincoln (2000) proffer a definition of qualitative research as a situated activity that includes a set of interpretive and material practices that locates the observer in the world. Qualitative researchers study things in their natural settings in an attempt to make meaning or interpret phenomena in terms of the meaning people bring to them. They also acknowledge the relationship between the researcher and the topic being studied as well as the social constraints that shape inquiry. Qualitative researchers stress the fact that reality is socially constructed and that objective reality can never be captured. We can only know a thing through its representation (Denzin & Lincoln, 2000). In doing qualitative research, no one paradigm or method is privileged over another. Using multiple methods and strategies for research, qualitative research provides an in-depth understanding of the phenomenon in question. The use of multiple methods is a strategy that adds breadth, complexity, richness, and depth to any inquiry

(Flick, 1998, as cited by Denzin & Lincoln, 2000). Qualitative research does not belong to a single discipline, though some disciplines more than others embrace these methodologies.

In a recent issue of the *Journal of Physical Activity and Aging*, dedicated to the exploration of qualitative methodologies as a potential tool for research, Grant and O'Brien-Cousins (2001) note that since its inception in 1993, the majority of the articles published in the journal have been in the quantitative paradigm. They explain the shortcomings of using a single approach to research as no one paradigm can capture all of the variations of any phenomena. They call for us to consider alternative meanings of how we define physical activity and aging, opening the door for alternative research paradigms in this field of study.

In order to consider alternative meanings of how environment influences physical activity participation in rural older adult women, this study used a qualitative case study to better understand how individuals, physical environments, and/or a community may function as a barrier or a facilitator of physical activity. Because there is some debate regarding the definition of a case study, I must first define a case study.

#### *Defining a case study*

Merriam (2001) notes that many students and researchers have encountered case studies; however, there is limited agreement as to what constitutes a case study. Part of the confusion regarding the definition of a case study, according to Merriam (2001), is that the process of doing case study research is confused with the unit of study and the product of the research. The key, as Merriam sees it, is the notion of a “bounded system” as the focus of or unit of analysis in a case study. The “case” is defined as an integrated

thing or an entity having boundaries that can be explored. The outcome of a case study is a report that presents a holistic description of a single instance, social unit, or a phenomenon (Merriam, 1988).

Merriam (2001) describes features of a case study that include its being particularistic, descriptive, and heuristic. Case studies are said to be particularistic because they focus on a specific event, situation, program, or a phenomenon. The product of a case study produces a report that is descriptive of the phenomenon under study. These descriptions include as many variables as possible and they describe interactions within a naturalistic setting. Lastly, case studies are heuristic because they help the reader's understanding of the topic of study. The case study report may present previously unknown relationships or ideas through its "thick descriptions" that take the reader to the setting of the study (Merriam, 1998).

Yin (1994) asserts that the choice of a case study is preferred when the researcher seeks answers to how or why questions. Similarly, Merriam (1988) notes that the research questions typically guide the choice of using a case study. A researcher chooses a case study method with the purpose of describing, interpreting, or evaluating a phenomenon. She states:

The qualitative case study helps the researcher gain an in-depth understanding of the situation and its meaning for those involved. The interest is in process rather than outcomes, in context than a specific variable, in discovery rather than confirmation. Such insights can have an influence on policy, practice and future research. (p. xii.)

The most difficult part of designing a case study according to Yin (1994), is defining the unit of analysis to ensure that the case is relevant to the research questions. Case study analysis often consists of looking at multiple parts or subunits of a system, and Yin (1994) cautions the researcher against minute focus on the subunits of the case at the expense of the whole case. The unit of analysis in this study is the rural community. In order to understand what this community provides in terms of supporting older women's participation in physical activity, multiple aspects of the community and the individuals within this community were studied.

### Sample Selection

This section will discuss how I selected the community, the older adult women, and the staff members who participated in my study. I will also use this section to discuss procedural issues of how I accessed participants, documents, and areas for observation.

#### *Selection of the community*

The method for choosing which community to study was based on a common practice of non-probability or more specifically, purposive sampling of rural communities in Georgia. According to Patton (1990), purposive sampling enables the researcher to gain the most insight based on what one wants to discover or understand. According to Merriam (1988, 2001), purposive sampling is the same as what Goetz and LeCompte (1984, as cited by Merriam, 1988) termed criterion-based sampling. This study employed a purposive sampling technique in order to identify the community of study.

In order to identify the community for analysis, I first consulted the U.S. Census data. Although useful, I found this data incomplete and difficult to understand in terms

of identifying specific demographic characteristics of rural communities that might pertain to physical activity participation of rural older women. Fortunately, a classmate made me aware of *The Georgia County Guide* (Boatwright & Bachtel, 2002), which is an annual publication from the University of Georgia College of Family and Consumer Science. This publication makes use of data from the U.S. Census, retail sales figures, building permits issued, health data, education data, labor statistics, motor vehicle registrations, and other vital statistics. It goes beyond census data and is the primary source for my selection criteria. Despite the utility of this report, it should be pointed out that most of the data in this reference are generated by county; therefore, the vehicle for selecting the rural community to study was to first identify the county of interest. After identifying the appropriate county for study, I focused on the largest municipality within that rural county (in most cases, the county seat) with the assumption that the larger municipality would have infrastructure features for analysis. For example, I assumed that there would be a recreation department, county and city services, a chamber of commerce, and there might be a public health office in the community.

One other source for data regarding physical activity in Georgia used for my selection of a community was a report entitled *How Active Are Georgians?* (Bricker, et al., 2001). This report provided criteria for identifying communities having higher rates of sedentary behavior. Using the above data sources that included U.S. Census Data, *The Georgia County Guide* (Boatwright & Bachtel, 2001), and the report *How Active Are Georgians?* (Bricker, et al., 2001), I employed several selection criteria to narrow down and ultimately select one rural community appropriate for study.

The first criterion was that the county be defined as a rural community based on the U.S. Department of Census designation. Interestingly enough, I found that the U.S. Department of Census defines “rural” in relation to their description of “urban.” That is, all persons living in places with a population greater than 2500 people are considered “urban” and all others are considered “rural.” The Bureau of Census employs the use of nine rural-urban continuum codes to distinguish metro counties by size. They define nonmetro counties according to their degree of urbanization and their proximity to metro areas. Further, The U.S. Department of Agriculture (USDA) defines codes 0 to 3 as metro and codes 4 to 9 as nonmetro (Economic Research Service of the USDA, 2002).

Using the Census Bureau coding scheme revealed that 117 out of 159 (or 73%) of the counties in Georgia are considered “rural.” Because I was interested in factors beyond the number of people in an area and beyond the proximity of a community to urban areas, I did not find this “rural” classification system particularly useful. I was interested in communities that were “disadvantaged” with respect to access to healthcare and health promotion services as well as finding a community with limited economic resources. In short, I wanted to study a community not adjacent to or benefiting from economic growth in metropolitan areas of Georgia.

Boatwright and Bachtel (2001) describe the “Four Georgia’s” as metropolitan, suburban, rural growth, and rural decline. Metropolitan counties have city populations greater than 50,000 within a county of over 100,000 people. Suburban counties are those in which more than one third of the people commute to the core city for work. A “rural growth” area tends to be characterized by having some attraction because of tourism,

proximity to major transportation route, or the county possesses a regional growth center capable of sustaining economic growth.

Boatwright and Bachtel (2001) describe a fourth community “rural decline” as having long-term population loss, lack of employment opportunities, low levels of educational attainment, and limited health care services. These areas tend to have high numbers of young and older residents because the working-age population tends to migrate to the more urban areas of the state. The focus of my study was on a declining rural county in Georgia because I assumed that there would be more barriers to physical activity within this type of community due to limited access to healthcare, poor transportation systems, and more residents having lower socioeconomic status.

Figure 3.1 provides a color-coded map indicating the metropolitan-rural status of communities in Georgia as outlined by Boatwright and Bachtel (2001). They note that most of the rural growth counties tend to be in the Northern part of the state, while the declining rural counties are scattered south and east of the large metropolitan area of Atlanta. There are 40 out of the 159 Georgia counties that fit the description of rural decline counties.

Having identified the 40 rural decline counties in Georgia, I employed a second criterion to these 40 counties to further narrow my search for a community of interest. Using the report *How Active Are Georgians?* (Bricker et al., 2001), I narrowed my search for a community by adding the selection criterion that the counties have activity rates where less than 25% of the adult population was physically active (Figure 3.2 on the bottom).

Simultaneously employing the rural status (Figure 3.1) and the activity status (Figure 3.2) of a community narrowed my search for an appropriate county to eight potential communities that I might study. These communities/ counties were given pseudonyms to provide confidentiality regarding their status as a “declining” rural county and being a county with lower rates of physical activity; but it should be noted that this information is readily available in the public domain.

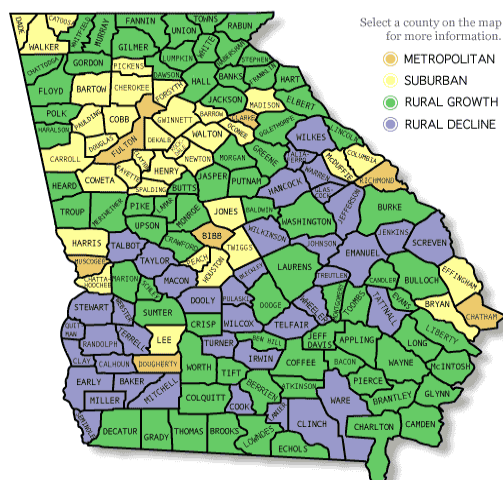


Figure 3.1: Metropolitan, suburban, rural growth and rural decline counties in Georgia (Boatwright & Bachtel, 2001)

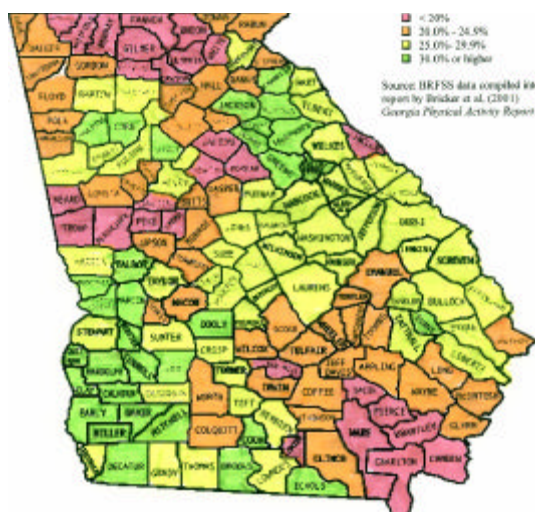


Figure 3.2: Physical activity status of Georgians in each county (Bricker et al (2001)



Counties identified as rural decline and having adult physical activity rates less than 20% (pink colored counties on Figure 3.2) included Dare and Sidney counties.

Rural decline counties that had between 20-24.9% (orange colored counties on Figure 3.2) adult physical activity levels included Marlon, Elijah, Carter, Fairleigh, Driver, and Bunch counties. To further explore which of the eight counties was most appropriate, I constructed a spreadsheet (See Table 3.1) to help me evaluate other potential criteria of interest.

Table 3.1 Data Sort of Rural Decline Counties by Demographic Variables

County	Population	% of people over age 65	% of population who is African American	% individuals > age 65 reporting functional limitations	% of people who are <i>Regularly Active</i>	% of people who are <i>Irregularly Active</i>	% of people who are <i>Inactive</i>	Planning Service Area for State of GA
Dare	35483	15.4	28	25.13	16	39	45	7
Elijah	21837	13.3	33.3	28.53	23	50	27	9
Marlon	14074	12.7	59.5	28.29	24	39	37	8
Fairleigh	11794	14.9	38.4	28.37	23	41	36	9
Sidney	7241	10.6	25.6	25.54	25	35	40	11
Bunch	6878	11.8	29.5	31.79	24	36	40	11
Carter	6854	13.2	33.1	25.72	22	44	34	9
Driver	6179	12.7	33.2	28.42	21	40	39	9

Table 3.1 allows us to see the population of the county, the percentage of older adults, the percentage of residents who are African American, the percentage of older adults reporting limitations in activities of daily living, the percentage of adults who are regularly active, irregularly active, and inactive, as well as the Georgia Planning Service area in which the county is located. The Planning Service Area (PSA) was important to my study, as services such as those offered by the Georgia Department of Public Health, the Georgia Division on Aging, and other statewide programs are administered through planning service areas (PSA).

Because the focus of this study was not the county, but instead, a community within a rural Georgia county, I needed to find a county containing a municipality that would provide rich data. After constructing Table 3.1 revealing data about each of the eight counties, I wanted to insure that the community would have enough of an infrastructure to insure I that was studying the “community” as my unit of analysis rather than merely studying the individuals within a community.

Based on information from the *Georgia County Guide* (Boatwright & Bachtel, 2001), it appeared that counties with a population less than 7000 people contained few “municipalities” and instead were comprised of unincorporated areas. Unincorporated areas presented difficulty for my study because I wanted to look at factors related to the infrastructure (e.g. facilities, services, and policies) that might influence physical activity. I saw the need to locate counties having towns of more than 1000 residents with the assumption that somewhat larger towns would have more of an infrastructure for health promotion, leisure, transportation, and other services pertaining to physical activity participation. To further narrow my search for a community of interest, I employed a third selection criterion that the counties have a population greater than 8000 residents and that the county had an incorporated municipality with more than 1000 residents. By employing this third criterion of community size, I narrowed my search for a community down to four potential counties including: Dare, Elijah, Marlon, and Fairleigh counties (pseudonyms).

Although race was not a primary factor in my study, I believed that in keeping with goals of the National Institute on Aging (NIA) and the goals of *Healthy People 2010*, in order to reduce health disparities among African American older women, I

needed to consider the inclusion of African-American participants. Arcury, Bell, and Carlton-LaNey (1998) reviewed U.S. census data for the Southeastern U.S. and found that there are substantial parts of non-metropolitan Georgia where a large part of the elderly population is classified as minority. Census data revealed that South Georgia has several counties that have greater than 40% of the population of the county who are over age sixty-five and non-white. Arcury et al., (1998) assert that in Georgia, the largest minority population of elders consists of people who are African American.

Of the four counties I narrowed my selection down to, Marlon County had the largest percentage (59%) of African American people, but this community only had 12.7% of the population who were over age 65, so I felt that it was not the best choice for my community. Dare County had an older adult population of 15.4 and also had higher rates of sedentary behavior than Marlon County, but I deemed Dare County not appropriate because it represented a larger rural area with a county population of 35,483 and the largest municipality containing 15,333 residents assuming that it might not represent a typical rural decline county. I also ruled out Fairleigh County as a community of interest. Even though this community had an older adult population of 14.9% and an African American population of 38.4%, its largest municipality contained only 2682 citizens. I believed that being such a small community it would have limited city services and other infrastructure that I might study. In the end, I chose Elijah County (pop. 21,837) as the county of interest for a number of reasons.

First, my reason for choosing Elijah County and Minton as an area of study was that it was located adjacent to other rural decline counties in Georgia and therefore it might be more representative of a rural decline community. Second, Minton seemed like

a large enough town (pop. 6943) to have an infrastructure (e.g. governmental entities, services and facilities) that would provide rich data for my community analysis. Third, I had a relationship with the Georgia Division on Aging Wellness Coordinator, who could help me gain access to elders in this community. Fourth, I had a place to stay close to Minton and this made for a more convenient and economical research experience and it allowed me to more affordably spend extended periods of time in the community.

To confirm my choice to study Elijah County, I asked the question: “Does this county represent a typical rural county of its type within the State of Georgia?” Using data from the Bureau of Census, I ascertained that all four “finalist” counties in my selection process fell in the middle of their rural-urban 0-9 coding scheme where rural communities are represented by Codes 4-9. Elijah, Dare, and Farleigh Counties were identified “Code 7” and Marlon County was identified as a “Code 6”, so all of these counties fell into the middle range (6-7) on the Census Bureau’s rural-urban continuum. Feeling that my four finalist counties were not in the extremes of being “nearly urban” or “extremely rural,” I sought to compare Elijah County with other “Code 7” counties in Georgia to insure that it represented an average community of its type.

In the State of Georgia, there are 31 counties meeting the criterion of being a “Code 7” municipality which means that the community contains an “urban population” or a municipality of 2500 to 19,999 and it is not adjacent to a metro area. Minton has a population of 6943, and data from the *Georgia County Guide* (Boatwright & Bachtel, 2001) reveal that Elijah County is not adjacent to any metropolitan areas. Table 3.2 presents descriptive statistics about the 31 counties and demonstrates how Elijah County statistically represents an average “Code 7” rural community in Georgia.

### *Older adult participant selection*

Much of the literature indicates that older adults are generally an understudied group with respect to physical activity (King, 1997; Stewart, 2001). The literature in health promotion and physical activity and aging is bereft of interventions with rural older adult women. In particular, the literature is relatively silent regarding physical activity interventions studying populations with lower SES and less education, ethnic minorities, inner city and rural populations, and the “very old” compared to groups of older adults who are white and middle class and the “younger” more active elderly. This study targeted women because they are more sedentary than men are at all ages (USDHHS, 2001).

Table 3.2: Descriptive Data Summarizing Demographic Variables of 31 Georgia Counties in comparison to Elijah County

Summary of data (n=31)	2000 Population	Land Area	Population per square mile	% of pop. Age 65 and >	% of people aged 65> considered disabled	Per Capita Income	Type of economy (Frequency count)
Min	6,854	179.27	7.6	14.7	18.2	16,043	Manufacturing (n=17)
Max	42,053	902.6	132	33.8	35.4	22,445	Non-specialized (n=7)
Mean	20,472	576.5	33	24.8	26.9	18,670.5	Service (n=3)
Median	21,992	576.5	33	25.6	27.5	18,333	Government (n=2)
SD	6467.2	96.90	2.8	5.7	3.9	1680.3	Farming (n=1) Mining (n=1)
Elijah County	21,837	686	30	26.46	28.5	17,498	Manufacturing

In terms of selecting older women participants to be interviewed regarding their perceptions about factors that influence physical activity participation, the criteria was as follows: First, that the woman be over the age of 65. Second, although race was not a

key factor in this study, I wanted at least a few participants who were African American (AA), in order to reflect the overall percentage of AA residents in the county, which was 33%, and in Georgia, which was 29% of the population based on the 2000 U.S. Census Data. Third, I looked for women who were considered active and inactive. Finally, I found women who attended the Elijah County Senior Center (since it was the main source of physical activity programming in the community) and at the suggestion of my major professor, I found active and inactive women who did not participate in the Senior Center program.

In an effort to find as diverse a population as possible I asked the Senior Center staff, the wellness coordinator, and service providers in the community to identify older adults who were active and inactive using the criteria of being active as participating in physical activity for thirty minutes at least three times a week. Inactive people participated in physical activity less than thirty minutes per session and/or less than three times per week. I also asked service providers and Senior Center staff members to help me recruit women of color and women who did not attend the Senior Center program.

Table 3.3 gives a demographic breakdown of the older women participants and the source from which they were recruited. I had no difficulty recruiting six active subjects from the Senior Center exercise group. I walked into the exercise group to observe after being given access by the Senior Center staff. After the group was finished, I introduced myself and asked if people would be interested in speaking with me about its physical activity. I immediately had seven potential participants who volunteered, with one interview that did not work out due to scheduling conflicts. Because I recruited these

participants first, I had to be a bit more strategic about recruiting the next participants in order to attain diversity in age, race, and activity levels of the older women.

Table 3.3: Demographics and Sources of Recruitment for In-depth Interview Participants

Source for recruitment	Number of participants	Initial classification of activity level	Age and race of participants
Senior Center Exercise program	6	Different levels of activity	Ages: 65-93 All Caucasian
Senior Center Congregate meals only	2	Inactive	Ages: 65 and 79 Both Caucasian
Homebound Meals on Wheels Program	3	Inactive	Ages: 81, 84 and 89 1 African American 2 Caucasian
Hospital Volunteer program	3	Generally Active	Ages: 71, 74 and 75 2 African American 1 Caucasian

At the suggestion of the Senior Center director, I contacted the volunteer coordinator at the hospital who pointed me toward active older women who volunteered at the hospital. The coordinator quickly mentioned her mother-in-law, who was, in her opinion, “a model active older woman.” I asked her if she had women of color who volunteered at the hospital and she quickly mentioned two women who would be likely participants. In all three cases, the volunteer coordinator spoke with the women ahead of time, which eased my access to these participants.

In addition to recruiting women from the hospital volunteer pool, I attempted to recruit participants who did not have an affiliation with the Senior Center or the hospital. I asked service providers in the community to identify potential older adults who might participate in my study. One 80 year-old woman, who was identified by the mayor, was

still employed full time at the local dry cleaners and she was unavailable for an interview, due to work and church related activities. Another potential participant was identified by the leader of one of the church social groups and she was currently “seeing to a sick friend” so she apologetically declined my request for an interview.

Finding participants who were less active was a more difficult chore than finding active older women. In an effort to find more sedentary older women, I asked the Senior Center staff to identify recipients of the Meals on Wheels program who did not have severe health conditions or disabilities that might inhibit their physical activity. Each of these three participants was active within her home and to some degree, each of them was active in the community, though to be eligible for the program, one is typically labeled as “homebound.” After finding it difficult to find access to sedentary seniors through the churches or other community organizations, I returned to the Senior Center Director to ask her to identify other sedentary older women. She identified two women who attended the Senior Center for congregate meals and socialization but they did not participate in the exercise program.

Interestingly enough, all of the interview participants volunteered prior to receiving specific knowledge that they would be given a ten-dollar gift certificate to WalMart in exchange for their interview. Many of the participants were generally surprised that they would receive something for just talking with me and they were quite appreciative at having the gift certificate; many commenting that they would use it for Christmas shopping.

In three instances, I attempted to use the gift certificate as an incentive to recruit women of color who attended the Senior Center. Despite several attempts by the Senior



Center staff and myself as well as the use of the incentive, the only three African American women who attended the Senior Center program for meals and socialization would not grant me an interview, stating that they were “not interested” or “too busy” to talk with me. I made another attempt to recruit African American older women from the community by riding around in what appeared to be an African American neighborhood. I witnessed several older women doing chores or sitting outside their homes and struck up conversations with women on two separate streets, but neither of them would grant me an interview. Perhaps my race and my Northern accent was a barrier to gaining access to these participants.

*Sample selection for staff member interviews*

The selection of the county drove the choice for which facility and staff members I would be interviewing. In each of the four counties that I narrowed my final selection of the community, there was only one Senior Center. Therefore, by default, I knew that in whichever county I would be working, I would attempt to interview the Senior Center director, the staff member or volunteer who implemented the physical activity program and the Division on Aging Wellness Coordinator who serves as a consultant in the selected community. My only criteria for interviewing staff was that they had a minimum of a year experience in the position, with the assumption that they would be able to more readily address my questions. There was no age, gender, or race criteria specified for the staff members interviewed. Staff members interviewed for the study included the Senior Center Director and Assistant Director as well as the Wellness Coordinator who is employed by the Georgia Division on Aging.

*Informal interviews with service providers and members of the community*

In addition to in-depth interviewing of staff members involved in physical activity programming for older adults, I also selected community service providers for informal interviews. There were no specific demographic criteria for interviewing service providers. Criteria for selection of these individuals included: 1) their willingness to talk with me in person or on the telephone, and 2) that there might be a possible interaction between their agency and the elderly population in this community. In total, I conducted 15 informal interviews by calling or going to an agency and asking to speak with someone who had knowledge about their agency. Some of the agencies included the health department, the hospital, local church and social organizations, two local politicians, and educational institutions.

Most of the service providers willingly shared information and I only had difficulty gaining access to the correct individual or the information in two cases. When trying to speak with the department of housing, the director stated that he was too busy to speak with me and that another staff member could not accurately provide the information I was looking for. After repeated attempts to schedule an interview (in person or by telephone) I finally acquiesced. I also went to the Public Health Department on two separate occasions and was told by an office person that they rarely serviced older adult clients. Several times during my discussion, she went back to ask the nurse for information to answer some of my questions. On a later occasion, I called and asked to speak with the nurse in charge and she willingly shared information about her agency's interaction with older adults and with other organizations in the community.

## Data Collection

Berg (1998) states that human ecology issues are often a key focus in community case studies. Human ecology is concerned with interrelationships among people in their physical, social, personal, and political environments. An ecological focus considers how various physical environmental elements influence physical activity participation. Typically, when doing a case study of a community, one would collect data from key informants, documents of municipal meetings, maps, and would likely include observations within the community. This particular study gathered data from all of these sources.

### *In-depth interviews*

During the course of this research project, in-depth interviews lasting from 1-2 hours were conducted with 14 older women and three staff members who had varying demographic characteristics that will be described in Chapter 4. All of the in-depth interviews were tape-recorded and later transcribed prior to data analysis. Interviews took place in a variety of locations; some took place within the participants' homes, others occurred in a quiet room at the Elijah County Senior Center, two interviews were conducted in the hospital cafeteria and one interview started in a women's home and was completed by telephone because she had to stop the in-person interview for fear she would be late for an appointment.

When the participant gave me permission, I also photographed her home and surrounding environment to provide further detail regarding the physical environment within the community. Photographs of participant homes used in Chapter 4 were all taken with the consent of the older women participants. When the older adult preferred

not to have their home photographed, I rode around the surrounding area to find similar type homes and neighborhoods to have a visual image of the type of environments where these women lived.

In-depth interviews were also conducted with three key staff members affiliated with the local Senior Center who work with older adults on a daily basis. All of the in-depth interviews were audio taped and transcribed for further data analysis. The structure of the interview (See Appendices A and B) conducted with the older women and the staff members was similar. First, I asked about their involvement in and perceptions about the definition of physical activity. Second, I asked questions about factors that encourage or hinder participation in physical activity that included individual, environmental, and social factors. Finally, I asked participants about how resources within their community might be improved to enhance older adult involvement in physical activity.

#### *Informal interviews*

In an effort to more fully appreciate how the community supports older adult participation in physical activity, informal interviews both in person and on the telephone were conducted with members of the community who might interact with older adults. Some of these informal interviews were conducted with the mayor, the County Executive, representatives from four different church groups, a staff member from the parks and recreation department, the health educator and volunteer coordinator from the local hospital, a staff member and a nurse from the public health department, a representative from the chamber of commerce, and representatives from other civic groups in town. The purpose of these interviews was to understand how these organizations serve older adults, ascertain their knowledge of community assets that

might assist older adults in staying active, and lastly, to inquire about interagency relationships in the context of providing any services for older adults. Due to the informal nature of these interviews, these interviews were not taped or transcribed; however, I recorded data using an informal interview protocol sheet (see Appendix C). After completing each informal interview I recorded field notes of my impression of the comments made by the interviewee as well as comments regarding the facilities and/or materials about the relevance of this information to older adults.

### *Document Analysis*

Appendix D includes a checklist of locations and facilities I visited and/or where I searched for documents. To locate specific documents that might portray the “physical activity” character of a community, I consulted community web pages, telephone directories, newspapers, the Elijah County Chamber of Commerce, the county public health department, the local newspaper, municipal documents, and historical data. Other sources of documents include the brochures from the Elijah County Senior Center, The First Baptist Church, and the Lifelong Education Department at Southeastern Georgia College (SGC) (a pseudonym) to see what their literature said about any fitness programming for senior adults. Brochures from the local parks and recreation department and the local health care facilities were consulted to see how they described any programs pertaining to older adult wellness. I obtained copies of all documents reviewed and I also recorded field notes during my review of these materials.

Most useful in my archival analysis was the local newspaper called the *Pine Needle Press* (a pseudonym). This publication features many of the local happenings related to social, leisure, and civic participation in the community. The Elijah County

Senior Center Director, Mitzi, informed me that she attempts to get a story about the Senior Center and the older adults into the paper at least once a month.

### Observations

Observation within the community and its facilities occurred during 4 separate visits to the community and these visits took place over a three-month period. Each visit in the community lasted 2 days and observations were done by riding around, walking in town, participating in programs, and observing less obtrusively while participating in normal daily activities such as shopping at WalMart, going to the post-office, eating at local restaurants, observing the volunteers at the hospital, and using the different walking tracks within the community. I also participated in and took photos of the exercise group at the Senior Center and at the First Baptist Church exercise group. In most cases, I took notes during the observation periods and I also verbally tape-recorded field notes immediately following each observation session.

### Data Management and Analysis

This section discusses how data were managed and analyzed. Schwandt (2001) defines data management as dealing with the information one accumulates while in the field. He notes that an essential task for any qualitative researcher is to implement a system for organizing, cataloging and indexing materials that are gathered from fieldwork. The system, will in turn, influence the way the researcher conceptualizes the process of analyzing the data.

Data analysis on the other hand, is the process of “making sense” of data, or as Schwandt (2001) describes, a process of working back and forth between data and ideas. Data analysis begins with data management and continues by introducing, describing and

interpreting the data. Merriam (2002) contends that data analysis is simultaneous with data collection. She states, “Simultaneous data collection and analysis allows the researcher to make adjustments along the way, even to the point of redirecting data collection, and to test emerging concepts, themes, and categories against subsequent data” (p.14). She adds that different theoretical stances can guide data analysis using schemes, typologies, or the use of particular analysis strategies.

All interviews and field notes about observations were tape recorded and transcribed as soon as possible after the events occurred. Materials collected from individuals, facilities, or organizations were organized in file folders. Where I was not able to obtain items firsthand, I obtained copies of documents and I recorded field notes about these documents. Additionally, the use of digital photography allowed me to store images on my computer for sorting and subsequent analysis. Data gained from interviews, observational field notes, and archival analyses, were transcribed and analyzed as they were gathered to enable the researcher to probe further in subsequent interviews or to look further in subsequent community observations to gain deeper insight into the environmental determinants of physical activities in a rural community. After transcribing and initial coding of each transcript, I began constructing a case description and the community description based on each interviewee’s responses to my questions. In addition to writing up a summary of interview participants, I compiled (based on my observations and document analysis) a portrait of the community. This “community portrait” was presented to several study participants for their “member check” to validate my observations and interpretations about the community.

This research employed constant comparative analysis strategies as the primary means of data analysis. According to Merriam (2002), this strategy was originally developed to help researchers generate grounded theory; however, many researchers use this method whether or not they are seeking to build substantive theory. Merriam describes the data analysis process as an inductive strategy that begins with a unit of data, which is then compared to other units of data while looking concurrently for patterns across the data. These patterns are referred to as codes and are refined and adjusted throughout the project until relationships between categories are discovered.

Data were analyzed first from a global perspective to gain a “picture” of the community in terms of its ability to promote physical activity for older women. Data were then more specifically analyzed using a model described by Dey (1993) for codes, categories, and themes within each set of data (interviews, observations, and archival materials). Each type of data was coded in a similar fashion by reading and re-reading the transcripts, field notes (recorded after each interview, during observations and about the pictures I had taken), and archival materials to identify codes words describing the data. These codes were placed on index cards and I then completed numerous pile sorts to see how data fell naturally into categories. At the category level of analysis, I sought the help of my major professor and several colleagues with experience in qualitative research, to check my coding and categorizing for its plausibility. After identifying categories, I re-sorted the code cards to further insure that the categories “made sense.”

By way of example, initially, I coded each of the activities that the women described as contributing to their activity level. Some of the activities included chores, hobbies, caregiving, and exercise. At first I labeled this category as “activities” but my



major professor helped me realize that the activities the women did were not helping to answer the research questions, but rather, the activities served to influence motivation to be physically active, so “activities” as a subcategory was placed in the category of attitude and motivation, which included a subcategory of interests and activities.

My interpretation of data was made in the context of the research questions and the McLeroy et al. (1988) socio-ecological model of health promotion with an additional goal of describing barriers and enablers within a rural community that influence participation in physical activity for older women. I coded transcripts, came up with preliminary themes and then shared this data with a peer debriefer to ascertain if my interpretation was trustworthy. This strategy is one method of triangulation (Patton, 1990) to help researchers insure that their findings are both credible and reliable.

The aim of this project was to provide rich thick data (that could not be gained through survey research) that “paints a picture” of a rural community and how it enables or inhibits participation in physical activity. I began constructing findings by presenting first, the community description and then a description of the older adult participants and their “stories” which enhanced the narrative account of the community.

#### Validity and Reliability

Merriam (1998) maintains “All research is concerned with producing valid and reliable knowledge in an ethical manner” (p. 198). Citing the work of Firestone (1987, as cited by Merriam, 1998) she relates how the researcher must convince the reader that the procedures have been followed faithfully in quantitative research, while in qualitative research must convince the reader that the author’s conclusions “make sense.” Further, Merriam contends that regardless of the type of research conducted, validity and

reliability must be considered during the conceptualization phase of a study design. In qualitative research specific concerns about the trustworthiness of findings include judgments about internal validity, external validity, and reliability.

Merriam (2002) details strategies to improve consistency and dependability of research results. These include triangulation, peer review, audit trail, and making public the author's subjectivities. Researcher subjectivity will be addressed in the discussion of biases and assumptions in the next section. Triangulation, peer review, and the audit trail are discussed in the sections on validity and reliability that follow.

### *Internal validity*

Merriam (2002) states: "Internal validity asks the question, "How congruent are one's findings with reality?" (p.25). Internal validity therefore, hinges on one's interpretation of the "meaning of reality" (Merriam, 1998). Merriam asserts that internal validity is said to occur when the researcher represents as closely as possible the reality as perceived by the participants. The qualitative researcher is the primary instrument for data collection and analysis. Merriam suggests that this places qualitative researchers closer to "reality" than if an instrument with predefined items is interjected between the researcher and the phenomenon being studied. Further, she notes that when one acknowledges that reality is always interpreted, along with the fact that our methods put us closer to the participants "world," internal validity is actually a strength of qualitative research (Merriam, 2002). She offers strategies that enhance internal validity including triangulation and member checks.

The qualitative researcher usually believes that reality is constructed, and so strives to represent the phenomena under study as "accurately" as possible from the

perspective of the participants. Often, this describing of “reality” is accomplished through triangulation. Patton (1990) advocates using a strategy called “triangulation of data” to improve validity. My study employed data source triangulation where I used data from interviews, observations, and documents to better represent what exists within this rural community.

Using triangulation, I collected data from multiple sources including interviews from several different perspectives such as: consultants, service providers and participants who had varying levels of participation in physical activity. Observations occurred within the Senior Center and other programming for older adults, around the older adult participants’ homes, and within the surrounding community. I photographed physical surroundings, where possible, and this provided one more source of data.

The documents I analyzed included: a) program brochures and flyers at the Senior Center or within the recreational, educational, or medical facilities in the community; b) brochures, websites, and pamphlets about the local community (from the Chamber of Commerce) and what it has to offer in terms of promoting physical activity; c) the use of telephone directories to locate facilities that might promote physical activity; d) and other documents that might have attended to larger issues of policies, laws, or ordinances relative to promoting physical activity. The use of multiple data sources from these interviews, observations, and documents helped validate my thematic analysis as being credible and logical and representing ‘reality’ within this community to the extent possible.

Another strategy to improve internal validity is that of member checks described by Merriam (2002) as a process where the researcher asks the participants to comment on

interpretations of the data. Usually, the researcher gives a summary statement of her tentative findings and asks whether these findings represent their world. I gave a summary of my thematic analysis to two key participants (one older woman and one staff member) and an informal interviewee (the County Executive, who is involved with issues related to older adults in this community) with a summary of my findings for their assessment regarding the validity of my findings.

Merriam (2002) describes another strategy for improving the internal validity of a study, which is the use of a peer review process. As part of this process, the researcher meets with colleagues or other scholars who provide feedback about the plausibility of researcher interpretations. I worked with a group of five other graduate students who agreed to look at my interpretations and give feedback. During the course of this study, I was also fortunate to be working with colleagues who had qualitative research experience and I periodically consulted with them to “check” myself and to question the validity of my analysis. Finally, I had regular meetings and communication with my major professor, who commented on the trustworthiness of my interpretations.

### *External validity*

External validity deals with the issue of whether the findings from a study are generalizable beyond the immediate case study (Yin, 1994). Merriam (2001) describes generalizability in qualitative research as being the responsibility of the reader who decides how useful the study is to his or her situation. She asserts that for a reader to determine if the findings are “transferable” or generalizable, the researcher must provide thick description to enable the reader to ascertain if the findings relate to her situation.

The issue of generalizability has been a criticism of case study research, but Yin (1994) argues that in case study research we are seeking analytical generalizability rather than statistical generalizability. The goal of case study research is to generalize a particular set of results to some broader theory. The theory, Yin (1994) notes, however, must be tested through replications of a study. My goal is not to generate theory or to apply a theory, but rather to understand social ecological determinants of physical activity in rural older women beyond the level of the individual. Any generalization from my study would be analytical generalization. That is, readers may see how this socio-ecological analysis can be applied to their own context, and ultimately to intervention strategies to promote health and wellness in both rural and non-rural communities.

### *Reliability*

Yin (1994) states that reliability occurs when a later investigator conducts exactly the same case study procedures and arrives at the same findings and conclusions as the previous researcher found. This concept is somewhat problematic for those of us who believe the researcher is an instrument and that, through their relationship with the study participants, creates a “social construction” of the findings. One example of study results or data being socially constructed happened when Wanda asked for ideas about to write for her newspaper column and I kidded “Well, write about how we used to be a lot more physically active when things were not so convenient.” I responded to her announcement the next week that she had written a newspaper article about physical activity with both delight, but also with fear that I had somehow “corrupted” the research process.

According to Merriam (2002), reliability is problematic in the social sciences because, as the above-mentioned interchange with Wanda demonstrates, human behavior

is dynamic. For this reason, it may never be possible to complete the “same” case over again, but Merriam (2002) asserts that the more important question is not: “Can the findings be replicated?” but rather, “Are the results consistent with the data collected?” (p.27). She discusses strategies one can undertake to improve the consistency between results and the data.

The goal of reliability, according to Yin (1994) is to minimize biases and errors in the study. One strategy for enhancing reliability is to use the audit trail as proffered by Merriam (2002) or the chain of evidence as described by Yin (1994). These terms are synonymous, requiring that the researcher document each of the steps and crucial decisions made during the collection and analysis phase of research. This strategy provides a source of understanding how findings were generated. Yin advocates the use of a case study protocol to deal with the problem of documenting each of the steps involved in multiple case studies. Chapter 3 of this document, the IRB procedure section, as well as the interview and observation protocols helped me construct a case study protocol that other researchers might use to complete a study similar to mine. In using the audit trail or chain of evidence, the goal is to provide for consistency between findings and the data collected, so that a reader could understand the basic logic or plausibility of conclusions (regardless of whether or not they agree with those conclusions). My researcher journal, which was part of my field notes, included a section labeled audit trail to detail my actions and impressions as I participated in this research project.

To enhance the reliability of my results I employed the use of a chain of evidence documenting how results were obtained. The chain of evidence occurs by keeping a

researcher journal documenting each step, decision, and conclusion that is made. This assisted me in not omitting data that was not consistent with my assumptions, and helped me not to leave out potentially important information. Yin (1994) states that, similar to a criminal investigation, the chain of evidence allows the reader to assume that the evidence presented in the case study report is assuredly the same evidence that was collected during the data collection process. Because I collected information from multiple sources, this chain of evidence was critical in preventing me from forgetting something, or losing a piece of data. I established file folders (real and virtual) and I used tape-recorded field notes, transcripts as well as my researcher journal to maintain my “chain of evidence.”

### Biases and Assumptions

An ethical challenge which plagues all research, but perhaps qualitative research more so, is the concept of researcher bias. This section serves to make public my assumptions, experiences, and biases, which will hopefully assist readers in understanding the manner in which data were interpreted. Janesick (2000) contends that because qualitative work recognizes the role of the researcher as part of the process, the researcher must describe her social, philosophical and physical location in the study. I came to this research with the following subjectivities.

My choice of qualitative research and a multi-level systems model of analysis display my belief that we socially construct multiple realities. My goal was not to uncover some unknown “truth” about how socio-ecological factors influence physical activity, but rather to illuminate possibilities that may not have been previously explored.

I believe that multiple factors influence health behavior such as physical activity participation (with environmental factors only being one category of influences).

An example of the mutual influence of factors upon each other lies in the fact that the environment influences individuals, but individuals also influence and change their physical, social, and task environment. Although current research and writings call for multi-level interventions to promote physical activity, there are few studies that look beyond the level of the individual for solutions on how to promote physical activity. While I realize that multi-level analysis can be complex, and at times unwieldy, I managed this potentially difficult problem by keeping my materials organized through the use of a computer, a research journal, field notes, and other documents. Finally, this bias that every issue has multiple factors contributing to its complexity was managed through the use of a peer de-briefer, a chain of evidence researcher log, and my own research journal to aid me in not artificially making things more complex than they really were.

My choice for studying women who live in a rural community comes from personal experience as an occupational therapist where I performed home health services in rural areas with clients who mostly consisted of older women. More recently, I have been volunteering doing Meals on Wheels in a rural community, and I have personally witnessed physical environmental barriers that seems to inhibit activity participation in older adult men and women. My choice to study women in particular, is based on past injustices in health research where White men were the primary focus of study. Additionally, research indicates that older women have more chronic diseases that could be ameliorated through participation in physical activity. Since I live in a rural



community and am striving to become a more physically active person, studying this topic may help me in lobbying and advocating for enhanced community services to promote physical activity as I age.

Coming from a critical and a poststructuralist perspective, I am always looking for problems and faulty structures that hinder healthy behavior. I had to check this bias and assumption constantly during data collection and analysis. During data collection, my interview protocol aided me in keeping my questions from drifting into “problem-finding.” The use of a research journal and regular meetings with my writing group helped me during my analysis to check my perspectives with what really exists in this community.

One other way I managed my bias for problem finding is to conduct research in a community in which I had limited exposure and never had visited. This allowed me to go in with limited prior knowledge of this community; however, my review of the literature did bring me to assume that rural communities, particularly those of declining growth, would have limited resources for health promotion programs.

A possible concern in trying to look at a typical “rural” community as the unit of analysis is the danger of inferring that environmental barriers have an impact on individuals because they live in a rural community. Given the range and variability in reported study findings in the area of rural health and aging, one cannot safely conclude that individuals in these communities have more or less physical activity advantages/disadvantages merely because they live in a rural community. Gesler, Rabiner and DeFries (1998) note that there is considerable uncertainty regarding the extent to which urban-rural differences in the functional and physical health of older adults may be

attributed to residence per se, rather than to differences in other factors (such as SES and educational level) that co-vary with residence. This is one key reason why this study is descriptive rather than explanatory. Findings that a rural community promotes or creates barriers to physical activity cannot lead me to conclude that living in a rural community necessarily *leads* to higher rates of chronic disease, disability, and functional limitations in rural dwelling older women.

### Chapter Summary

This chapter sought to clearly delineate how I made each of the decisions for conducting this project. It describes how I selected a community, participants, and documents how I conducted my analysis. This chapter addresses limitations of the study throughout the sections on validity and reliability and the primary methods I used for addressing these concerns which include triangulation of data sources, researcher journal, audit trail, and sample selection processes. My analysis of the data was accomplished through constant comparative analysis of the data as it was collected. The goal of this research is to provide rich-thick description of a rural community and how it promotes physical activity participation in older women.

## CHAPTER 4

### DESCRIPTION OF THE COMMUNITY AND INTERVIEW PARTICIPANTS

The purpose of this study was to explore factors that influence physical activity participation in rural-dwelling older women. The term rural was intentionally used in describing the population of interest because little research is available regarding the influence that living in a rural community might have upon older adult participation in physical activity. The community is therefore, the focal point of this study. In order to understand what environmental and social factors influence participation for older women, it was necessary to have some insight about the rural community and the older women who live in this community. This chapter has three parts, of which the first part contains a description of the rural community. The second part of this chapter is a description of the in-depth interview participants. Informal interviews were conducted with service providers in the community and they will briefly be discussed as a group in the third and final part of this chapter.

Information used in this description of the community was gathered through observations, interviews, and review of documents including electronic sources such as official websites about the community, Elijah County (pseudonym) Chamber of Commerce, and organizations within the community. For the purpose of preserving confidentiality of informants and the community, pseudonyms were used for names places and people within the community.

### Description of the Community

Minton (pseudonym) (pop. 6943) is located in the southeastern coastal plains of Georgia. Minton, which is the county seat of Elijah County (pop. 21837), is located in the middle of an imaginary triangle whose apexes are made up of three of the five largest cities in Georgia. Despite being 11 miles from an interstate and about ninety minutes driving distance from three large cities, Minton and Elijah County continue to retain an essentially rural character. Not unlike other rural communities in the South, county services are integrally intertwined with city services; this description will therefore include facts about both the town and the county in which Minton is located.

The original inhabitants of Elijah County and Minton were Native Americans, who surrendered the land to the state of Georgia in the Indian cessions of 1750 and 1775. The county was established by legislative action in 1802, and was named for James Elijah (pseudonym), who was involved in state politics at the time the county was founded. Minton has been the county seat since 1802, except for a brief period in the 1820's when its name was changed to Lyon (pseudonym). Minton did not become an incorporated town until 1856. The origins of the name Minton are uncertain, but one historical document indicates that the governor of New Jersey was Clay Minton (pseudonym) and some of his relatives lived in the area and hence suggested the name Minton.

In Minton's early history, one of the main sources of economic growth was timber from the rich pine forests native to the area. Logs were hauled by mules and wagons to the Hoopoe River (pseudonym) and were transported on rafts to the Georgia coast. Railroads later took over the job, and then trucks shared the work of transporting logs and

timber products. In the 1930's Minton found itself at the crossroads of two major U.S. highways along the eastern seaboard. The Franklin Hotel, which still stands today, was a popular resting place for north/ south travelers. The OK Café and the Pineman Barber Shop, which were around 40 years ago, still thrive today. In addition to Minton, several smaller towns and communities within Elijah County developed over the years and continue to dot the landscape, including Cottonwood, Deer Park, Evergreen, Pine Nut, Pecan Grove, and Sanchez (all names are pseudonyms).

A road trip on any of the Elijah County roads reveals wide-open fields and farms with livestock such as cattle as well as crops such as soybeans and cotton. According to the Georgia County Guide (Boatwright & Bachtel, 2001) the county contains some 441 farms with the average size of a farm in this county being 347 acres. Further, this publication reveals that the agricultural economy of Elijah County is comprised of row and forage crops, forestry products, and livestock.

Driving through Elijah County, one can see a variety of flora and fauna as well as a rich mixture of topography. The landscape is comprised of gentle rolling hills and miles of long-leaf pine tree forests planted in the sandy low-lying terrain. There are numerous sturdy looking pecan groves, and cotton fields that give the optical illusion of cotton candy when viewed at sunset during a typically warm Southern day. Being one of the largest Pine Tree growers in the state, this community has the nickname of "Pine Tree Capital of Georgia," celebrating with a Pine Tree Festival each May since 1946.

Multiple signs up and down the country roads advertising deer processing, hunting clubs, and taxidermy shops evidence the presence of large numbers of deer and other wildlife. According to the website from the county, species native to the area

include deer, wild turkey, rabbits, raccoons, opossums, alligators, fish, bobcats, quail, foxes, snakes, turtles, and other wildlife such as coyotes and armadillos. The Hoopoe, Okmulgee, and Canoochee (pseudonyms) rivers flow through the county, and smaller streams and ubiquitous ponds make the area an excellent recreation and fishing area. A local state park, several campgrounds, the terrain, the temperate climate, and the presence of many long-time family farms with hunting and fishing areas make Minton and the surrounding Elijah County a sportsperson's paradise.

Documents from the Elijah County Chamber of Commerce reveal that since the times of the earliest settlers, rich and fertile soil, the mild weather, and an abundant supply of water contribute to the economic base of the community. In the cultivated fields, common crops include cotton, corn, tobacco, soybeans, peanuts, and wheat. Hogs, goats, and cattle represent the major varieties of livestock. Originally established on agricultural productivity and timberland, the towering pine forests led to the development of industry and commerce and today, Elijah County and Minton have a mixed economic base. In addition to agriculture, banking, metalworking and manufacturing, as well as public sector employment make for a more balanced economy.

Manufacturing in this community has progressed through textile industries, woodworking and cabinet building, chemical production, metalworking. According to the mayor and residents interviewed for this project, Minton has lost a significant amount of jobs over the past fifteen to twenty years, mostly in the textile industry. Other manufacturing and production is relatively stable and in fact, Minton also calls itself the "Metalworking Capital of Georgia" because of the large number of metal manufacturing businesses located here. According to the mayor and the website for the city, a recent

development is the construction of a technology park with state of the art computer wiring

Using proceeds from a special local option sales tax, the establishment of the new Minton/ Elijah County Technology Park is being developed to further diversify the economy of the county and to create new job growth. The development council is focusing on attracting businesses such as Internet related businesses, computer training, telecommunications, call support centers, technology research and development, computer services, computer hardware and software, and related businesses. As part of this effort, the community is also working with the technical college and the local two-year college to help support this effort by enhancing the programs offered to incorporate more technological training. As part of this project, the community is gaining access to digital subscriber lines, which is unique for rural areas in Georgia at this time.

The Elijah County Chamber of Commerce website boasts that in addition to the high tech advantages cited above, Elijah County offers a unique mix of characteristics that together create the right environment in which to start and grow a business. These include the highest investment tax credit in Georgia, one hundred percent property tax exemption for certain business inventory, State supported QuickStart and Intellectual Capital Partnership job training programs and a readily available workforce (7.6% unemployment rate November 2000 which is the 5th highest in Georgia).

While the Mayor of Minton is a part-time position, there is a full time city and a full time county administrator that deal with the day-to-day operational activities of the city and the county. The city provides a fire and police service for Minton, while the county provides services for residents living outside the city limits of Minton. Minton

has fourteen paid firefighters and sixteen paid police officers. The city also has responsibility for management of the water department. Utilities such as gas, electricity, trash collection and cable are managed by private entities. Although many services are located within the city of Minton, the county administers many of the services such as low-income housing, the public schools, the parks and recreation department, the public health department and the local county hospital. Services provided such as low income housing, schools, and healthcare are provided by the county government. Although the county operates the major recreational facilities, the city operates the city auditorium as well as several small parks located in the city limits of Minton.

Education in Minton is provided through the Elijah County Schools. The county boasts having award winning schools that serve some 4500 students. Being a large employer in the county, some 800 staff members serve in seven different schools with a small teacher student ratio of fifteen students to one teacher. The county boasts a thirteen-percentile increase in student testing scores in the past few years, and citizens and the local newspaper tout the high quality of the local schools. Technology is a large focus of the Elijah county schools. Minton has three relative new elementary, middle and high school buildings located on the same road. These buildings appear to be state of the art facilities in education.

Minton Vocational-Tech School was opened in 1969, and Elijah County Junior College opened in 1978. Both schools have subsequently changed their names to Minton Technical Institute and Southeastern Georgia College, respectively. Although the technical institute does not provide programs specifically geared toward senior adults, their literature and marketing materials indicate their willingness to work with returning



adult students for career development. Two of the interview participants in this study, for example, received training in secretarial skills as returning adult students to advance their careers.

Southeastern Georgia College (SGC), referred to as the “college” by community members, offers two year associate degree programs as well as opportunities for lifelong learning. Over the past ten years, the college has sponsored trips and courses that have attracted older adults. More recently, the Department of Continuing Education has changed its name to the Department of Lifelong Learning, which a staff member indicates a shift to more focus on the older learner and also on returning adult students. According to the Lifelong Learning Department Director, courses that attract older adult students include the computer courses, leisure courses such as art or exercise classes, and financial courses. Their program brochure from January 2003 indicates several new adult fitness courses and it announces the opening of a new fitness facility that includes an indoor walking track, treadmills, exercise bikes, and weight machines. At the time of this writing, the first “Adult Fitness Course” was underway.

Older adults interviewed in this community report taking advantage of cultural and leisure programming offered at SGC including concerts, speeches, fitness programming, and trips sponsored by the college. These offerings are advertised on the website and in the local newspaper, the *Pine Needle Press*. As one participant put it: “I find out about events at the college from my friends or through the paper.” While many of the cultural events and speeches at the college are free, the cost for attending courses in the Lifelong Learning Department is sometimes a barrier to attendance for older adults. One older woman identified the price of some of the courses (which generally range from

35 to 75 dollars) as a barrier to attendance in courses at SGC: “I attend events at the college when I can afford them.”

In addition to programs offered at the college, cultural programming in Minton takes place through many of the churches, local high schools, the local movie theatre, and through the arts council. The Elijah County Arts Council has recently expanded its programming in visual and performing arts. Garnering support from the Sawmill Creek Foundation and other corporate sponsors, this organization, which recently moved into an old church building two blocks from the center of town, sponsors a gallery exhibit the first Sunday of each month, and also hosts a “coffee house” where local artists present or perform their works. The Arts Council has recently started two performing arts series consisting of four performances for children and four performances for adults.

When not seeing an art or performing arts show, residents of Minton can find solitude, entertainment, and knowledge at the local library that is located in the center of Minton. This modern library facility has eighteen public computers that are part of a system linking all of the libraries in Georgia. The library has a large section for genealogy research and has a local volunteer who assists patrons doing this research. The library manager indicates that many of the patrons using this section of the library consist of older adults. While the library staff will offer assistance to patrons using the computers, they do not offer specific training in computer use. Like many other libraries, this facility offers programming for children and school aged students, but one activity that is attended by a number of older adults is the Ada Rea Smith Book Club which meets monthly at the library.

In addition to leisure and educational programming, the Elijah County Parks and Recreation Department advertises an array of recreational activities. Housed near the airport in Minton, the main county recreation complex consists of a large indoor gym, several lighted baseball fields, multiple picnic pavilions and playgrounds, three ponds, and a lighted walking trail. In this same location near the small private airport, the Minton Country Club has a golf course that older adults might use, though membership in the country club or being a guest of a member would be required. This might limit older adults who are on a fixed retirement income from participating in golf.

Within Elijah County limits, there are also several other parks operated by the county that have lighted and paved walking trails (See Fig 4.2), fishing ponds, and benches that older adults might use to enable physical activity out-of-doors. The City of Minton operates four to five open space parks, and has an indoor auditorium that is opened during the day. The city administrator tells me that older adults might use this auditorium or the indoor gym operated by the Parks and Recreation Department in the event of inclement weather. I visited both facilities on two separate occasions (one of which happened to be a rainy day) and did not see older adults using either facility. The parks, two of which have playgrounds for children all have sidewalks and benches that elders could easily get to via nearby parking lots. Located within residential neighborhoods, virtually all of the city parks are accessible on foot for residents living nearby.

An informal interview with Minton's mayor revealed that the city is constructing a new park located in the center of town that will serve as a "town square." As part of a downtown revitalization project, for which Minton received grant funding, this area will

provide a green space for people working and shopping downtown, but it may also provide a space for older people to be outside and watch the small town activity. As part of this revitalization process, local businesses have also applied for, and thus far five businesses have received grant funding to refurbish storefronts, which will hopefully



Figure 4.2. Walking trail at Simon Park

attract consumers to patronize local businesses. This square is located three blocks from a desirable senior apartment complex as well as older residential homes and when I made a visit to an interviewee living in the apartment complex, I noticed an older adult who attends the Senior Center walking from town with groceries to his home in this complex. Apparently, older adults who are able, walk to the town square to patronize local businesses. The town center is located across the street from city hall and the county courthouse and is within two blocks from a grocery store, a pharmacy, and the main post office. There are shops on three sides of the square with the county sheriff's office being the fourth side of the town square park.

In addition to parks located in Minton, there are walking trails located in nearby towns of Evergreen and Sanchez. The town of Pine Nut has a community house, a

lighted walking trail and a playground with walking benches. Located close to the interstate, Elijah County is home of Deer State park, which has several hiking trails that are paved, and the more varied terrain and slope of the trails may offer more of a challenge to older adults than the walking trails in Minton City and Elijah County Parks.

A representative from the Elijah County Parks and Recreation Department states: “Other than the walking trails and the indoor gym, we really don’t target older adults in our programs...Most older adults go to the Senior Center for a hot meal and the exercise program they offer.” This representative was able to identify one arts and crafts program held in the “community house” out in Evergreen that sponsors a monthly “china painting class.”

Minton has one hospital and two nursing home facilities. The mayor proudly shared that for a small town rural hospital it is rare to operate in the “black” as Elijah County Hospital does. According to a recent issue of the Pine Needle Press, the local newspaper, the hospital is planning a building expansion. There are also several new physicians in town and specialists are coming to Minton more frequently, saving individual’s time and effort from traveling to nearby larger cities to visit these physicians. In talking with the health educator (who is also the volunteer coordinator) at the hospital, programming at the hospital for wellness is limited to a monthly diabetes support group meeting and a weekly Weight Watchers meeting. There are no educational programs for older adults on fitness, nutrition, or other wellness issues as there often is in larger municipalities. The hospital does participate in annual health fairs that are held at the Senior Center.

Minton has two nursing homes, one 49-bed facility, which is operated by the county, and the other, a 103-bed facility, which is privately operated. Most of the residents in the two nursing homes in Minton are older adults. The activity programming at these facilities consists of recreational activities such as crafts or an occasional trip, and residents may participate in “chair exercises” once or twice a week. In addition to nursing homes, there are two assisted living facilities within Minton, but they provide no specific activity programming. Many of the more “able-bodied” seniors living in these two facilities go to the Elijah County Senior Center for activity programming.

When service providers were asked about what the community could do to enhance older adult involvement in physical activity, service providers stated that more programming similar to programming at the Elijah County Senior Center is needed. All interviewees and service providers were aware of the exercise and line-dancing programs via word of mouth, personal experience, or because the Senior Center is often featured in the Pine Needle Press. Several service providers stated that they often refer older adults to the Senior Center for the exercise program and for socialization.

The Elijah County Senior Center supports the needs of the elderly in Minton and Elijah County through several programs. Operated as a private non-profit organization, the Senior Center program is funded through the Georgia Division on Aging and it provides vital services to the elderly including meals and nutrition services, wellness and physical activity programming, and socialization activities such as bingo. Though not affiliated with the Division on Aging, this particular center houses a program called “Community Action” that helps all residents of the county by assisting them with their

cost of utilities. The Community Action Program is based on financial need for payment of utility bills, and many elderly residents of Elijah County benefit from this service.

When the Elijah County Senior Center was originally started over twenty years ago, it was part of a model intergenerational program. The center is a large facility that has four large rooms, three of them measuring approximately forty by forty feet and a larger room measuring thirty by fifty feet. The facility also has an institutional sized kitchen and four spacious offices. Originally, three of the rooms in this facility were used for the child development center and the larger multipurpose room was used for the senior programs. The current center director, Mitzi, was originally employed as the child development center director and later on took on responsibility for both the child development and the older adult programs.

The daycare program was intended for families with low income and was primarily a pre-school and head start program. When the GA lottery began, state funding for pre-kindergarten came about and many private commercial daycare facilities opened offering low-income parents more options for childcare and within five years, the child development portion of the building was closed. In order to stay open for the Senior Center, Mitzi was approached by the county government and asked to take on the community action program as part of her role as owner and operator of the non-profit corporation. She willingly agreed to take on the responsibility of the community action program and states that its funding helps in part pay for operational costs for the Senior Center.

Mitzi reports that soon after taking over the role of Senior Center Director, she went to some training sponsored by the Georgia Division on Aging and learned about

physical activity programming for older adults. Within a few months of the training, she started an older adult exercise program (See Figure 4.3), which has been at the Senior Center for 18 years. Over the years, after attending additional training, Mitzi stated that she modified the physical activity program according to what the “experts” told her she should be doing. About four years ago, she introduced “line dancing” to the older adults and they have been doing it two times a week ever since. The group has made costumes and gives demonstrations and performances to church groups and nursing homes within in the community.



Figure 4.3. Elijah County Senior Center Exercise Program

Analysis of literature about the community such as a publication from the Chamber of Commerce reveals that there are at least some 51 churches in the city limits of Minton. After making phone calls, visiting, and/or obtaining information about programming at each of these churches, I found only three church-related programs that had specific activity programming for older adults. Of the three churches (which all



happen to be larger churches) that do provide programming for older adults, one provides an older adult exercise program and the other two provide social programming for senior citizens.

Interviews with service providers revealed two possible reasons for a lack of programming for older adults offered through churches. First, many of the churches may be too small to have programming specifically for older adults. For example, one service provider interviewed for this study who worked at a smaller church stated: “We just couldn’t do separate programming for older adults...There are only 50 members in the whole church, so we tend to do all activities with the whole church family.” The second reason why there may be limited programming through the churches is that there might not be a perceived need or a perception that the activity needs are already being met at the Senior Center. Despite all of the services providers being aware of the Senior Center exercise program, only three out of the fifteen knew about physical activity programming for older adults offered at Minton First Baptist Church. Providers who had awareness of church-related programming had more day-to-day involvement with older adults and they included the Senior Center staff members, the health education nurse at the hospital, the public health nurse, and the County Executive.

The two largest churches in Minton providing programming for older adults include the First Baptist Church, which has social and exercise related programs, and the First Methodist Church, which has social programming for older adults. The socialization programs at the Baptist and Methodist Church called “55 Alive” and “Happy Rovers” respectively, consist of a monthly meeting usually held at the church to provide socialization and fellowship for older adult church members. During these

meetings, seniors ranging in ages from sixty to ninety-five, participate in a covered dish social with an informal educational program for about one hour per month. Occasionally both of these social programs will take a trip to a nearby state park or to see a tourist site or a cultural happening outside of Minton. Both programs provide limited transportation to these programs using the church van, but as the coordinator of the Happy Rovers states: “ I know some of ‘em [older people] shouldn’t be driving [laughter] but they’d be trapped if they couldn’t get out.”

The First Baptist Church sponsors what apparently is the only other exercise program in town for older adults. This program meets two to three times a week in a refurbished old hardware store building that is now the annex for the church. Led by a volunteer, this program consists of stretching and strengthening exercises in both sitting and standing positions with an average attendance of twelve to eighteen participants who are mostly older women. One woman, named Maureen, stated that she attends both the Senior Center Exercise program and the First Baptist Church program because “The programs work on different things...my heart gets a work out when I do the Senior Center program and my muscles get a work out when I do the program here at the church”

According to all sources of information consulted for this research study, the community does not have a public community pool or a bowling alley available in Minton. When the older adult women were asked what more could be done in their community to promote physical activity many stated “more programs like the Senior Center exercise program” but a few participants suggested other activities they thought were needed. For example, Doris said: “...I’d tell ‘em [the government and planning

agencies] to have a nice heated pool for people that cripples could swim in it and exercise in the water....'cause I would go to it” and Rita Mae noted: “I used to go to ... Bladesborough to go bowling...that would be nice to have here...and to go out with my friends bowling.”

Involvement in civic organizations and clubs is another means for seniors to be active in their community. The Elijah County Chamber of Commerce brochure lists over thirty organizations that citizens might choose to join. Some of the civic organizations include groups like Kiwanis, Lions, Shiners, Masons, Optimists, and Order of the Moose. Several older adults and service providers interviewed for this project stated that gardening and participating in a garden club is a good way for older adults to remain active.

Several of the interview participants reported that volunteering was another means for older adults to stay active and engaged. Four of the women interviewed for this project were currently working as volunteers at the local hospital, and an interview with the volunteer coordinator at the hospital revealed the fact that all of her 50 volunteers were older adults. Some seniors also reported volunteering at their church, or for diagnostic based service groups such as the local chapters of the American Cancer Society or the American Heart Association.

In addition to civic organizations, the community hosts several annual events in which older adults might become involved. As mentioned previously, the Annual Pine Tree Festival brings out the whole community each May. At the same time, there is also an annual Pine Tree Golf Tournament. Like many communities, there are annual parades, the Jaycee Fair, The Deer Park Lions Fall Festival and the Kiwanis Club

Octoberfest. There is also an annual tour of homes, a 4-H barbecue and an annual Christmas parade through town. Other service organizations participate in “Relay for Life” events to promote awareness of breast cancer and one participant, Joan, mentioned being involved in a large fundraiser for the local chapter of the American Heart Association.

In comparison to larger municipalities and metropolitan areas, it may not seem that there is much to offer the older adult in terms of activities within this community. I was, however surprised at the high level of awareness of community facilities and events by older adults and by service providers. Perhaps, in a smaller community, because there are fewer “news items” these community facilities and events get more publicity and advertising. In any case, although senior programming may be somewhat limited, programming at the Senior Center seems to have a good reputation among community members and appears to be a desirable place for many older adults to participate in physical activity and other health promotion activities.

While the natural beauty of the county abounds, there is also evidence of rural decline as one enters this area. Some of this is evidenced within Elijah County and the surrounding areas via abandoned buildings, signs from eras past such as the Pontiac Indian and as my field notes on November 7, 2002 attest:

I see a rusted old school bus a junkyard full of tractors and all rusty and set up almost like a museum to rural life, a trailer, a square aluminum looking thing that looked like it had been there for years. As I leave Hampton I see a house, red shotgun house held up on Cinder blocks, with a 1973 Monte Carlo out in front of the house. I pass a truck with a load of hay, some beautiful tiered or terraced

fields with round bails of hay laid out for animals I do not see. On the road I see red clay tire tracks from some type of heavy equipment truck, cotton fields with the top of the cotton already picked and the bottom white balls of cotton.

Statistics about Minton and Elijah County found in data presented by Boatwright and Bachtel (2002) in the *Georgia County Guide* also provide evidence of why this county might be labeled a “rural decline” county. Some of this data is presented in Table 4.1 and 4.2 comparing Elijah County with the rest of Georgia. It should be noted that this data is reported by county; therefore, it is difficult to fully ascertain how Minton compares with the rest of Georgia. Table 4.1 compares Elijah County with the total population of (all of the counties) Georgia, while Table 4.2 compares Elijah County with an “average” county in Georgia.

Regardless of which source of comparison is used, statistics about Elijah County reveal characteristics that this county has more people who are minority status, disabled, and who have lower median incomes and thus may have more need for social service programs. This data also reveal that Elijah County has a slightly higher death rate than the rest of Georgia, which may, however, be attributed to higher rates of infant mortality and higher rates of suicide/homicide when compared with the rest of Georgia. In addition to economic factors, Elijah County has an alarmingly high rate of high school non-completion, despite a small school system that has won awards for its excellence. One very important point also lies in the fact that 70% of the county residents live outside the city limits of Minton.

Table 4.1 Compilation of Statistics About Elijah County (pseudonym) comparing it to the total population in Georgia (Boatwright & Bachtel, 2002)

	Elijah County	Georgia Total
County Population	21859	9,089,246
Minton Population	6943	N/A
Demographic variables about county residents		
% of county population that is White	63.7	65.1
% of county population that is Black	33	28.7
% of county population that is other races alone	2.51	4.83
% of county population that is over age 65	13.3	9.6
Median age of county residents	34.9	33.4
% of county population receiving Social Security	21.5	13.4
% of county population receiving Disability	6.7	2.4
Morbidity and Mortality		
Percentage of people with disabilities age 21-64 years	24.2	19.9
Percentage of people with disabilities age 65+	56.4	47.5
Live birth rate per 1000 population	15.3	15.8
Death rate per 1000 population	11.5	7.9
Infant death rate per 1000 population	13.6	9.8
Suicide rate per 100,000 population	15.3	12.7
Homicide rate per 100,000 population	14.4	10.7
Income		
Median household income	\$24,383	\$42,433
Average weekly income, all industries, 2000	\$395	\$658
% of households earning < 10,000/yr	22.3	10.1
% of households earning > 100,00	4.4	12.3
% of families below the poverty level	21.8	9.9
% of population receiving food stamps	15	6.1
% of population receiving TANF	3.8	1.5
% of farmers who worked 200+ days off the farm	42	40.8

Table 4.2 Compilation of Statistics About Elijah County (pseudonym) comparing it to an “average” county in Georgia (Boatwright & Bachtel, 2002)

	Elijah County	“Average” county in all of Georgia
Access to health care		
Total practicing physicians, 2000	20	15
Number of hospitals	1	1
Number of nursing homes	2	2
Education		
Total enrollment in county/city schools	4,487	8,885
% of students eligible for free/reduced lunch	69.1	54.2
% NOT completing high school	38.6	29.3
Housing		
Total housing units per square mile of land area	13.7	64.9
% mobile homes	26.3	25.5
% of people living in “town” of Minton	29.9	36.4
% of people living outside the city limits of Minton	70.1	63.6

Boatwright and Bachtel (2002) note that rural communities generally have people with lower levels of educational attainment. In Elijah County a startling 38% of the residents do not complete high school. They also note that rural communities typically have reduced access to healthcare, which may be evident in the fact that there are only 20 physicians in the community. Residents in this community, as attested to by several of the interview participants, often go to the three larger cities that are at least 90 minutes away for more advanced health services. Because nearly 70% of residents do not live in the city limits of Minton, they may also have reduced access (either geographically or because of non-eligibility) to city and/or county services, which are for the most part, located in the town of Minton.

Boatwright and Bachtel (2002) report that 27% of residents in Elijah County live below the poverty level in comparison to 13% of the population living below the poverty level throughout the rest of Georgia. Table 4.1 reveals statistics about the lower median incomes and higher percentages of residents who receive reduced or free lunch, assistance of Temporary Assistance to Needy Families (TANF), and food stamps, which may be indicative of people in financial need. Additionally, there are relatively higher percentages of people in this community who have fixed incomes either through disability or social security income. Lastly, Table 4.1 also demonstrates that 42% of farmers spend more than 200 days working away from their farms to supplement their income.

Despite the designation of being a rural decline county this community brims with pride as evidenced in the community signage, school support on the shop windows of downtown businesses, and frequent articles in the local newspaper, *The Pine Needle*

*Press* about various organizations within the community. Members of the community also speak with pride about various facilities and groups in the community that support them being active.

In summary, this section presented a description of the rural community as portrayed through observations, documents about the community, and interviews with citizens living and/or working in this community. A positive feature of this community lies in the fact that citizens and service providers have a keen awareness of the facilities and services that might promote physical activities. Another strength is the perceived quality of the Elijah County Senior Center Exercise program as an asset that older adults might use to be physically active. Finally, a strength of the community lies in its outdoor trails and parks in which older adults might be physically active. Weaknesses within this community are limited availability of services and facilities available for helping older adults to be physically active. Real or imagined, the cost for the services that are available beyond the Senior Center, such as the programs at the college, are perceived to be cost prohibitive by some older adults. In addition to cost and availability, the nature of the rural community often requires that citizens in a community come into town to access goods and services. Older adults, particularly those living outside the city limits of Minton, for the most part, drive to access goods and services and hence, transportation difficulties may be a barrier that is more prevalent in a rural community. The next section will provide an overview of the interview participants who provided some of the data about the community.



### Description of Participants

In order to accurately conduct a social ecological analysis of this rural community, both the environment and the people within this environment served as key sources of information. In addition to doing observations of the community and analysis of documents, I conducted interviews to better understand how the community influences physical activity participation for older women. During the course of this research project, in-depth interviews lasting from one to two hours were conducted with fourteen older women who had varying demographic characteristics (See Table 4.3). Some of these interviews took place within the participants' homes, some occurred in a quiet room at the local Senior Center, two interviews were conducted in the hospital cafeteria, and one interview started in a women's home and was completed by telephone because she had to stop the in-person interview for fear she would be late for an appointment. When the participant gave me permission, I also photographed her home and surrounding environment to provide further detail regarding the physical environment within the community. When the older adult preferred not to have their home photographed, I rode around the surrounding area to find similar type homes and neighborhoods to have a visual image of the type of environments where these women live.

Table 4.3 gives some details about the older women participants. The ages of the women ranged from 65 to 93 years old. There were three African American women and the rest were Caucasian. The education level of the women ranged from associate degree in business and human resources to one woman who only completed the sixth grade. Thirteen out of the fourteen older women graduated high school. Seven of the women were widowed, four were divorced and three were still married. I was surprised that only

four of the women identified their careers as “homemakers” while the other 10 participants worked until retirement. Three of the women lived in apartments; two lived in manufactured housing; and the remaining nine participants lived in single-family homes. Most of the women reported having at least one medical condition. These conditions included diabetes, heart problems, arthritis, cataracts, back problems, and a history of cancer.

Finally, women had varying levels of engagement in physical activity ranging from sedentary to highly active. To classify activity levels of the women, I combined descriptions used by the Surgeon General and the ASCM (USDHHS, 1996). Table 4.4 represents my decisions on how I chose to assign activity levels based on the woman’s self-report of the types, frequency, and intensity of activities that was described as being performed on a regular basis.

In-depth interviews were also conducted with three key staff members affiliated with the local Senior Center and who work with older adults on a daily basis. Staff members included the Senior Center director and assistant director as well as the Division on Aging Wellness Coordinator. The Senior Center director, Mitzi worked at the center for more than twenty years and the assistant director was employed a little over a year, but had prior experience in human services organization. The wellness coordinator had been with the agency for two years and had been interacting with staff and older adults at the Elijah County Senior Center for the past two years.

Table 4.3. Summary of Older Women Interview Participants

Name	Age	Race	Marital and Living status	Education level Occupation	Reported Health conditions	Activity level
Bessie	81	AA	<ul style="list-style-type: none"> <li>• Divorced</li> <li>• Lives alone in an apartment</li> </ul>	<ul style="list-style-type: none"> <li>• &lt; HS</li> <li>• Nursing Asst</li> </ul>	Diabetes Arthritis	Inactive
Helen	84	C	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives alone in an apartment</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Homemaker</li> </ul>	Depression	Inactive
Flory	89	C	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives alone in town apartment</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Quality control in a factory</li> </ul>	Depression Back, knee & hip problems	Inactive
Betty	79	C	<ul style="list-style-type: none"> <li>• Divorced</li> <li>• Lives with daughter in a manufactured home</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Factory work-sheet metal wk.</li> </ul>	Diabetes, cataracts, two total hip replacements (THR)	Inactive
Doris	65	C	<ul style="list-style-type: none"> <li>• Divorced</li> <li>• Lives in a manufactured home</li> </ul>	<ul style="list-style-type: none"> <li>• &lt; HS</li> <li>• Service work, waitress</li> </ul>	Arthritis, Back, knee and hip problems	Inactive
Judy	74	C	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives alone in Single family home (SFH) in Cottonwood</li> </ul>	<ul style="list-style-type: none"> <li>• Technical School</li> <li>• Secretary</li> </ul>	Heart problems, high cholesterol, “frail as a child”	Minimally Active
Alva	75	AA	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives alone in a SFH</li> </ul>	<ul style="list-style-type: none"> <li>• Technical School.</li> <li>• Nurse</li> </ul>	Back Surgery 10-12 years ago	Minimally Active
Linda	73	AA	<ul style="list-style-type: none"> <li>• Married</li> <li>• Lives in SFH with husband &amp; sister-in-law</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Homemaker</li> </ul>	Mastectomy HTN, diabetes	Minimally Active
Wanda	73	C	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives alone in town in a SFH</li> </ul>	<ul style="list-style-type: none"> <li>• AA degree</li> <li>• Manager</li> </ul>	No reported health conditions	Moderately Active
Rita Mae	65	C	<ul style="list-style-type: none"> <li>• Divorced</li> <li>• Lives alone in town in a SFH</li> </ul>	<ul style="list-style-type: none"> <li>• 10<sup>th</sup> grade</li> <li>• Factory work</li> </ul>	History of back, knee and hip probs.	Moderately Active
Ruby	81	C	<ul style="list-style-type: none"> <li>• Married</li> <li>• Lives in SFH in town</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Bookkeeper</li> </ul>	Arthritis, high cholesterol, thyroid	Moderately Active
Virginia	85	C	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives in SFH out in the country</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Homemaker</li> </ul>	History of back problems	Highly Active
Fannie	93	C	<ul style="list-style-type: none"> <li>• Widow</li> <li>• Lives alone in town in a SFH</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Homemaker</li> </ul>	Occasional vertigo	Highly Active
Joan	71	C	<ul style="list-style-type: none"> <li>• Married</li> <li>• Lives in SFH with husband</li> </ul>	<ul style="list-style-type: none"> <li>• HS</li> <li>• Bookkeeper in family business</li> </ul>	Arthritis, Neck fusion, Heart problems, high cholesterol	Highly Active

All of the in-depth interviews were audio taped and transcribed for further data analysis. The structure of the interview (See Appendices A and B) with the older women and the staff members was similar: First, I asked about their involvement in and perceptions about the definition of physical activity. Second, I asked questions about factors that encourage or hinder participation in physical activity that included individual, environmental, and social factors. Finally, I asked participants about how they would improve current resources in their community to enhance older adult involvement in physical activity.

In an effort to more fully appreciate how the community supports older adult participation in physical activity, informal interviews both in person and on the telephone were conducted with members of the community who might interact with older adults. Some of these informal interviews were conducted with the mayor, the County Executive, four different church-related organizations, the parks and recreation department, the local hospital staff, the public health department, the department of housing, the chamber of commerce, and other civic groups in town. The purpose of these interviews was to understand how these organizations serve older adults, ascertain their knowledge of community assets that might assist older adults in staying active, and lastly to inquire about interagency relationships in the context of providing any services for older adults. Due to the informal nature of these interviews, these interviews were not taped or transcribed; however, I recorded data using an informal interview protocol sheet (see Appendix C). After completing each informal interview I recorded field notes from comments made by the interviewee, as well as comments regarding the facilities and/or materials.

Table 4.4: Cross reference of Surgeon General Guidelines with CDC-ACSM Guidelines Classifying Participants Based on Activity Level

Frequency	Duration	Intensity	Activity Level classification	Compression of categories	Participants in each category
No consistent activity level	Less than 10 minutes per period of activity, does not achieve 30 minutes daily activity	Light	Inactive	Inactive	Betty
1-2 days per week	Less than 10 minutes per period of activity, but achieves 30 minutes of daily activity	Light	Sedentary		Helen Flory Doris Bessie
2-3 days per week	Achieves 30 minutes of activity (in periods of 10 minutes or greater for each activity period)	Light to moderate	Minimal Activity	Minimal to moderate activity (Regular sustained activity)	Judy
3-5 days per week	Achieves 30 minutes of activity (in periods of 10 minutes or greater for each activity period)	Moderate to vigorous	Moderate Activity		Wanda Rita Mae Ruby Alva Linda
5 days per week	Achieves 30 minutes of activity (in periods of 10 minutes or greater for each activity period)	Moderate to Vigorous	Sufficiently Active	Highly active (Regular vigorous activity)	Virginia
Most days / week	Achieves 30 minutes or greater per day	Vigorous	Highly Active		Fannie Joan

In order to better understand the findings of this study, following is a brief summary of each of the participants who granted me an in-depth interview. These participants were chosen in part by convenience and their willingness to volunteer but also, a conscious effort was made to include several participants of color, a variety of ages among the participants, and lastly, attempts were also made to choose participants who had differing levels of physical activity and varying degrees of community involvement.

### *Wanda*

Wanda is a quiet, well-groomed woman who does not like to discuss her age. She has a beautiful head of thick white hair and has a sturdy build. I rarely noticed her smile. Wanda reports having no medical problems and she describes herself as being physically active. She lives alone in a single-family home near Minton High School.

Wanda sadly explains that she “outlived her husband and her daughter who both succumbed to cancer.” She initially encountered the Elijah County Senior Center Exercise Group somewhat by accident. When Wanda was still working as a human resource manager at a local textile factory, she encouraged her newly retired husband to attend the Senior Center daily for a hot meal to relieve her of fixing her husband a noontime meal. A year or two later after she retired, Wanda started coming to the center with her husband to take the daily noontime meal. She then discovered the exercise group and has been in the group for the past ten years. Since the line-dancing group began 5 years ago, Wanda has participated and she has thoroughly enjoyed this activity.

In addition to participating in the exercise program and line dancing three to four times a week, Wanda writes a column called “Times Remembered” for the local

newspaper, *The Pine Needle Press*. I met Wanda after an appointment she had with the Community Action Program. Her visit to this organization was a surprise to me because she did not appear in financial need. On the three occasions I observed or visited with her, she wore well-starched shirts with color coordinated shoes and slacks.

Despite her quiet and rather serious demeanor, Wanda's education level and status as a newspaper columnist makes her an informal leader at the Elijah County Senior Center. Based on interviews with other Senior Center participants, it is apparent that Wanda acts as a resource regarding information about "what is going in the community."

During the interview, Wanda shared that had no family except a son-in-law, living 250 miles away, with whom she infrequently communicates. Wanda confided that while she was depressed after her husband died, she became clinically depressed after her daughter died, never expecting to "outlive my child." Wanda states that retirement is busy and that there are lots of choices about what to do each day. In addition to her newspaper column and exercising, she does yard work, housework, belongs to church groups, and a book club. She states that she has many close friends through each of these organizations; however, "I have learned to depend on myself and not count on friends to keep me active." Her independent nature was conveyed in a more dramatic comment she made during our interview "I'd cut my throat if I couldn't drive because I don't like to depend on anyone." I considered Wanda to be "moderately active" because although she exercised vigorously, she did not consistently do these activities five or more days a week.

*Virginia*

When I first met Virginia, I immediately thought of Mrs. Santa Claus, June Cleaver and a cherub-faced grandmother wearing a ruffled apron laying a freshly baked apple pie on her windowsill. This 85-year-old white-haired widow has a “kind” looking face with rosy cheeks, porcelain doll skin, and a rather impish grin. She lives alone on a 200 plus acre farm outside the city limits of Minton. Other than occasional back problems, Virginia shares that she is very healthy.

Virginia was born and raised in the local area, but moved to a larger city with her husband when they were young adults for improved job opportunities. After retiring, her husband wanted to move back “home” to Elijah County and they purchased a farm so her husband, who was raised “in town” could “try his hand at farming.” She shared that she really enjoys farm life. She spoke proudly of her flowers and “just walking about on my land.”

Virginia describes her daily routine as consisting of chores, taking a daily walk or doing some other stretching exercises, doing some yard work, and occasionally cooking big meals for her three adult children and their families who visit her each weekend. Virginia has been attending the Senior Center Exercise Group for the past five years. She confided that after her husband passed away, she was lonely and somewhat bored. A friend at church told her about the Senior Center, and she has been attending both the exercise group as well as the line-dancing program 3 times a week. She noted that prior to coming to the Senior Center exercise program, she walked on her property and on the local track in her small community of Pine Nut where a woman in her community “whooped and hollered ‘til she got that track built out at the community house out there.”



I considered Virginia to be “highly active” because she exercised and fit physical activity into her life on a daily basis, on many days having more than one 30 minute period of physical activity.

*Rita Mae*

Wiping beads of sweat from her forehead and somewhat winded after participating in the line-dancing group, Rita Mae says that she has been participating in the exercise group since starting at the Senior Center about a year ago. She notes that recently she starting participating in the line-dancing group and although she doesn’t know all of the steps, she is eager to learn the more complicated moves. Her rotund body, slender legs, and small feet make her appear like a linebacker balancing precariously on the legs of a ballerina. Despite her disproportionate features, she manages to stay “in-step” with the line-dancing group by stiffly shuffling in time with the music. Rita Mae grew up out in the country and she noted:

We had to work in the fields whenever I was growing up, putting in tobacco and stuff like that, and as we got a little bit older my daddy went on in a big way and he got cotton pickers that pick the cotton then but ah we have worked tobacco we did it for a long time we take it back around the barn and more dirt would just be sprinkling on your head. It was nasty but we worked hard coming up cause my daddy was a farmer.

In a rather monotone voice, she confided that she is divorced and has six adult children and twenty grandchildren living nearby who visit or call several times a week. Additionally, she alluded to having a male friend who stays over her house a few times a week and he apparently helps her with heavy yard work and household maintenance. Rita

Mae describes a history of arthritis in her back, knees and hips which caused her to retire a year early on disability from her job at a local textile plant where she worked for twenty-one years folding tee-shirts. After being home a few months and telling her friend that she was bored, she started attending the Senior Center daily for congregate meals and the exercise group. She notes that participation in the exercise group has helped her:

My back, I had a lot of trouble with my back, and then my knees, but since I have been exercising I can tell its helping. I'm more limber, like uh I can walk to the mailbox just across the road and I used to give out when I come back but now I can go and not quite as bad

Other than participating in Elijah County Senior Center activities, Rita Mae's typical day mainly consists of occasional crocheting, doing household chores and cooking when her children visit. She states that on some days she "just doesn't feel like doing anything, so she rests." Up until ten years ago, Rita Mae drove to Bladesboro, which is thirty miles each way to go bowling with friends a few times a month. Recently, she went on an annual weekend trip to the mountains with a few friends from her hometown of Evergreen. Rita Mae states that she is in the process of finding a church because she has only lived in Minton for the last four years and all of the members of her old church in Evergreen have died. I considered Rita Mae to be "moderately active" because although she was engaged in vigorous activity, she did not consistently do this five or more days per week.

*Fannie*

After the other group members directed me to her as an ideal candidate for my study, Fannie dutifully assumed her role as the informal “Elijah County Senior Center Older Adult Poster Child.” When I first observe this soft-spoken, slender woman with a dowager hump I am pleasantly surprised to see someone who moves with the agility and grace of a much younger woman. Her wash and wear clothing, orthopedic-looking shoes, and her gray curly permanent hairstyle attest to her practicality. Fannie proudly tells me her age of 93 and gives an account of growing up:

I had a perfect home, my mother had ten children and I am in the middle. I have five brothers and five sisters and they would always take us to church on Sunday and we could look forward to that and they were Christian parents and we just had no trouble in our family raising up the boys and girls... We knew when Sunday come we have to go to church and we appreciate that now.

Making several references to an ingrained work ethic, Fannie recounts working on a farm as a child, working as welder during World War II, and working for thirty years as a civil servant. She shared that during the course of her work life, she lived in several states and retired to Minton where she has lived for the past thirty-two years. Fannie states how she likes to be busy and how important discipline and routine are in her life:

Well, I am a person who wants to be doing something with my hands or in the yard or somewhere and always trying to have a project to pass my time away. I used to do a lot of craft work and then I jump from that to cooking and I have quilted for the last thirty years... I get up and leave home at nine o'clock everyday just like I was going to work, everyday I come to the Senior Center and

on Saturday I get things ready for the weekend... Well I go to church every Sunday and Wednesday night, and I do missionary ministry because my daddy brought me up to go to church.

Fannie attests that she has excellent health with only occasional vertigo and that she takes hormone pills to prevent osteoporosis. She has lived in her in-town home for the past thirty-two years, but later announced that she would be moving within the next month or two to live with her daughter who resides nine miles away. When asked about her neighborhood, she shared a story of having a “plastic Santa Claus” stolen from her front porch, indicating that she knew the “Mexicans” must have done it. When probed further about a possible fear of crime influencing her decision to move, she stated, “It’s just my health. I know I am getting older everyday... and when you get my age you get weaker and I just need somebody closer to me.” I considered Fannie to be “highly active” because she was engaged in multiple physical activities at least five days a week. On many days she engaged in more than one 30-minute period of physical activity by doing her walking program in addition to the exercise group and line dancing.

### *Ruby*

Ruby is an eighty-one-year- old woman who has attended the Elijah County Senior Center since she and her husband retired nearly eighteen years ago. My initial observation of Ruby was in the dining area at the Senior Center, where she was assisting her husband who is quite hard of hearing by loudly repeating the Bingo numbers into his ear. During that same observation period, I also noticed her cutting up her husband’s meat and tending to his needs as they took their afternoon meal at the “Center.”

When I first spoke with this woman, I was immediately reminded of the character “Aunt Bee” on the *Andy Griffith Show*, because of her pleasant demeanor, appreciation of community, and her positive outlook despite having a husband who is ill with cancer. Her hair appears as if she has a standing weekly appointment at the Lovely Lady Beauty Shop, and her soft powdery skin, pink cheeks and matching lip color appear to fit her “rosy” personality. Her clothing is appropriate for the setting and for a woman her age, usually consisting of slacks, a comfortable modest print blouse, and comfortable crepe sole walking shoes.

My assumption about her being a stereotypical Southern Baptist woman was slightly shaken, when I observed Ruby during the exercise and more specifically during the line-dancing group as she cheerfully moved across the dance floor while moving her somewhat arthritic fingers in large expressive movements. During the line dancing, her facial expressions become animated and she seemed to willingly escape from her role as caregiver during this activity. She confided that she rarely leaves her husband’s side for more than an hour at a time, but when they come to the Senior Center, she can exercise knowing that he is with his friends playing checkers in the next room. Ruby has been doing exercises at the Senior Center for the past sixteen years and states that it is “good for the body and the soul.” Although she lives across the street from Simon Park, which has three lakes and trails around each lake, she stopped doing early morning walks around the park about ten years ago because “the humidity near the water made it too hard to breathe while walking.” I considered Ruby to be “moderately active” because she did not consistently participate in physical activity at least five days a week. In her case,

caregiving for her husband may have limited her ability to participate in her exercise program more frequently.

*Judy*

Judy is a petite woman with stiff brown hair, who appears to be somewhat nervous as evidenced in her rapid speech, quick movements, and concern over details. She rescheduled her appointment with me several times because it conflicted with many of her social activities such as the “Young at Heart” and the “Caring and Sharing” groups which local churches sponsor. She shared having a history of heart problems and arthritis and added that if she didn’t stay active, she knows that these problems would be much worse. Judy says that she fatigues easily because of her heart, but that she tries not to let it stop her from doing many daily activities such as chores, exercise group at the Elijah County Senior Center twice a week, and participating in many church activities. Although she describes herself as being “frail” her whole life, Judy is active in many church related social and service activities stating: “I’m about to cook myself to death...with one covered dish after another every week at church.”

Judy grew up in the county just west of Elijah County and she reminisced about picking tobacco sharing how much she enjoyed the difficult and messy chore of stringing tobacco when she was a child. After graduating from high school, she pursued secretarial education at Minton Technical College and she had several clerical jobs throughout her life, retiring from a local bank in Minton. Judy is a widow who has three grown children and four grandchildren who live within a two-hour drive from her home in nearby Deer Park, which is also in Elijah County. She noted with some laughter that her children are

of little influence regarding her physical activity because they are in much worse shape than she is. She added that friends are more important in encouraging her to be active.

Although Judy lives seventeen miles from the Senior Center, she tries to come to the exercise group and line dancing groups two times a week. She states that the distance between the Senior Center and her home is rather far so she combines her trip to the Elijah County Senior Center with errands such as paying bills, doing her shopping, and doing church related social activities to make her time and distance traveled more worthwhile. Judy states that she naps daily, and that after her third cardiac catheterization for blockage in her arteries, she quit her volunteer job at the hospital, because it was “just too much for me.” She states that she does all of her household chores alone because she lives alone, but for the heavier chores such as vacuuming and yard work, she may take as many as three days to complete the task because she needs frequent rest breaks. I labeled Judy as “minimally active” because she only participates in vigorous activities one to two times per week in the exercise group due to living so far from Minton. In addition, she tries to limit her participation in vigorous physical activity due to her heart condition.

### *Bessie*

Bessie is a tall woman with a wide smile, beautiful smooth skin, and gray plats tightly pinned to her head. She moves swiftly through her apartment giving the appearance of a woman much younger than her eighty-one years. A lifelong caregiver to residents in an institution for the mentally retarded, Bessie has spent the past two years in somewhat of a caregiving role to her son as she confides: “worrying myself ill about my quadriplegic son.”

Divorced for many years, Bessie is proud to live alone in an apartment on the main street in town. Although her daughter does many heavier household and community tasks for her, Bessie announced with self-respect that she could independently perform all of her personal care, though she does receive a daily hot meal through the Meals on Wheels Program. Bessie attended the Elijah County Senior Center for fifteen years up until one year ago, when she “took ill with pneumonia and nearly died.” Bessie explained that her son became quadriplegic about two and a half years ago, and since that time she has been treated for pneumonia, heart problems, and has also been diagnosed with diabetes. She credits the home health nurses and her doctors with “getting me back on my feet.” Bessie is honored to be the oldest member in her church and jokes that her preacher says “one day, you may be burying me.”

Bessie is dependent on her daughter for transportation within the community even though until recently, she used the local taxi in town if she needed to go somewhere. She reported that occasionally, she walks up the street from her apartment on the main street in town to go to a small restaurant or to pick up a newspaper but other than that, she is not physically active on a consistent basis. Other than going to church, medical appointments, to visit her son at the nursing home, or going out shopping, Bessie is rather sedentary, though she uses no devices for mobility or safety. She describes herself as physically active and uses a comparison with her younger sister who “has mo’ grunts than me” when sharing that she is satisfied with her level of physical activity. Although Bessie reported going out in the neighborhood on walks, her daughter and the coordinator of Meals on Wheels states that she rarely does this activity. I labeled her as “sedentary” because she does not reach the recommended intensity or frequency of physical activity.



*Helen*

Helen is lifelong resident of Minton who has been widowed two times after long periods of caregiving for two husbands who were both terminally ill. She lives alone in a senior citizen complex in Minton and occasionally attends the activities at the apartment complex. Helen was referred to the Elijah County Senior Center Program about a year ago after being discharged from an outpatient behavioral health program where she was in treatment for depression for about six months following the death of her second husband.

Dressing in somewhat contemporary clothing and having a more modern hairstyle, Ruth appears to be younger than her age of eighty-four. She has bright rosy cheeks and seems to have respect and admiration for staff members at the Senior Center and at the Behavioral Health Center, crediting both agencies for helping her to overcome depression. She states that she has four close friends living in her apartment complex who also attend the Elijah County Senior Center, so it was easy to make the transition to the center. She speaks with sadness of never having had her own children, but refers to her stepchildren as her “babies” stating that she has a close relationship with stepchildren from both of her marriages. She noted in particular, that one of her stepdaughters who lives about 250 miles away visits about once a month and she sees to her needs including paying a housekeeper to clean her apartment.

Helen states that her days consist of doing personal care, light household chores, attending the Senior Center for congregate meals and socialization, as well as occasionally attending social activities at her apartment complex. She believes that she is “too old to exercise” and chuckled that she tried once to use the treadmill in the Elijah

County Senior Center and her pants fell down while walking, so she hasn't tried this activity again. While she is still able to drive, Helen shared that she avoids driving at night. In addition to socializing, Helen enjoys crocheting and making blankets for other people. She explains that other than heavy housework, she can do day-to-day chores such as laundry, light meal preparation, and cleaning, though she willingly accepts help from her stepdaughter. Helen was labeled as "sedentary" because she spends most of her day engaged in sedentary activities such as socializing, and doing handcrafts. Although she does light household chores, she does not do so with the required frequency or intensity (recall that daughter pays for someone to do heavy cleaning).

### *Flory*

Flory is a quiet woman who has a muted affect and appears to have a fatalistic attitude about aging as a time of inevitable decline. Although she portrays herself as if she does not have much in her life, Flory doesn't complain or describe herself as unhappy. When describing herself and her ability to deal with chronic health conditions such as arthritis, she states: "I do what I can, but sometimes, I just get so tired out, I have to stop and rest." She explains that in order to get to the activity center, the mailbox, and to the laundry room in her apartment complex, she gets in her car and drives for fear that her legs will "give out" while attempting to walk. Although she does not use a device such as a cane or walker, Flory wears large wide-based tennis shoes and she hobbles from side-to-side as she ambles her large body throughout her apartment while trailing her hands along the wall for support.

Telling me that she will soon be ninety years old, Flory explains that in order to successfully complete shopping, she parks right near a carriage well and uses the carriage

to lean on while walking in a grocery store. She noted that she cannot be on her feet for more than twenty minutes at a time, so she limits the time of day and the number of items she has to purchase at local stores. She shared that her brother-in-law will frequently call and offer to pick up needed items at the store prior to visiting her at least once a week, and this saves her energy from having to be up on her feet at the store.

It appears that Flory has created a script for herself that decline is inevitable and she appears to be fulfilling the prophecy of necessary debilitation associated with aging. She reports that her memory is failing and she sees friends and older public figures like Bob Barker (who is the host of a television show called *The Price is Right*) losing their memory and just “getting worse and worse.” Flory indicates that her activity level (which is quite sedentary) is what is to be expected for someone her age, and that there is little she can do to improve her activity level adding, “The doctor’s are amazed at how much I do at my age.” Although Flory considers herself active for her age, I labeled her as sedentary because she does not meet the recommended levels of intensity or frequency for her physical activity.

### *Betty*

I met Betty while riding on the Elijah County Senior Center van when I was accompanying the Assistant Director, Stacy, in transporting the members home after the congregate meal program. Betty talks loudly and interjects comments into everyone’s conversation on the van. As the van drove up the uneven dirt driveway, I wondered how she would get into her house because there were no steps into the front of the manufactured house that was propped up on cinder blocks. Fortunately there were stairs to the side of the trailer with a supportive handrail and Betty easily got out of the van,

climbed the stairs, and walked into her into her home without difficulty. As she entered the house, I see that Betty has somewhat frizzy gray hair, well-worn Keds with white athletic socks, an oversized top, and stretchy leggings that are consistent with her “rough around the edges personality.” She turns, gives a big smile and waves goodbye to the vanload of people.

While on the bus, I asked Betty about her level of physical activity and told her about my project and she agreed to do an interview if I could come to her home prior to three-thirty in the afternoon when her four great-grandchildren arrive home from school. As I enter the smoke filled kitchen, I meet Brenda, Betty’s daughter and Brenda’s three-year-old grandson who approaches me with some curiosity. I am startled to hear a gruff holler from a back bedroom, asking, “Who’s out there?” Sitting at the kitchen table while smoking and doing a large print word search book, Brenda (who is present for the whole interview with Betty) explains that her husband is quadriplegic due to a truck driving accident. I can barely see the bedroom where he is located as I look down the hallway which only has sheetrock half way up the walls.

Betty shared that although she is originally from New York, she spent many years in Augusta until two years ago when she divorced her husband because he was having an affair with someone he “met over the computer.” Since leaving her husband, she moved to Minton to live with her daughter because she was having some health problems such as diabetes, arthritis, and heart problems. She feels that she isn’t able to exercise because: “I’m too old...and when they told me about my heart, I started getting afraid to move.” Betty also has had two total hip replacements on the same hip because the first one failed. The hip replacement was initially necessary due to arthritis caused by

working on her feet as a “drill press and punch press operator in the manufacturing industry for thirty five years and according to Betty, “They had to do the second hip replacement cause I was too hard on the first one and kept popping it out of place.”

Despite having medical problems, Betty states that she does not have pain in her hip, nor does she appear to have difficulty walking or climbing stairs. Her typical day consists of attending the Elijah County Senior Center. Although she performs her self care, she does not perform any household chores, nor does she assist in the care of her great-grandchildren. Since Betty doesn’t drive, she is dependent on her daughter for transportation within the community, and the van transports her to and from the Elijah County Senior Center. Betty states that she loves doing large print crossword puzzles and word searches and she enjoys watching game shows like *Wheel of Fortune* every night. She states that she used to enjoy sewing but that “the diabetes is affecting my eyes, so I can’t sew anymore.” When asked about her satisfaction with her level of activity, Betty stated: “I’m doing pretty good for someone my age.” I labeled Betty as sedentary because she does not meet the intensity or frequency recommendations for physical activity.

#### *Doris*

Doris is a sixty-five year old woman whose facial features and “babyish” speech make her appear as if she is simple-minded but as we conversed I realized that some of her behavior might be attention seeking. She consistently makes a late “entrance” into the exercise group a few times a week by slowly ambling in and sitting down facing the whole group who seem to disregard her entrance. Doris is known as the “birthday card lady” around the Senior Center because she writes cards to all of the members of the Senior Center and places a dollar bill in each card. When asked about why she does this,

Doris stated, “Everyone likes to get cards and I don’t have much money... this helps everyone feel special.”

Doris is an obese woman with a large body frame who waddles when she walks using a straight cane for support. She also showed me how she got in and out of her car, which appears to be an amazing feat. She has black hair with gray roots in a pageboy haircut. When observed on several occasions, Doris’s attire appears to be clothing that a much younger person would wear. On the few days I observed Doris, I rarely noticed other Senior Center members acknowledging her and she seems to hold staff members and visitors “conversation hostage” through ingratiating comments about their physical appearance. For example, when she first saw me, she immediately stated “Oh, aren’t you such a pretty thing...are you someone’s grandchild?”

Portraying herself as a victim, Doris shares that after leaving her for a younger woman, her ex-husband occasionally drops his mother off at Doris’s home or takes Doris on vacation with him and his new wife so that Doris can “baby-sit” for her ex-mother-in-law while her ex-husband is on vacation. Each time she speaks about her ex-husband she humorously growls after she mentions his name. She also jokes that about ten years ago, she “took up smoking *Virginia Slims Lights* ‘cause I couldn’t find a man.”

Doris reports that she likes to get out of the house and just see people. She attends the Senior Center daily, participates in Bingo at the Moose Lodge at least once weekly, goes to department and grocery stores at least once a week, and stated that she kept a post office box because it “gives me an excuse to go into town and see people.” She did report, however, that for many of these activities she has to adapt the task in order to participate. For example, she stated that she uses a cane to walk and described

how she drives less than one hundred yards to her daughter's house to pick up her grandchildren and how she gets in and out of her car in order to prevent a fall:

Doris: I lean on my car, lean my right hip on the car and unlock the door and then I get backwards and I open the door...and then like in the mornings when I am getting ready to go get my grand babies to carry them to school, I go out at a quarter after seven and get the car warm, you know...

Mary: When you were walking a little better, did you ever walk on that dirt road to your daughter's house?

Doris: I can't even walk to my daughter's house from my trailer

Mary: Oh ok, and how far is her house from yours?

Doris: I can see it...and I can throw a ball there, but I can't walk there so I have to drive a car to her house.

Despite her attempts to do exercises for a few minutes each week by coming into the exercise room and sitting down, she is labeled as sedentary because she does not meet the recommended levels of frequency or intensity for physical activity.

### *Joan*

Her daughter-in-law, Liz who is the volunteer coordinator at the Elijah County Hospital referred Joan to me because she thought that her mother-in-law was a "role model for healthy aging." Joan is an active 71-year-old woman of average build, who wears neatly starched clothing, curly white hair, stylish glasses, and carefully applied make-up that combine giving her the appearance of a financially comfortable retired schoolteacher. As Joan recounts her activity with rapid and enthusiastic speech, she lists numerous activities in which she regularly participates such as church and local civic

organizations. Most recently, she is dealing with a son who is undergoing treatment for an aggressive cancer whose son also happens to be seriously ill with leukemia. Despite dealing with two seriously ill family members, she was eager to talk with me and help me.

Originally from Ohio, Joan and her family moved to Minton about twenty-six years ago when they relocated their family-run heating and air conditioning business to be near their son and his family. Since moving to Minton, their adult daughter has also moved to the area and when I interviewed Joan, she was hosting her daughter's family for a few months while their house was being built. Joan has a third child, who lives in New York.

Joan describes an active life working part-time keeping the books and answering the phone at their family business, volunteering at the hospital, being on the Heart Association board, golfing at least one time a week, and trying her best to walk daily. She and her husband are involved in several civic organizations and she listed at least three church related activities that she participates in on a weekly basis. While Joan states that she tries to exercise daily, she noted: "My first priority is quiet time with the Lord each morning and then I fill in the rest of the day with other things I need to do." Joan shared that a flexible work and volunteer schedule allowed her to be more consistent with her exercise. Joan also shared that when she can't get her walk in during the day, her husband will walk with her in the early evening. When I interviewed Joan, she was dealing with a serious illness of two family members and she shared that prayer and exercise helped her cope with this stress. Joan stated that in the past, she participated in fitness courses at the community college and although she enjoyed these courses, she



thought that paying seventy-five dollars for a weightlifting or a tennis course was too much. She shares that she has heard about the Elijah County Senior Center Exercise and Line Dancing Programs and although they are free and convenient to her work schedule, she confides: “I’m just not ready to go to the *Senior Center*.” Joan shared that one strategy she uses to keep her daily walking program consistent is to keep her exercise clothes and her golf clubs in her car so that “I never have an excuse not to exercise.” I labeled Joan as highly active because she engages in some for at least five days a week and she reaches the recommended intensity of activity.

### *Alva*

I met Alva in the hospital cafeteria for the interview. She scheduled her interview after her volunteer work doing patient transportation and delivering mail and books to patients. Alva is a soft-spoken woman who takes her role of community volunteer seriously. She spends her time volunteering at the hospital and supporting neighbors. A woman of slender build and gray hair pulled back into a bun, seventy-five-year-old Alva walks quite fast, looking as if she is on her way to accomplish an important task. She is straightforward in her responses to my interview questions, yet warm and concerned that her answers will help me in my research.

Alva proudly shares that she worked at Elijah County Hospital for thirty-six years after completing training at Minton Technical College to be a practical nurse in 1953. Alva shares that she enjoys crocheting, gardening, being a church member, doing community work, walking daily in her neighborhood or at the Simon Park Track, and a lot of her time is taken up “seeing to some neighbor friends.”

You know, I'm old, and I can drive, and there are a couple of ladies older than I am that I see about, whatever they call and ask me to do take them to the store or the bank or whatever...I am still able to do that.

Alva was initially encouraged by her physician to start walking after having back surgery around twelve years ago. She reports that other than having occasional back problems, she was "brought up working" and intends to "keep going as long as I am able to go." She states that she is satisfied with her level of physical activity:

Well I am satisfied with my level of activity because I visit the nursing home and the hospital, and the volunteer work that I do and the people that I see come in are so much younger than I am and some of them are in worse shape.

Alva believes that it takes a lot to motivate older adults because they can be "comfortable in their ways...its hard to get them started or restarted after they get out of a routine."

Being a nurse, she believes that if older people realized how being active would help their health, "more of 'em would be moving around...as for me, I just can't sit 'round and hold my hands." I labeled Alva as "minimally active" because she did not meet the recommended frequency for physical activity.

### *Linda*

Linda is a petite woman; with a warm smile and a firm handshake that I was introduced to by another hospital volunteer that participated in my study. I met this seventy-three year-old-woman in her home while she was in between appointments. Unfortunately, after about thirty minutes of talking we had to cut the interview short because she had to go with her husband to a doctor's appointment. Linda does not drive,

so she is dependent on friends and family for transportation to volunteer work, weekly church activities, and on errands and appointments.

Linda reports that she lives in a neighborhood that has a small grocery store and other local businesses close by, so she can walk to access goods and services in her community. She noted that although she feels safe in her neighborhood and she walks on the sidewalks, she prefers to do her walking for exercise program three to five times a week at the local track. She stated, "If I drove I would go every day, but I don't drive, so I have to depend on friends or family to take me over to the track when they go walking."

Linda stated that she was encouraged to start walking about ten years ago by her physician after she had a mastectomy. She also explained that she had diabetes and high blood pressure, which are both managed with medication and diet. She is independent in all of her self care and generally is responsible for all of the household chores while her husband does the maintenance and yard work. Although her sister-in-law is healthy she lives with Linda and her husband. In spite of the fact that her sister-in-law is quite healthy, Linda reports that she does the majority of the housework and cooking because "my sister-in-law is older than me, and it's my job to take care of her." She added, "I try to cook good for everyone and to eat right and take care of myself, so that I'll be around to take care of my husband and my sister-in-law."

Linda reports that she worked most of her life as a housekeeper but that she finds more satisfaction in volunteering at the hospital because it makes her "feel like I'm helping people who are under stress...and I've met people I wouldn't normally talk to." She also shared that it took her about a year to decide to volunteer after her friend kept "pestering me to go with her every week." She went on to explain that she now

structures her week and other appointment around her Tuesday morning volunteer job. I labeled Linda as moderately active because although she reaches intensity, she does not reach these intensities on five or more days each week.

*Summary of participants and their context within this community*

Table 4.5 summarizes factors that help place these women in their individual and the community context. This group of older women provides a fairly diverse sampling of older women. They range in age, activity level, education, work history, marital status, community involvement, activities and interests, and in their places of residence. Each of the women perceived herself to be in good or excellent health. All of the women had friends or family that they spoke with daily. Generally the participants ranged from middle to lower SES and they had a wide variety of educational levels. In some of the categories on this table, women responded affirmatively to several of the items, therefore the categories may total greater than 14 (e.g. women may have more than one medical condition).

Description of Senior Center Staff Members

*Mitzi*

Mitzi is a 47-year-old woman who is a lifelong resident of Minton. She has been employed at the Senior Center for the past twenty years. Originally, she assumed her position as the director of Headstart Preschool Program after obtaining a certificate in childcare from Minton Technical College. Mitzi proudly shared that she received her training at the technical college while trying to raise her children soon after she was divorced. The Headstart program, that Mitzi directed, was originally a model intergenerational program that the county started conjointly with the Elijah County

Table 4.5: Context for the older women in Minton

Contextual factor	Number of responses	Contextual factor	Number of responses
<b>Marital Status</b>		<b>Community Involvement</b>	
Married	3	Church member	10
Widow	7	Civic or service group	3
Divorced	4	Attends college courses	4
<b>Education Level</b>		<b>Interests and activities</b>	
8 <sup>th</sup> grade and below	1	Television	14
10 <sup>th</sup> grade	2	Walking/ Exercise	9
High school	8	Line dancing	5
Some college or tech school	3	Handcrafts	4
<b>Work history</b>		Reading/ Puzzles	8
Homemaker	4	Travel	4
Secretarial/ Administrative	4	Social/ Bingo	6
Manufacturing	3	<b>Residency status</b>	
Service/Professional	3	Lifelong resident of Minton	
<b>Work or volunteer role</b>		From the general area	7
Work 10-20 hours per week	1	From another part of US	4
Less than 10 hours per week	4	Housing	3
<b>Caregiver role</b>		In town	
Primary caregiver	3	Outside city limits	9
Secondary caregiver	3	Type of neighborhood	3
<b>Personal Health Problems</b>		Subdivision	
Arthritis	7	In-town neighborhood	3
Depression	2	Busy road	6
Cardiac or hypertension	4	Rural	2
Cataracts	2	Type of housing	3
Diabetes	1	Single family home (1 level)	
Cancer	1	Multifamily/ Apartment	10
<b>Driving Behaviors</b>		Manufactured home	2
Doesn't drive	3	Terrain outside home	2
Drives without restriction	6	Uneven or "unsafe"	
Limits driving (no nights)	3	Even and level	3
Limits distance and roads	2	Afraid of traffic	9
<b>Income:</b>		Yes	10
Lower (10K/year or less)	9	No	4
Middle (20K/year or more)	5	Afraid of crime	
		Yes	10
		No	4

Senior Center. Mitzi has seen many changes in the programs including the closing of the Headstart Program after the state of Georgia instituted the state pre-kindergarten programs funded by state lottery proceeds. After the preschool closed in 1999, the County Executive approached Mitzi and proposed that the Community Action Program be housed and operated by the same non-profit agency that directed the Senior Center, and due to a need for funding for Senior Center programs, Mitzi agreed.

With her carefully cropped reddish shoulder length hair and her speedy movements, Mitzi looks like a fireball quickly darting from task to task as Director at the Elijah County Senior Center and the Community Action (Utility Assistance) Program. Despite being busy, Mitzi is friendly and always has time to chat with clients and staff expressing caring and concern for what is going on in their lives. Mitzi typically dresses in a professional manner wearing skirts, stockings, and dressy shoes to work, but this does not stop this 47-year-old grandmother from leading the line-dancing group at least once a week. Even though she has fibromyalgia and takes steroids, that make her “puff up,” Mitzi says if she doesn’t do the line dancing or walk daily, her condition would be much worse.

When observed leading the line-dancing group, she functions as both a peer and a teacher, acting in the role of peer when all of the members know the steps to a dance like the “Electric Slide,” but she easily slipping into the role of teacher when it is evident that some of the members are not familiar with the more complex steps in dances such as the “Kansas-City Shuffle.” Mitzi shared that she started the exercise program about eighteen years ago after attending a “senior fitness” workshop given by the Georgia Division on Aging. Although she has no formal training in working with older adults, she attends

continuing education when available. This is how she learned about other centers doing line dancing, and she was encouraged to begin a line dancing group at Elijah County Senior Center around five years ago. She proudly stated that the group has gone to nursing homes and to churches to perform and that the group even has made themselves uniforms that they use for these public performances. While she acknowledges an awareness that the seniors get frustrated when she is not there to lead the exercise group, she explains “older people sometimes can be real dependent...Even though they know how to lead themselves, if I haven’t been leading the group in a while, participation drops off, so I have to make sure that I go in there and lead the group at least every two weeks...so they don’t get upset and stop coming to the group.”

Because she has been the Director for many years and because she is accountable to the Elijah County Senior Center Board of Directors, Mitzi has a deep understanding of policy issues that impact her ability to deliver effective programming at the Senior Center. Mitzi has a keen awareness of the need to publicize her program, and she usually gets an article or a picture into the *Pine Needle Press* on a monthly basis. Mitzi realizes the tension between housing two programs under one agency, and knows that the Senior Center is dependent on funds from federal and state programs, always thinking about when she has to apply for the next round of funding. She confides that she prefers, working with the older adults, and really sees the benefits of health promotion programs, but she must devote much of her time to the Community Action Program because it helps meet the operational expenses such as utilities that she would otherwise have difficulty paying if the Senior Center Program was a lone entity.

Mitzi states that she has personally experienced the benefits of physical activity in managing her chronic health condition, and she has seen the exercise group benefit many older adults. She does note, however, “you can’t push people, you just have to keep encouraging them to try the group out.” Mitzi is aware of the church related exercise group in town, but states that many people who attend the Senior Center, might not feel comfortable in a church related program.

Mitzi whispers that although staff members from the hospital are on the Advisory Board of the Elijah County Senior Center, the Elijah County Hospital Cafeteria is seen as “competition” for the congregate meals program at the center. For example, many of the “more able bodied seniors with money eat lunch at the hospital instead of coming to the Senior Center.” While the hospital would like these seniors to eat in their cafeteria for the revenue, Mitzi acknowledges that it is often the congregate meals program that first attracts older adults to the Senior Center. Later on, these participants discover the benefits of the health promotion classes and the exercise group. So, Mitzi concludes, if older adults eat at the hospital, they may miss out on the town’s major source of health promotion for older adults in this rural community.

### *Stacy*

Stacy is a 27-year-old woman who the Senior Center members universally describe as “sweet.” When I first met Stacy, she was having a rough day because Mitzi was out with a family emergency. Despite being somewhat overwhelmed trying to do two jobs, when she realized that I had driven four hours to meet with Mitzi she stopped what she was doing to assist me. Stacy introduced me to the participants in the exercise groups as well as the Senior Center members who only participate in the congregate meals



program. I was surprised and grateful that Stacy spent a considerable amount of time and effort orienting me. She invited me to ride the transportation route with her, and provided me with archival materials about the Elijah County Senior Center.

Originally from a much larger town, Stacy's family owns hunting property in Minton and she met her fiancé while visiting Minton for a weekend. She says that she is prepared to spend her life in this town, but reveals, "I get so tickled when I read the newspaper or hear people here talking about the traffic...living in a small town has its good and bad points...people here don't know me, so I don't have anybody in my business...yet."

Stacy attended college for one semester studying sociology. After she dropped out, she worked for two other non-profit agencies prior to beginning her current job as the Assistant Director of the Elijah County Senior Center just over a year ago. Her prior jobs were working with pregnant teenagers for agencies in a much larger city. She stated her opinion about working with older people as follows: "The teens never appreciated the hard work I did, the seniors really are sweet and appreciate what we do, though sometimes they can be a little dependent."

Stacy was aware of the church groups that promoted physical activity in this community. She explained that when she first came to work at the Senior Center, she contacted the church groups to see if there were church members who might benefit from the Senior Center and also to see if there were any potential volunteers for the Meals on Wheels who were members of these local churches. She shared:

They [churches] wouldn't give me the time of day...I asked them to help bring a meal to one of their church members and they wouldn't even consider it as part of

their senior ministries...after that, I realized that we wouldn't be doing much together in this town.

Stacy also shared her beliefs about programming that might discourage older adults from attending a Senior Center where they “put a silly-old craft like a Christmas ornament in front of the senior and tell them to do it...or they try to give Bingo prizes like lotion or shampoo, when these people would much more appreciate things they need like food, so we give canned or dry goods a lot of time as Bingo prizes.” Stacy shared her perceptions:

The seniors can be real needy at times, sometimes downright like children, but as I do intakes for the Community Action Program, I realize that some of these people need a lot more help than some of the Senior Center folks...some of their stories are really sad and I go home and cry and I thank my lucky stars that I have a roof over my head, food, and a job. There's a lot of poverty here and there's high unemployment, so the senior's problems seem like nothing compared to these other people's problems.

#### *Amy*

Amy is a bubbly 24 -year-old woman who has a degree in health education and currently employed by the Georgia Division on Aging as a wellness coordinator. In her job, Amy is responsible for providing both direct and consultative services to Senior Centers in seventeen rural Georgia counties. She states “I love my job, I can't believe that just because I have a college degree, people respect me...originally I wanted to work with adolescents, but I just fell into this job and couldn't be happier.” In her capacity as a wellness coordinator, Amy provides educational modules on health related topics to the

seniors around the mealtimes and she provides consultation and services on fitness, nutrition and other areas of health promotion.

Having observed her interacting with the staff and the seniors, I am surprised that she knows all of the seniors by name or face for only being in the center twice a month. She eats the noon meal with the older adults, is friendly with many of the older adults, but she seems to understand her age differential between herself and the Senior Center members stating: “There are certain subjects, like sexuality, that I wouldn’t discuss with the seniors because of my age.” Amy demonstrates what appears to employ effective teaching strategies by using humor, stories, and appropriate educational materials for her educational sessions. She notes that she has a budget to purchase educational materials and she is also accountable for generating program objectives and meeting those goals.

Amy states that each Senior Center is different and she tries to provide what they need:

Here [Elijah County Senior Center], they have a good exercise program, so I just check in on them periodically to make sure they’re doing right...but in this center, I focus my efforts on educational approaches and try to encourage the ones who don’t exercise to start into the group. I come here a few times a month and do a class, some screenings or some assessments...The staff here is good, so I focus on the centers who really need help even getting an exercise program started and I lead the programs in some of the counties I work in.

Despite being young and having limited experience, Amy seems to demonstrate a fair amount of insight regarding the challenges of health promotion professionals in

motivating individuals for healthy behaviors. When discussing the role that communities can play in promoting health for older adults, Amy noted that

Many of the gyms want the older folks' money, but they don't usually provide good programs that are safe for older adults, so they stop going to them...If I had a lot of money, I would open a wellness center for older adults in every other county in Georgia. I tried to contact the churches in several of the counties I work in and they don't do too much for older folks in the way of health promotion...as far as trying to work in politicians, they have bigger fish to fry...you have to have passion about an issue to make changes in a community.

#### Description of Informal Interviews with Service Providers

In addition to performing in-depth interviews with older adults and with Senior Center staff members, I also conducted fifteen informal interviews with service providers and community leaders to ascertain their knowledge and perceptions about the community and its ability to promote physical activity for older women in this community. Each interview occurred in-person or on the telephone using an informal interview guide (Appendix C) and these interviews lasted anywhere from ten to forty minutes.

These interviews revealed that individual service providers have different levels of awareness regarding availability of services within the Minton community. One point, however, is that all fifteen participants were aware of the Elijah County Senior Center Exercise program, mostly through the local paper, *The Pine Needle Press*. Thirteen out of the fifteen informal interviewees also identified the local parks and walking trails as potential facilities that older adults might use to be physically active. All participants

identified health as a possible barrier to physical activity and twelve of the fifteen indicated that transportation problems could limit older adult involvement in community activities.

When asked to describe a person who is aging healthy, several of the participants said that older adults who work or volunteer are usually more active and healthy. Many participants described a “healthy older adult” as one who exercises and eats right, and a few suggested that a healthy older adult “probably follows doctor’s orders.” When service providers were asked what would help their community to enhance the promotion of physical activity for older adults, many interviewees said that they would expand programs like the Senior Center and that the community needs to encourage older adults to be involved in civic activities.

## CHAPTER 5

### FINDINGS

The purpose of this study was to identify factors that influence physical activity participation in rural older women. The research questions sought to uncover the individual, environmental, and social factors as well as the barriers and facilitators that influence physical activity participation. Following the procedures mentioned in Chapter 3, I formulated the findings.

Data obtained by purposive sampling from 17 in-depth interviews, 15 informal interviews, observations, and document analyses comprise this summary of findings. All interviewees were given pseudonyms and names of places or organizations have been changed to preserve confidentiality of individuals and the community.

Data collection methods for this study happened in a concurrent fashion. For example, observations were interspersed with interviews of older adult women and service providers within the community. Using the constant comparative approach to data analysis, review of the data occurred throughout the data collection process. After the first in-depth interview and the first morning of observations, tentative categories were identified. These categories continued to be revised and sorted throughout data collection and analysis.

Before the final report was constructed, member checks occurred via e-mail and telephone communication with one older woman participant, one staff member, and one service provider (Elijah County Executive) who could speak at length about program

planning for older adults. These member checks served to insure that findings were interpreted within the appropriate context of this community. These member checks did not significantly alter the themes generated, but their questions and comments about the findings did result in the categories being revised slightly.

Table 5.1 Overview of findings in response to the first three research questions

Research Question	Findings
What are the individual factors that influence physical activity participation in rural older women?	<ul style="list-style-type: none"> <li>• Health</li> <li>• Life context</li> <li>• Personal attributes</li> </ul>
What are the rural environmental factors that influence physical activity participation in rural older women?	<ul style="list-style-type: none"> <li>• Natural environment</li> <li>• Structural or built environment</li> </ul>
What are the social factors that influence physical activity participation in rural older women?	<ul style="list-style-type: none"> <li>• Interpersonal support</li> <li>• Organizational factors</li> <li>• Public images of older adults</li> </ul>

This chapter will discuss individual, environmental, and social factors influencing physical activity participation in rural older women. Table 5.1 shows categories that comprise the findings in response to the first three research questions for this study. I will first display individual factors that consist of health, life context, and personal attributes. Second, I will present environmental factors having an influence on older women's physical activity participation including the natural environment and the structural or the built environment. Third, I will present social factors that shape physical activity participation including interpersonal support, organizational factors, and public images of older adults. It was found that each of the three categories of factors (individual, environmental, and social) demonstrated interactions and these interactions

are presented during the discussion of each group of factors. The fourth research question for this study: “What are the barriers and facilitators of physical activity participation in rural older women?” will be addressed within the presentation of each group of findings as well the end of the chapter.

Table 5.2 Individual factors influencing physical activity participation

Health
<ul style="list-style-type: none"> <li>• Physical</li> <li>• Emotional</li> </ul>
Life context
<ul style="list-style-type: none"> <li>• Roles</li> <li>• Time and routine</li> <li>• Financial situation</li> </ul>
Personal Attributes
<ul style="list-style-type: none"> <li>• Life history <ul style="list-style-type: none"> <li>• Work ethic</li> <li>• Gender</li> </ul> </li> <li>• Interests and activities</li> <li>• Values and attitudes <ul style="list-style-type: none"> <li>• Guilt</li> <li>• Internal versus external motivation</li> <li>• Attitudes about age</li> <li>• Relativism</li> </ul> </li> </ul>

### Individual Factors Influencing Participation in Physical Activity

The first research question addressed individual factors that influence physical activity behavior and Table 5.2 represents the categories and subcategories that emerged from the data. Participants had little difficulty identifying individual factors that included health, life context, and personal attributes as having influence upon participation in physical activity. Health factors included physical and emotional health. The life context factors included roles, time and routine, and financial circumstances. Personal attributes was the final category of individual factors that emerged and these included life history, interests and activities, as well as values and attitudes. In the category of life history, two



subcategories that emerged were work ethic and gender. The subcategory of values and attitudes was further sorted into subcategories that encompassed attitudes such as guilt, internal and external motivation, attitudes about age, and the concept of relativism.

### *Health*

All participants identified health status as influencing participation in physical activity positively and negatively. For example, participants identified health problems as a barrier to being active whereas a lack of health problems would “allow older folks to keep going.” The older women, staff members, and community service providers readily acknowledged the health benefits of physical activity as having potential to affect both physical and mental health. It appeared that participants were able to more readily identify health as a barrier rather than a facilitator to physical activity participation.

*Physical health.* Reported medical conditions identified by participants ranged from having several chronic health conditions such as arthritis, diabetes, heart problems, and cataracts to one participant who had no reported health problems and the oldest participant who reported only occasional problems with dizziness. There was no consistent relationship between the presence of medical conditions and perceived ability to be involved in physical activity. For example, Judy, an active 74 year-old-woman, described herself as follows: “I was always frail and weak...and I am still weak, I have never been a strong person, and I’m so cold natured...I have arthritis, high cholesterol, and I’ve had three heart attacks.” Despite these apparent medical conditions and a perception of “frailty,” she participates in an exercise group two times a week, walks daily, and is an active church member. Conversely, 79-year-old Betty who appears to be quite “able-bodied” stated: “I go into the recreation room, [at the Senior Center] I can’t

do the line dancing and their exercises [the Senior Center Exercise Group] because I have a hip replacement.”

Most participants, regardless of activity status, easily identified the physical benefits of being physically active. Rita Mae summarized the physical benefits or facilitators to physical activity since beginning the Senior Center Exercise Group:

I have had a lot of trouble with my back and my knees, but since I have been exercising, I can tell its helping...I can walk to the mailbox and I used to give out when I come back ...now I can go to the mailbox and its not quite as bad.

*Emotional health.* Recognizing the emotional benefits of exercise, as one participant, Ruby stated: “It [exercise] helps all the way ‘round.” Virginia described a euphoric feeling during her participation in an exercise group noting: “Sometimes when I’m exercising, I get so tickled.” At least four of the older women interviewed for this study, stated that they began or resumed an exercise program to overcome depression. For example Wanda confided:

I didn’t come here [to the Senior Center] for about a year and a half after my daughter died...I got along ok, but I wanted to start being with people again and feel better, so I came back and started exercising again.

### *Life context*

Participants in all interview groups (i.e. older women, staff, and service providers in the community) identified life context as a factor that shapes participation in physical activity. The data from these interviews clustered into the subcategories of roles, time and routine and financial situation which all have potential to impact participation in physical activity.

*Roles.* Many of the older women identified multiple roles and responsibilities such as caregiving, being an active church member, or doing volunteer work, all of which had the potential to influence their involvement in physical activity. Caregiving responsibilities the older women described included caring for sick spouses or adult children, transporting grandchildren to and from school daily, and as Alva explained how taking care of others helped her to stay active; “Each day, I wake up and I call three older women and I see ‘bout them. I see what they need today, like goin’ to the store, having me read them their mail or their bills, or just having a visit.” In Alva’s case, caregiving served to keep her active, whereby Bessie noted that going to the nursing home to visit her son limited her time and energy for taking walks, so “I get out of the routine of walking, when I go to see ‘bout my son.”

Similarly, Ruby shared that caring for her husband limits the frequency and the duration of her exercise routine:

If I had more time during the week, I would probably walk some more but I don’t like to leave Dan by himself in the house, because he has taken three or four bad falls, and I just don’t want to be gone an hour from the house.

Ruby goes on to say although her role as a caregiver sometimes limits her ability to be physically active, she realizes that doing physical activity helps her fulfill this role more successfully and she shared that her husband feels the same way, encouraging her to do exercise to preserve her strength to be able to care for him. “Don says, you gotta stay well now so you can wait on me.”

Many of the women were active in their local churches serving as Sunday School teachers or service group volunteers. Women also reported being involved in support or

social groups such as the “Caring and Sharing Group,” the “Happy Rovers” group, and the “55 Alive Group.” One woman, Judy, described her life as cooking and going to various meetings at church and other organizations:

I am doing things in the house and washing clothes and whatever needs to be done in the house, but then I am involved in other things too. There’s the “caring and sharing” group for us widows. I go to “Young at Heart” group once a month luncheon, and once a month we have a friendship club in Cottonwood, bring a covered dish at both places, and I go to church. I’m in the choir so we practice on Wednesday nights, and then church on Sunday, and then there’s always something on the side, somebody dying or you know things you got to do so it just keeps me really busy it [retirement] is not slow to me. It might be for a lot of people, I just stay busy all the time, but I would prefer it that way. I just can’t sit home and hold my hands when I am at home I am busy in the house, things in the yard. I am a member of the Women’s Mission Board. We do covered dishes about twice a month...I know I’m just about cooked to death [laughs].

Five of the older women participants identified the role of volunteer as an activity that encouraged being physically active. Linda, for example, felt that although she only volunteered one day a week at the hospital, that her four hour day at the hospital could be counted as a day of exercise because “ We’re up on our feet for most of the four hours were there, so that’s got to be worth at least a day of exercising [laughs].” One woman conceded that volunteer work could also limit involvement in physical activity:

Mary: How often do you volunteer at the hospital?

Alva: I just do it one day a week now...I used to do it two days but I am just doing one now because I have been doing things for my family and I just cut back to one day a week... I do for other people everyday, I take the ladies to the store everyday 'round about 10:30, so this limits me being able to take in my own exercise, but runnin' them around keeps me active but I guess it's not the same because I'm in the car or sittin' in the ladies houses.

*Time and routine.* Many women described the experience of juggling their schedules or structuring their routines in order to get more physical activity. Wanda gave an example: "For instance, next week on Tuesday, I'm supposed to be in Bladesboro at 12:00 and I'm trying to juggle to see if I can come up here [the Senior Center] to get my exercise in and then have time to drive to Bladesboro." Many of the more active women described scheduling appointments such as doctors, dentists, or beauty salons on days when they were not volunteering or attending an exercise group. Joan, who works part time, volunteers at the hospital, and is involved in numerous organizations, explains how she structures her routine to avoid missing her exercise:

It's very beneficial that I work in our business, but I have to make sure I get in my exercise, so I keep my golf clubs and my exercise clothes in my car so that I can walk at the park across the street from work or take in a golf game after I leave work when the weather is decent...If I miss my exercise during the day, I can usually talk my husband into walking with me in the evening because he needs his exercise too.

Fannie and other participants described the challenges of re-establishing routines after an illness, a vacation, or a break in the routine of physical activity. She identifies

her strategy for staying active at age ninety-three: “I get up and leave home at 9:00 every day just like I was going to work. I come up here to the center Monday through Friday, and on Saturday and Sunday, I’m involved helping friends or doing church things.”

*Financial situation.* Although there are no available opportunities for participation in commercial fitness facilities within this community, the older women in this study identified financial factors that hindered them from taking courses such as line dancing, tennis, and aerobics at the local college. Wanda confided: “You have to pay for those courses over at the college. Sometimes they’re as much as seventy five dollars and many of us don’t have that kind of money.” Joan’s comments also attest to the financial issues: “I used to do a weightlifting class at the college, but I’m not into that right now because every time they start a new season they raise the price.”

Participants also stated that money limited participation in travel, which might also enhance participation in physical activity. On a more encouraging note, reports from service providers and a review of program materials revealed that there is no cost for participation in the Senior Center or in the local church exercise program. In addition, many of the social activities offered at the Senior Center, one of the local senior citizen apartment complexes, and the church groups in town (i.e. Happy Rovers and 55 Alive groups at the Baptist and Methodist Churches, respectively) are also provided free of charge. Although money was identified as an issue, there was no apparent association with perceptions money as a barrier with the income level of the older women.

#### *Personal attributes*

Factors that arose under the category of personal attributes included having a life history of physical activity, having interests that encouraged physical activity, and having

attitudes that influenced participation in physical activity. When asked about reasons for being engaged in physical activity or to speculate on why people might not be physically active, many of the interview participants readily identified attitudes that were more often barriers to physical activity. For example, Wanda concluded that some people “are just lazy.” Life history was also a factor identified as both a barrier and a facilitator to physical activity. Wanda continued, “Lazy people have probably been that way their whole life.” Mitzi indicated that some older adults who were more sedentary might not participate in physical activity because of an attitude “they worked hard all their lives so why would they start exercisin’ now?” Conversely, some participants made statements indicating a life history of activity such as: “Its just their way to be active” or as Fannie put it: “I was raised up working on a farm and we all worked hard, so I’ve always been a busy person.”

*Life history.* Many of the older women, Senior Center staff, and two of the health professionals informally interviewed for this study identified personal history as a possible factor that influences participation in physical activity. Some of the women shared that they had a life history of being involved in activities such as work, church, or social activities. Most of the interview participants reminisced at how things are so much more convenient nowadays and perhaps as Ruby put it:

You didn’t see our parents needing exercise, ’cause they were working with their hands and their bodies. We sit and watch television and we drive everywhere, of like me, worked at a desk for 20 years...so that’s why we need to add exercise into our day to stay healthy.

Several of the older women described growing up on a farm and having to work in the cotton or tobacco fields as a child as Fannie describes:

When I was little and we were all working the farm, all the children were always outside helping or getting things for the older people. Mother would need some wood and I brought it in to cook with. I would bring a bucket of water into the house or any other little thing that my parents wanted done...When you live on a farm you don't know what farm work is...My daddy would whistle and we knew what he meant, he need some water brought down...so I always took the water to him when I was little...Later, instead of fetching people what they needed, I was the one working the fields, picking and plowing, it was hard work. If you grow up working that hard, it isn't easy just to stop when you get older.

Another aspect of life history was the issue of gender, which seemed to be evident among the individual factors women identified as having more of a negative influence on lifelong involvement in physical activity. Many of the women talked about playing team sports in elementary and high school only during physical education classes (not on teams, like boys did) as Wanda recalled:

Back then, sports teams were only for boys...and softball was my love! ... We would choose sides in school, but *never anything out of the classroom* [italics added]. There was *one* [emphasis] time when I was working at different plants here in Minton, that they had teams of their own and I competed in them for softball...these were working ladies and we would play other women's teams. It was great fun, but we had a hard time finding ladies to join the team, so it died out after a while.



Materials about Minton provide evidence of limited involvement of women in organized sports. A review of old high school yearbooks from 1980's until 1999 reveals, for example, that there were few teams other than basketball and track for girls. It should be noted that in the past few years the local high school has had teams such as basketball, golf, and tennis for girls. Activities for younger girls also seem limited as evidenced in *The Pine Needle Press* articles as well as materials produced by the local parks and recreation. Both sources of data demonstrate the presence of sports leagues for boys, but no apparent references to teams for girls or even co-ed softball, soccer, or baseball for younger children in this community. It appears that this community promotes more "traditional" female physical activities such as cheerleading, which is published in both the high school and the recreation department athletics materials. The local telephone book also provides evidence that there are a number of "dance" programs available in the community, which may give further evidence of promoting more typically "female-oriented" activities for girls.

*Interests and activities.* Inherent in the multiple roles that older women described was the fact that their interests and leisure pursuits had sway in how physically active the women were. Some women discussed taking classes at the local college, belonging to a book club, or participating in a travel organization that sponsors senior trips out of the neighboring county's Senior Center. Two of the women stated that having a pet kept them active due having to care for, walk, and feed the pet. Although some of the above activities may not be vigorous activities according the Surgeon General's standards for physical activity, women described activities as helping to keep them physically active

because their interests encourage them to “get out of the house,” to walk, and as Linda put it, “to get out and see folks.”

Many participants reported enjoying gardening, doing yard work, or just tending to plants out in front of their home. Despite the love of gardening, several participants stated that they had either “downsized” or limited involvement in heavy yard work in the past several years. Wanda put it rather succinctly: “I don’t want anything you have to feed or water...After my husband died, I cut down both my pear trees...and dug up all my fig trees...because...you know...that’s work.” This relinquishing of activities, particularly gardening inhibits opportunities for older women to be physically active.

More sedentary leisure pursuits listed by women included participation in Bingo, reading, doing crosswords, and watching television. Except for television being specifically identified by several women as a barrier to physical activity, none of the interests that women described were explicitly identified as actually limiting their physical activity. Women stated that chores were their greatest means of being physically active. Although the scaling-down of more vigorous physical activity (i.e. heavy yard work) might help the older women conserve energy for more valued activities, it might also be a hindrance to achieving the recommended daily physical activity. For several of the more sedentary older women, such as Flory, and Geraldine, participation in daily life tasks of cleaning, personal care, and meal preparation were the main source of physical activity and may provide a useful substitute for more vigorous exercise-related activities. Betty and Doris, for example, relinquished all of their household chores to their daughters, and hence had fewer opportunities to be physically active through daily life tasks.

### *Values and attitudes*

Many of the women, staff members and service providers identified both positive and negative attitudinal factors that influence participation in physical activity. It appeared that staff members and several of the older women, saw negative attitudes as a barrier to physical activity, while positive attitudes were not clearly identified as a facilitator of participation in physical activity. Specific attitudinal factors included guilt, internal vs. external motivation, views on age, and relativism comparing themselves to their peers.

*Guilt.* Guilt was expressed as both a neutral factor and a facilitator to physical activity involvement. Flory stated that, “There are a lot of activities in the apartment complex that I don’t go to...but if I feel like going I do, because I need to get...I know I need to move around more.” When Wanda was asked if she would exercise later in the day if she missed exercise group, she retorted: “No...if I miss it [the exercise group], I miss it.” Many of the other women confessed that they know they “should” be exercising more frequently which demonstrated some level of awareness of the Surgeon General’s recommendation to exercise on most or all days of the week. For example, when Bessie was asked how often she got outside and walked, the conversation would go as follows:

Bessie: I walk every day, cause he [physician] told me to walk every day. Well he put me on a mile at first, but it was a bad pull to me. So I just start walkin’, doin’ what I could a little closer back to the house. I walked like this block and go all the way around and make a stretch of that, and then I come in.

Mary: And is that 5 days a week or 7 days a week?

Bessie: uh...uh...well... its supposed to be 7 days...but I do what I can.

*Internal vs. external motivation.* The participants described the concept of being internally or externally motivated as a factor that guides participation in physical activity. While some participants described internal motivation as being important, others described external motivation as a factor that encouraged participation in physical activity. Wanda indicated that she has learned by experience to be more intrinsically motivated regarding involvement in physical activity, stating that many people:

They just don't exercise because they're too "lazy" or too wrapped up in the "stories" to get outside and walk. Two different times, I tried to organize the ladies in my neighborhood, some of us widows, to get out and walk in the mornings. It wouldn't be too long before one would drop out, then another. Soon I was by myself again. The group never lasted more than a few weeks. After that, I realized, I had to depend on myself for exercise.

For Linda, external motivation appears to act as a facilitator for physical activity. Linda described herself as not being physically active until "my friend told me she was goin' to come get me and take me to volunteer at the hospital." She also described her walking program as being influenced by her daughter: "My daughter, comes get me a few times a week to walk at the track." Not wanting to disappoint others may serve as an external motivator helping Linda to be physically active and is evidenced in her statement, "When she [daughter] shows up in the morning, even if I don't feel like it, I can't let her down."

Mitzi, the Senior Center director summarized her opinions about people needing to be internally motivated in her comment: "You can't force people to exercise, *they have to want to do it.*" The wellness coordinator, Amy, seemed to believe that the participants

had more external motivation to be physically active in her statement: “You have to make exercise fun, let people know you care about them, let them know you’re interested in their lives and that you miss them when they aren’t at your group.”

*Attitudes about “age.”* Positive and negative attitudes about age were consistent among participants based on their activity level. It appeared that the less physically active older adult women and some community service providers viewed aging as a time of decline. Helen says:

I’m 85 years old and I’m way too old to line dance or walk on a treadmill...I tried it, but I got dizzy...you know I am a little to old now to do all that standing exercise, but I can sit down and do it [exercise].

Conversely, 93-year-old Fannie had a more positive view of aging:

It feels good to be a role model. You can never give up, whatever you start keep it up, and encourage others to do so, I would rather do for somebody else, cause I’ll do for somebody else quicker then I’ll do for myself. I’ll never stop. My daddy lived to be 102 and my mama was 93, so I plan to be around a few more years. I always encourage everybody to do all they can do, don’t sit down and give up. I have the willpower behind it, you’ve got to be willing to do, and always don’t let it be a burden to you, anything you want to do.

*Relativistic attitudes.* Within discussions about perceived activity level and perceptions about their health, another interesting attitudinal factor that seemed to emerge from the data was the concept of what I call “relativism.” All older women interview participants were asked to comment on the types of activities they participated in; any health conditions that might limit them; and how satisfied they were with their current

level of physical activity. Regardless of their level of activity (as measured by the Surgeon General's standards), they all described themselves as physically active. While the older women willingly admitted to "down grading" activities or reducing the demands within their living environments, they all viewed themselves as physically active by doing housework, hobbies, or community work. In addition, no one reported being dissatisfied with their activity level, in many cases, stating as Betty did: "For my age, [79] I'm doing pretty good." Bessie echoed a similar sentiment, comparing herself to others who were her age or younger. She poignantly states:

They's only two of my 19 brothers and sisters living. Me and my baby sister is the only ones left, and she have no grunts than I do [laughs]...she say..."oh, po me, I'm by myself...y'all gonna let me die." When she gets sick she wanna see the rest of the family so I have her son come and pick me up so's I can go see 'bout her.

This section on individual factors discussed health status as both a barrier and a facilitator to physical activity. Generally, the presence and/or severity of medical conditions is positively associated with inhibiting involvement in physical activity, though several of the participants (Judy, Ruby, Rita Mae, and Mitzi) recognized or used their condition as a facilitator for physical activity which is necessary to preserve and maintain their health. For the most part, depression was the one emotional health factor that was clearly identified as a barrier to physical activity, yet two of the participants (Wanda and Virginia) stated that physical activity helped them overcome depression, so in one sense, the desire to overcome depression may have in a roundabout way facilitated involvement in physical activity.

In addition to health being an individual factor that influences participation in physical activity, life contexts such as roles, time and routines, and one's financial situation impacts involvement in physical activity. In most cases, involvement in more roles, activities and interests facilitate physical activity, though the juggling of schedules is necessary when the women hold multiple roles. Caregiving was more of a barrier to involvement in physical activity but this role was also seen as a motivator for one woman (Ruby) to maintain her level of physical activity. Although the Senior Center and the church group in this town do not charge for their programs that may facilitate physical activity, financial factors influenced involvement in other types of programming. For example, several women indicated that finances hindered their ability to participate in leisure related physical activity such as fitness courses offered through the local college or being able to take advantage of travel opportunities.

Personal attributes such as a lifelong history of involvement in physical activity, a variety of interests and involvement in activities within the community, and having a positive outlook were all identified as facilitators to involvement in physical activity. The two most frequent responses participants gave when asked why they think people aren't physically active, was having poor health or "having a negative attitude."

#### Environmental Factors Influencing Physical Activity Participation

When asked about external factors that had an impact on participation in physical activity, data from in-depth as well as informal interviews revealed consistent themes that are displayed in Table 5.3. Nearly all interviewees mentioned aspects of the natural environment such as weather, amount of daylight, and aesthetics. Generally speaking, barriers as opposed to facilitators within the structural environment were identified more

frequently. Many of these factors, which are also documented in the literature, include geography and terrain, availability of facilities, proximity of facilities, and safety within the community as factors that might influence participation in physical activity.

Table 5.3 Environmental Factors Influencing Physical Activity Participation

Natural environment

- ☐ Weather
- ☐ Amount of natural and/or artificial lighting
- ☐ Aesthetics

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Structural or built environment

- ☐ Geography or terrain
  - ☐ Availability of facilities
  - ☐ Proximity
  - ☐ Safety
- 

*Natural Environmental factors*

In order to identify natural environmental factors, participants were asked about their physical surroundings and to identify things in their community that might help or hinder them in being physically active. Included in factors described in the natural environment were the weather, the amount of daylight and the aesthetics of the area. All participants were able to acknowledge the weather as a factor that might inhibit physical activity. Surprisingly, many participants stated that they never thought about the character of the trees and flora around their home environment as hindering or helping their level of physical activity, but one participant, Virginia states that her trees make her want to get outside and walk:



When it starts to get warm, I love to just go outside and walk about looking at all of the Camilla's we planted. It makes me sad, but I feel that I'm with my husband when I get out there and walk among those trees.

*Weather.* Weather was unanimously identified as a factor that inhibits older adult physical activity. Judy described limiting her activity in the hot weather:

I have a riding lawn mower and that is therapy to me. I love to ride it, but I can't stay on it very long you know because it might mess up my heart so I try to stay on it a little bit of a time. When it's hot, I may take two or three or four days until I get it [the yard mowed] all done. I get out there early in the morning or even late in the afternoon or I spread the job over a few days only working in the morning or late afternoon during the summer months so I don't get a heat stroke.

In addition to the temperature, Ruby shared that when she tried to walk on the trail in the park across the street from her home in the early morning, the humidity (regardless of the time of year) and the moist air near the pond hindered her breathing, so she started coming to the Senior Center to exercise where it is "climate controlled."

Being a northerner, I would have thought that the weather would be identified as a facilitator to physical activity, but this was not the case. For example, one might think that because South Georgia has more warm and sunny days per year, that it would encourage physical activity. Several participants' comments about the weather were made regarding changes in weather, which led me to believe that perhaps it is not the weather itself, but rather, the changes in weather patterns that negatively influence consistent outdoor walking or activity routines. For example, one informal interview with an older woman who recently joined the exercise group at the Baptist Church [which

occurs in a climate controlled setting] revealed that she had been coming to the group for about 3 months, but she added: “I don’t know if I’ll keep coming when the weather gets cold.”

*Amount of natural and/or artificial lighting.* Most of the older adults, all staff members, and many of the community service providers identified that the amount of daylight was a key factor in deciding whether or not people might be physically active out of doors. Many of the informal and formal interviewees also noted that many of the local walking tracks had good lighting at night, which might encourage use of the walking trails. Several participants, Ruby among them, stated: “Simon Park is well lit so you shouldn’t be afraid to exercise there.”

Other participants suggested that they would not exercise in an environment they were not totally familiar with without sufficient natural or artificial lighting stating that that they would only go to outdoor walking tracks during midmorning when it was “light outside.” The amount of daylight also pertained to the ability and/or willingness to drive at night to be able to participate in church and other social activities. Several of the older women participants shared that they did not go to evening Senior Center functions and some older women stated that they no longer went to evening church activities because they elected not to drive at night due to concerns over driving safety.

*Aesthetics.* Aesthetics also arose as an environmental component indicated by the study participants as influencing physical activity. In particular, many of the interview participants discussed scenery in local parks or neighborhoods as helping to make walking a more pleasant experience. One park in particular, Simon Park, was mentioned numerous times as being a nice track to walk on because it was out in the open and the

walking track had trees, benches to sit on, and ducks in each of the three large ponds that walkers might enjoy. Several participants also mentioned two other walking trails, one located out at the Elijah County Recreation Complex and the other at a nearby state park, that both had more wooded trails with more challenging trails because they had more curves and more hills. Interview participants from the Elijah County Senior Center and the local church groups mentioned taking field trips with groups of older adults to the state park in order to walk on the trails.

In terms of aesthetics surrounding their homes, many participants talked about their gardens or flowers as a source of enjoyment that got them walking outside of their homes. Virginia shared:

I work in the flowers. My camellias are beautiful. They're real pretty and they make the place look good. In the spring, they make me want to get outside to see how they're blooming. They make me enjoy life in the country.

Flory, who was much less physically active, stated that tending the few flowers she in front of her apartment encouraged her get outside of her apartment at least a few days a week.

The presence of a variety of visual stimuli in the environment may have had both a positive and negative influence on older women's physical activity. My initial impression visiting Bessie's home, was that she would not want to go outside of her home (which was located on a busy street with uneven sidewalks) because the environment was not pleasing, but rather (in my opinion) scary. She stated, however, "I loves to get outside and see what's goin' on, go down to the diner, go get me a paper and just watch the cars go by, to just know I'm alive." Conversely, those elderly women

who lived out in the “country” with more rural acreage isolated by tree cover, may have actually had less variety or visual stimulation in their environment. Betty put it succinctly: “Why should I go outside to watch a bunch of pine needles and pine cones falling off the tree?”

Although some of the interview participants in this study lived in areas that had lots of trees and green space as well as sidewalks or safe areas to walk, Figures 5.1 through 5.4 demonstrate that much of the community within and surrounding Minton, is not altogether aesthetically pleasing, nor would it be safe to walk on the side of the road. While I did not see every participant’s home, I did make the observation that participants who lived in more isolated areas with less variety in the natural environment (i.e. minimal variety in flora and fauna), tended to be the participants who were less physically active. While aesthetics may be one factor, the terrain or geography might be another factor that contributes to activity participation. Geography will be discussed within the structural environment, because it consists of both natural and constructed elements.

#### *Structural factors in the environment*

Some of the natural environmental factors may overlap with some of the structural environmental factors (e.g. terrain could be natural or built). This category emerged as being different from the natural environment in terms of being built or constructed and perhaps implies that we might be able to modify the “built” environment to encourage physical activity. Factors within the built or the structural environment include the geography or terrain, availability of facilities, proximity and location of facilities, as well as participant perceptions about safety in their physical environment.

*Geography or terrain.* Noted in Figures 5.1 through 5.4 are the types of pavement on which older adults might have to traverse. In Figure 5.1 and 5.3, which are rural and “in-town” locations respectively, each reveal terrain features that older adults might consider difficult to negotiate.



Figure 5.1. Note the uneven dirt driveway at Betty’s home, which limits her ability to walk outside her home. Her house is on an isolated road with limited aesthetics in her environment



Figure 5.2. Virginia’s home out on a country road, the rest of the farm is located behind the house. Gravel and dirt paths do not limit her ability to walk outside.



Figure 5.3. Although the sidewalk and the walkway are uneven pavement, this does not seem to limit Bessie from getting outside to walk to the diner or to get a newspaper a few blocks away.



Figure 5.4. The flowers that Flory keeps outside her apartment are raised up on a bench and tending to them gives her a reason to get outside. Note the smooth, relatively level sidewalk, which provides accessibility.

Betty’s home (Figure 5.1) has a ramp located in back of the home and a stairway to the side of the trailer, but Betty noted, “With my fake hip joint, I won’t even walk

down that bumpy driveway to the mailbox.” She also noted that although she uses no mobility devices, she tells whomever is transporting her to pull the vehicle as close as possible to the steps of her home, so she limits potential for falling in her “driveway.” Figure 5.3 shows the puddle right out in front of Bessie’s home and the uneven sidewalk located on this busy street. Although these features of her environment, and the lack of a railing down the three cement steps in front of her home might seem like a barrier for this 81 year old woman, she states: “I’m used to them, I know where to be careful walking.”

The other two figures (5.2 and 5.4) reveal other positive and negative components of the physical terrain that might shape participation in physical activity. Figure 5.2 reveals a home located on a busy country road with little or no walking space. Virginia noted that she walks in back of her home and even though there is no pavement there, she feels protected from cars back there. She stated that when she walks on uneven surfaces such as the grass-covered path to her garden, she just walks slower and more carefully and at this point, would not limit her going outside.

Figure 5.4 demonstrates a more carefully graded, smooth concrete pathway in front of Flory’s apartment. Flory stated that at her previous residence (a large home she owned for over 20 years) she was unable to carry groceries into her home without losing her balance. She stated that this pavement allows her to wheel her laundry to the laundry room, or to use a wheeled cart to carry groceries into her home without feeling like she is going to lose her balance. She also has a convenient parking space right outside her apartment, which allows her to readily access her vehicle.

*Availability of facilities.* A theme that emerged throughout the data was the availability and proximity of local facilities where older women might be physically

active. My observations and documents about the community revealed the following indoor spaces where people might be physically active: the Senior Center, the Baptist church exercise facility, the Minton auditorium gym, and the parks and recreation gymnasium, as well as local stores where people might walk while shopping. According to several of the staff and participants, the closest mall that one might walk indoors is in Bladesboro, which is about 45 minutes away. There are no commercial fitness facilities of any type located in Minton, and as Cathy at the Chamber of Commerce put it:

It's not just the old people, but all of us who need a fitness facility in town. I know I'd go to one. It seems like every time they try to open one, it never lasts more than a few months.

Stacy, one of the Senior Center staff members who does the intake assessments on the senior clients, stated: "Many of the seniors could never afford a fitness center, even if they had one here. The seniors that could afford it, might be too 'tight with their money' to pay for it."

Although the local college has a fitness facility, senior adults can only use it as part of courses taken through the lifelong learning division. As mentioned earlier, access to this facility may be perceived to be cost prohibitive for many older adults.

Additionally, several of the participants suggested that even if there were facilities, there might need to be some adaptations for older adults. Doris suggested, "We need a heated pool in this town, that us "cripples" could go in and loosen up our joints." Another participant, Rita Mae, shared that she used to drive to Bladesboro about forty minutes away to go bowling, stating: "It would be nice to have some lanes here." Judy noted,

however: “If you had bowling lanes or other places for older folks, you’d have to fix it so people with arthritis wouldn’t hurt themselves.”

*Proximity.* In addition to availability of facilities, many of the Senior Center exercise group participants, for example, live throughout this forty-mile wide county. One woman, Judy, lived eighteen miles away from the Elijah County Senior Center and she tells me:

I don’t come usually, but twice a week, cause it is too far, I live in Cottonwood and it is too far to drive that far, ...but on the days I come into town to the exercise group, I usually have bills to pay or groceries to pick up or something so I do all my buying, my groceries in town [Minton] over here, I don’t buy them anywhere else.

Although Helen and Flory both lived in the local senior citizen apartment complex, they perceived distance and proximity differently, perhaps due to physical limitations. Flory, who was more disabled from arthritis, stated that it was somewhat of a production to go to the laundry facility in her complex and that on days when she didn’t feel like walking the hundred feet or so to the laundry room, she would drive to the laundry facility in her complex. Helen, on the other hand, had few walking difficulties and expressed no difficulties walking to the laundry room or to the complex’s Activity Center. Doris shared that in order to go to the store and successfully complete the trip, she had to park in the handicapped parking area and ask someone to bring her a cart so she could use it to ambulate through the store and not fall. She stated: “We need more handicapped parking spaces, so ‘cripples’ can get out to the store by themselves.”



When one thinks of a rural community, often the word isolation comes to mind. Stacy from the Senior Center drove me around Minton several times and showed me many of the homes (Fig 5.5 & 5.6) of individuals who were recipients of Meals on Wheels or the Community Action Program and shared how some older adults may be isolated:

Many of these people are all alone. They're out here by themselves, no one to visit them or even to go out and see. One woman, who could barely walk takes care of her neighbor's dogs, just for some human contact. She gets up and gets dressed every day even though the only person she might see is the Meals on Wheels delivery person.



Figure 5.5. Trailer (on right) of an older adult who receives Meals on Wheels



Figure 5.6. Stacy encountered a man with quadriplegia living in this utility shack when he requested assistance from the CAP for help paying his electric bill. The shed has no running water or toilet.

Stacy also shared many stories of members of the community who had no way to access services of the Senior Center or the churches because of lack of transportation. She noted: "The county is so big, we can only do transportation and Meals on Wheels for older adults who live within the city limits of Minton." This policy is due to financial issues (which will be discussed later) and it further isolates residents who live outside the city limits of Minton.

*Perceptions of safety.* Perceptions of safety regarding crime and traffic emerged as part of the structural or “built” environment. Although crime rates are typically lower in rural communities, once again the concept of relativism seemed to be evident. In a large municipality, one would not typically hear about assaults or burglary unless they were “high-profile” cases. It appears from the interviewees and from the local newspaper, The Pine Needle Press, that these “less serious” offenses are often publicized in the paper in a section called the “Police Blotter.” A sampling of the local newspaper revealed a full page in nearly every edition of the weekly paper listing reported crimes in the city, the county, as well as the “jail activity.” Figure 5.7 is a sampling of the headlines from the City Police as well as the Sheriff’s Report and the content is similar each week.

While these reports may serve to make citizens aware of crimes, it also serves to raise anxiety about crime, according to Amy, a staff member,

I know I have heard from some of them is the fear of just walking in the neighborhood they’re scared to go. You know it’s not safe for them, they’re scared of people come and just knock them over the head cause it’s happened. It happened in Pinehurst, a mom and her daughter you know got mugged and kidnapped. They’re scared because there is not a safe place for them to exercise, and they don’t have the money to buy home exercise equipment.

Fannie also seemed to have perceptions of poor safety stating: “They [making a reference to a minority group] are getting closer and closer. One of them stole my Santa Claus from my porch. I’m afraid to go out other than the daytime.”

Traffic and road safety also emerged as both a barrier and a facilitator to physical activity. While some participants indicated that they could easily walk in their neighborhood without fear of a traffic accident or a fall, others indicated that their neighborhood streets or the country roads were not safe to walk on. At least six of the older women interviewed for this study indicated that they had on occasion used one of the walking tracks in town, because they weren't "...chased by dogs, or nearly run down by cars when you walk on the track" as Ruby put it.

In summary, environmental factors included natural and structural components. The components of the natural environment consisted of weather, the amount of lighting (natural and/or artificial), and the aesthetics in the community. Weather emerged as more of a barrier to physical activity. More specifically, it appeared that changes in weather negatively impact adherence to physical activity routines. Although members of the community were aware that the public walking trails had good artificial lighting, the older women seemed to prefer walking during daylight hours, so this may be a barrier in terms of there being a limited number of natural daylight hours in which one could walk. Finally, aesthetics arose as both a barrier and a facilitator to physical activity. Women who appreciated gardens, flowers and trees were encouraged to be physically active outside, whereas many participants, particularly those who exercised inside, had not considered the natural beauty in the environment as a factor that might encourage them to exercise. Perhaps this indicates that aesthetics is certainly not a strong facilitator for physical activity, nor is it a strong barrier to stop people from being active out of doors.

## Police Report: *Officers deal with robberies of local businesses*

Pine Needle Press, Nov 20, 2002

Police officers reported numerous robberies involving local merchants and businesses in the city. Cases logged are as follows:

Oct. 22

A Braswell Blvd. woman reported she saw her ex-boyfriend and his new girlfriend cut all four tires of her car.

A Lindsey Road woman reported she lost her cellphone.

A man at [redacted] Technical College reported a man, whom he identified, poked him in the face and pushed him.

A Center Street man reported four men beat him up.

A Lewis Street woman reported a woman, whom she identified, struck her after an argument.

Employee at Maxwell's reported a woman, who was identified, took four items of clothing without paying.

Oct. 23

A woman on Stevens Drive reported receiving harassing phone calls from a woman who is now dating her ex-husband.

Employee at Time Saver 51 reported a man, who was identified, took a bottle of Robitussin.

Employee at Goody's department Store reported two males stole a bottle of cologne.

Employee at BP on South Main reported someone cashed a bad check in the amount of \$382.50. Check was written to someone else.

Employee at Maxwell's reported that after she reported a shoplifting incident, suspect called her and threatened her.

Oct. 24

Employee at Enmark reported someone pumped \$10.01 in gas and drove off.

Employee at Wendy's reported a woman started yelling and calling her names after being told to move on through the drive-thru.

Employee at [redacted] and Sons reported someone broke in and stole two rifles and cash.

A man who parked his car at Wal-Mart reported someone stole two video movies from the car.

Employee at Time Saver 51 reported a woman, who was identified, stole \$10 worth of candy.

Oct. 25

Employee at Badcock reported a DVD player and VCR missing from the store.

A man at [redacted] Club reported a man, whom he identified, hit him with a pool cue stick.

Oct. 26

Employee at Enmark reported someone pumped \$5 in gas and drove off.

Employee at Tim's Butcher Shop reported someone had stolen the store stamp and forged a check with it.

A Jerome Street man reported someone broke the window of his home.

Employee at East State Equipment reported someone

cut the electricity to the building, stole a \$1,500 computer, damaged the front door as well as the Coke and cracker machines and stole \$95 in cash.

Oct. 27

A Youngblood street man reported someone entered his home and stole several items totaling almost \$3,000.

A man who parked his car at First National Bank reported it stolen.

A woman at The [redacted] Community Center reported a man, whom she identified, stole her pocketbook, cellphone and \$50 in cash.

A man at The [redacted] Community Center reported a man, whom he identified, struck him on the back of the head.

Oct. 28

A woman who was at Goody's parking lot reported two females, whom she identified, took her necklace out of her purse.

Employee at Time Saver 52 reported a man, whom she identified, stole six bottles of Extra Strength Tylenol.

Employee at Petro reported a customer, who was identified, damaged the hose to a gas pump.

Employee at Kwik Shop reported a female passed a counterfeit check in the amount of \$256.52 on the account of [redacted] Animal Clinic.

A woman on North race-track Street reported someone put an unknown substance in her gas tank.

## Sheriff's Report: *Deputies investigate burglaries*

County Sheriff's deputies reported several burglaries in [redacted] County last week. Cases logged are as follows:

Oct. 16

An [redacted] man reported two people, whom he identified, hit him with their fists.

Oct. 22

A Kemp Road woman reported someone threw a rock at her mobile home. Victim also reported side door of home was open.

A [redacted] Farm Road woman reported someone stole her syrup boiler from her shed.

Oct. 23

A [redacted] South man reported someone stole his weed eater.

Employee at Kwik Shop reported a female cashed a check

at the store that was written on the account of [redacted] Animal Clinic. The check was later returned as counterfeit.

Employee at [redacted] Country Store reported someone cashed forged checks written on the account of [redacted] Animal Clinic.

Oct. 24

A Harrison Drive couple reported someone entered their home and stole \$2,200 in guns and money.

A [redacted] Cemetery Road man reported someone entered his storage shed and stole several items.

Oct. 25

Employee at [redacted] Truck Stop reported a man kicked open the door to the bathroom.

A Findley Road [redacted] man reported his cows escaped into

the road.

A Monroe Street, [redacted] woman reported a man, whom she identified, took several checks from her checkbook on her closed account.

Phillip Patrick [redacted], 18, 464 [redacted] Road, [redacted] was arrested on DUI and criminal trespass.

Oct. 27

Ricky [redacted], 39, 200 Racetrack Street, [redacted] was arrested on child support charges.

A Lambs Bridge Road, [redacted] woman reported receiving obscene phone calls for two weeks.

A man traveling on Highway [redacted] reported hitting a deer with his vehicle.

Figure 5.7. Sampling of reports of crime from the "Police Blotter" that appears consistently on the third page of the weekly newspaper (names removed to keep name of community confidential)

Table 5.4: Social Factors Influencing Physical Activity Participation

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<ul style="list-style-type: none"> <li>• Interpersonal support           <ul style="list-style-type: none"> <li>○ Network of family and friends</li> <li>○ Professional interactions</li> </ul> </li> </ul>
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<ul style="list-style-type: none"> <li>• Organizational factors</li> <li>• Programmatic issues           <ul style="list-style-type: none"> <li>○ Scheduling</li> <li>○ Transportation</li> <li>○ Program content</li> </ul> </li> <li>• Commitment and leadership</li> <li>• Interorganizational relationships</li> <li>• Financial issues</li> </ul>
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<ul style="list-style-type: none"> <li>• Public images of older adults           <ul style="list-style-type: none"> <li>○ Role models</li> <li>○ Publicity and awareness of programs for OA</li> </ul> </li> </ul>
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### Social Factors Influencing Physical Activity Participation

Participants were asked questions about other people, organizations, and even laws or policies that might influence their ability to be physically active. Table 5.4 presents the three major themes that emerged with regard to social factors including: interpersonal support, organizational factors, and public images of older adults as a source of encouragement. It should be noted that inherent in the discussion of social factors are financial and political issues which are difficult concepts to isolate, and in fact, also contribute to the individual and the environmental factors that influence participation in physical activity.

### *Interpersonal factors*

Both informal and formal interview participants recognized the importance of having supportive social networks as generally encouraging participation in physical activity. These networks included family members, friends, church members, doctors, nurses, and other health professionals who might encourage individual participation in physical activity. Only a few participants made comments indicating that interpersonal relationships limited involvement in activities and two participants stated that the support of family had little bearing on their participation in physical activity.

*Network of family and friends.* All interviewees readily acknowledged the benefits of being physically active with friends or via the support of family. One pattern that emerged regarding the social network women described was that the inactive participants seemed to have smaller social networks. One other commonality between more inactive participants was the type of social support provided for these women. All five inactive participants had a daughter or stepchildren who provided for their material and/or physical needs, in many cases doing most of the housework and this may have limited opportunities in which the women might incorporate physical activity into their daily routines. Helen described it as follows:

Ruth: and she comes in [stepdaughter] if anything is out of place like the stove needs cleaning, and I can't get down in the cabinets to clean them out, she does all that, when she comes in she comes in working

Mary: isn't that sweet.

Ruth: when she comes in she says, "That help that I hired for you, she is not doing her job."

Similarly, Betty's story demonstrated how family might actually inhibit participation in physical activity. Betty said that since moving in with her daughter, she does not participate in daily living tasks such as cooking, cleaning, laundry, nor does she have any responsibility for care of her five great grandchildren, who spend several hours daily in their home. While both Betty and her daughter seem satisfied with this arrangement, it appears that a lack of home responsibilities and a perception that she is too "frail" to be physically active is contributing to her sedentary activity level.

Two of the active participants, Wanda and Judy, noted during their interviews that support or encouragement from friends and family had little impact on their participation in physical activity. Despite this, it was apparent that both women had made new friends through their participation in physical activity. Although meeting people different than you, in some cases, might be a barrier to physical activity, meeting "different" people might also make participating in a group activity more interesting as Virginia attested: "I have really enjoyed seeing people out here at the center, even though it's some people that I wouldn't have chosen to be with and all...everybody has had something that's interesting about them."

Despite the comments made by Judy and Wanda that they were not necessarily encouraged to participate in physical activity by other people, all of the active individuals had large networks of friends and family. Linda's story demonstrates how social support facilitated being more active. Linda reports that her friend Alva (another participant in this study) "kept pestering me to come and volunteer at the hospital. Now I wouldn't miss a day. I'm glad she kept on me, 'cause it keeps me active and in a routine."



*Professional interactions.* Several participants stated that they began a physical activity program upon the recommendation of a health provider such as a physician or a nurse. Older women participants reported receiving advice from a physician during their recovery from an illness or surgery, many specifically were told that walking would aid in their recuperation. Bessie stated: “Them nurses got me back on my feet and gave me some exercises to do. I do them every day.” Likewise, Alva shared that after back surgery, her physician recommended she participate in exercise to aide in the recovery process. Several participants also mentioned that they started an exercise program to assist their husbands who were encouraged to participate in physical activity by a health care professional.

*Organizational factors*

Organizational factors also arose from the data as having an impact on participation in physical activity. All interview participants shared concerns about when programs are offered, who leads programs, how services are coordinated and how agencies work together to promote physical activity for older women in this community. Included in subcategories of organizational factors are programmatic issues, commitment and leadership, interorganizational relationships, and financial issues.

*Programmatic issues.* In addition to there being limited programs available within this community, programmatic issues were also identified as having more of a negative than a positive effect on participation in physical activity. Programmatic features identified by participants include scheduling, access via reliable transportation, and age-appropriate content of programs.



*Scheduling issues.* Many of the older adults, due to appointments and chores or errands they needed to do, preferred to do their home or center-based exercise program in the morning. One woman, however, attended the Baptist Church exercise group because: “I’m way too stiff in the mornin’ so I couldn’t handle the program over at the Senior Center. My joints need time to limber up. Since this program is at three in the afternoon, I can do it better.” All of the physically active participants saw the need to do structured physical activity more frequently or with more intensity. Virginia states:

I’m glad to be a part of it [the Senior Center exercise program], but it’s not as much as I need. I like to exercise five days a week and we only have it here three days a week. It would be better if we had it more, I think, but I’m thankful for that much. On the days we don’t have exercise I walk on my own.

*Transportation.* Throughout the interviews and observations, the issue of transportation came up over and over again. Wanda bluntly stated: “If I couldn’t drive, I’d cut my throat!” In discussing her socialization program at a church, one service provider humorously commented:

I drive myself to this group early, so I’ll be off the road when these older folks of 80 and 90 years are on their way to the group [laughs]. I know some of them shouldn’t be driving, but there’s no other way to get around in town.

Stacy, the Assistant Director of the Elijah County Senior Center confirmed the issue of transportation for older adults in this community. For example, each day she assists an elderly gentleman by getting his wheelchair into and out of his truck so he can attend the Senior Center daily for a hot meal and socialization. Stacy and Mitzi both confirmed that transportation to the Senior Center as well as delivery of Meals on Wheels

are only available for people who live within the city limits of Minton due to lack of funding for another van and the staff to do transportation activities. Senior Center participants reported that many years ago, when the center had two vans, they would take trips and that often this was the highlight of the year. Due to transportation problems, these trips are no longer an option for a social outing.

Lastly, transportation and many older adults' self-imposed driving limitations hinder their ability to participate in many evening activities at the Senior Center or at local churches. Several participants, who did not drive however, willingly accepted transportation help from friends or the Senior Center, stating as one woman did: "If it weren't for my friend coming by and picking me up three days a week, I'd never get out to this exercise group or to do my errands. I'd probably die of loneliness or starvation [laughs]."

*Program content.* The last programmatic issue that arose was concern over content being specifically designed for older adults. Universally, the older adult women and service providers touted the benefits of the Senior Center exercise program because it specifically targeted the needs of older adults. Stacy, as staff member at the Senior Center, noted that older adult activities should be "dignified and not demeaning" particularly for social and leisure activities. For example, she noted that making ornaments is not universally meaningful to all older adults, and that with some of the older adults with reduced resources, making food or winning food as Bingo prizes is more relevant to many of the Senior Center participants. Amy, the wellness coordinator gave her opinion about what programming for older adults should look like:

There's no place for them [older adults] to go that they feel safe and comfortable exercising. I think the Senior Center gives them the opportunity to meet other seniors and find out and see what other seniors are doing and can do. You know the ones sitting there. They know that's there's a group of seniors in here line dancing and exercising. They know that it can be done. They know those people are the same age as them, you know in the range, but I think that can be encouraging. Also, you have to make it fun and safe for older adults. You have to let the older adults know you care and when they're not there that you missed them. Also, some of the Senior Center directors and assistant directors need more training on fitness for older adults.

*Commitment and leadership.* In addition to programmatic issues, commitment and leadership was evident as a factor that seemed to influence older adult participation. Several of the older adults who participate in either the Senior Center or the church sponsored exercise group, stated that the quality of the leadership was critical to the success of a program. Observations and interviews revealed that participants have respect and admiration for leaders who give some control to the group, but can realize when a group is floundering and can easily jump in and take over.

Both of the Senior Center staff members, Stacy and Mitzi, indicated that older adults are "more dependent learners" noting that when Mitzi is not there to lead the line-dancing group on a regular basis, the group attendance begins to decrease. Marcia, who leads the church exercise group shared that she has tried to use exercise videos when she cannot lead the group, but that the members would rather not do the exercises when there is no leader present. Several participants of the Senior Center exercise group indicated

that they appreciated volunteers leading the groups, but that they preferred a leader with training in fitness for older adults. The Senior Center participants sympathized and understood the dual function of the Senior Center being joined with the Community Action Program.

Several of the participants acknowledged that the Community Action Program (assistance with utility bills) was more critical to people's lives and while they understood that this program often took the director's time and attention away from the Senior Center programming, they would prefer more involvement of the director in their programs. In addition to the Senior Center and the Church program, older women who had participated in the exercise programs at the local college made comments that the instructors for these programs did not always specifically target programming for older adults. For example, one woman stated: "Sometimes the instructors were too fast for me" while another woman noted "one of the instructors talked to the group like we were babies."

*Interorganizational relationships.* Relationships between agencies, referrals to other programs, and meeting the activity needs of older adults in this community requires that staff and consumers have knowledge of other services within a community. Perhaps one benefit of being a small community is that people seem to have knowledge of agencies and organizations that might support the activity needs of older adults. In interviews with service providers, it became evident that professionals from different agencies serve on each other's boards of directors; therefore key stakeholders seem to have knowledge of what is going on within various community agencies. An example of this is that the health educator and the County Executive both serve on the Senior Center

board. Because of this, these agencies can coordinate efforts as they do yearly for an annual senior health fair, and these agencies know about issues that are pertinent to each other.

One interagency issue that arose in the interviews is that the local hospital cafeteria is seen as “competition” for the Senior Center that also provides a hot noontime meal for older adults. More affluent and able-bodied seniors, according to the volunteer coordinator at the hospital, seem to have formed a “lunch bunch” and this group lunches at the hospital daily. The Senior Center director, Mitzi, admitted that these seniors could benefit from the Senior Center programs, as could the Senior Center who requests that congregate meal participants living above the poverty level pay three dollars daily for meals.

In all of my formal and informal interviews, both groups of participants were able to identify the facilities in town such as the recreation complex and the local walking tracks indicating a level of awareness about agencies that might promote physical activity. They were also able to identify agencies that might help older adults with participation in physical activity. Almost all of the interviewees knew about the Senior Center and the church program for structured exercises as well as the hospital and the health department as a resource for older adults to access health promotion or screening services.

In this community, there is a relationship with the hospital in the community, but there is very limited interaction between the Senior Center program and other agencies. I visited and called the Public Health Department, which is located right next door to the Senior Center, and they reported no interaction with the Senior Center or for that matter

of fact with assisting older adults in the community other than their Breast Cancer Screening Program. When I asked the nurse at the Public Health Department about the presence of the Chronic Disease Coordinator, a person, who I thought, might interact with older adult populations, she stated that their office had little interaction with this individual and she infrequently worked in Minton. This provides evidence that there is limited interaction of agencies within this community and further burdens the Senior Center as the sole agency (with occasional support from the hospital) responsible for health promotion within this community

As more positive evidence of some degree of relationships between agencies at least for referrals, Helen, one of the older women interview participants, was referred to the Senior Center after completing her rehabilitation for a mental health problem. Doris has also been referred by the Senior Center staff to the Health Department for blood pressure screenings and for assistance with funding her medications. When the nurse at the public health department was asked how she counsels older adults to become more physically active, her first response was: “I encourage them to get involved at the Senior Center, the Baptist Church exercise program, or to walk on any of the tracks around town.”

*Financial issues.* Convenience and cost seemed to be a facilitator to activity participation for the two participants who were residents at the local apartment complex specifically developed for senior citizens (also known as the “Presbyterian Apartments”). Flory stated: “Look at the monthly calendar of activities. There’s something each week. I only have to walk or drive up to the activity center. It’s no cost, which makes me go to things that I might not normally pay for.”

Despite cost and convenience being a facilitator for the two residents of Presbyterian Apartments, for the majority of the participants, financial issues arose over and over throughout interviews and observations within this community as a barrier to physical activity. In particular, financial concerns discussed by participants and service providers were funding for transportation and for fitness and activity programs. Older women identified cost of individual activities as a barrier to becoming more physically active and service providers often pointed to limited funding as a reason for limited programs or a lack of transportation to these programs that might help older adults remain active community members.

*Public images of older adults*

The third and final theme that emerged when addressing the research question about the social factors influencing physical activity was “public images of older adults.” Under this theme, categories included having older adult role models and public awareness of programs. In particular, the presence or absence of age-appropriate role models of “healthy aging” was identified by older women and by service providers as having an influence on participation in physical activity. Joan, who shared that attending the college for fitness programming which currently was not within her budget, stated: “I have heard about the program at the Senior Center. I just haven’t been there. I don’t think I’m ready to go there yet. I’m only seventy-one.” This statement indicated that Joan may have felt that she was “too young” to attend the Senior Center, even though she heard good things about their exercise program.

When older adults, staff members, and community service providers were asked about role models for healthy aging the Senior Center staff and members all pointed out

Fannie who was 93 and has been participating in the exercise program for 20 plus years. When I asked Fannie if she minded this role of “poster child” for the exercise program, she quickly replied: “Oh no! I would do anything to encourage others to be involved.” The mayor described his role model of healthy aging as someone who “is active in church or civic groups, may still be working a job, and who has hobbies and interests, like gardening.”

Perhaps one advantage of being in a small town is that there are fewer newsworthy events, therefore the media may more readily promote social service agencies or health related issues. Mitzi reported that she is able to get a story or a photo about the Senior Center at least once a month and she shared a folder of photos and news stories over the past few years. The older adults within this community seem to be visible in the newspaper, brochures, and on community websites. Additionally, service providers stated that the media, specifically *The Pine Needle Press*, portrays older adults positively. The public health nurse and several service providers at the church said that they read about the line dancing group and the older adult exercise group in the newspaper on a regular basis and that this gave the program a good “reputation.”

In terms of positive role models beyond the community for promoting physical activity among older adults, participants and service providers stated that there were few positive images of older adults being physically active. Only three of the participants were able to identify positive role models on television or movies that demonstrated healthy aging. One participant identified Betty White as a positive role model and the other two interviewees identified Bob Barker as a positive role model. One participant



Flory, appended her statement however, by adding: “You can tell, he is failing, though. He forgets things like I do [laughter].”

Wanda, who was the most educated of the interview participants, was more cynical about the media’s promotion of active older adults, stating: “When I see these advertisements or showing older people being active, I wonder who’s sponsoring it.” Lastly, Amy, a staff member, stated that the media should show physically active older adults more frequently and in a more positive light:

They should show people from diverse backgrounds who can safely exercise. It would also be good to show older women, because they are less active than men and we should see older adults who are disabled, say in a wheelchair, but who can still be active.

In summary, social factors that seemed to have a positive impact on promoting physical activity included interpersonal and professional support. Organizational factors arose more frequently as a barrier to promoting physical activity. In particular, programmatic issues regarding scheduling, leadership and commitment, age-appropriate programming, funding, and interagency relationships were identified as barriers more often than being facilitators to physical activity. One final social factor that was identified was how public images of older adults promote physical activity. In this community, it appears that the local media portray older adults in a positive fashion, which encourages people to be involved in physical activity. Perhaps on the negative side, few interviewees could identify national figures or campaigns where older people are portrayed positively to encourage physical activity.

Interaction of Factors Influencing Physical Activity Participation

In addition to the summary of findings presented in Table 5.1, there were findings that represented an interaction between each of the three factors and these are presented below in Table 5.5.

Table 5.5 Interaction of Individual, Environmental, and Social factors

Person-environment interactions
<ul style="list-style-type: none"><li>• Use of adaptive equipment to enable task performance</li><li>• Structuring of tasks to encourage activity</li></ul>
Person-social interactions
<ul style="list-style-type: none"><li>• Comparison of self with others around</li><li>• Persistent encouragement individual to individual (personal and professional)</li><li>• Use of local media to encourage individuals</li></ul>
Social-environment interactions
<ul style="list-style-type: none"><li>• Use of political process to change the physical environment</li><li>• Interagency relationships to provide access to services</li></ul>

Table 5.5 represents components of interactions between individual, environmental, and social factors that influence physical activity participation. These interactions occur between the individual and her environment, between the individual and the social situation, and between the social world and the environment. These will be explained below.

*Person-environment interactions*

Throughout the interviews, individuals shared stories about how they adapted the environment or a task in order to be able to accomplish what they wanted to do. Flory reported that even though her stepchildren paid for a housekeeper, she liked cleaning. To

compensate for difficulty bending over, she purchased a long-handled sponge to enable her to clean her bathtub. This long handled adaptation may have helped Flory accomplish a task, which in turn, promoted incorporating physical activity into her daily life tasks.

Doris, who had a high need for social interaction actually kept a box at the post office even though she could get a mailbox placed at the end of her road that she would be able to access from her vehicle. While this post office box served to facilitate social interaction, it also encouraged Doris being more physically active because she had to get in her car and drive as well as walk into the post office to retrieve her mail. Doris shared: “I keep a box down at the post office and I try to go everyday so I get out of the house and see people.” Doris, who had self-reported financial difficulties as well as mobility problems shared that her need to see people daily makes her go to stores even when she has no money to spend:

I go to the store to browse, and I use a grocery cart to lean on or when I go to BiLo, I use the electric cart. Even when I don't have money, it helps just to get out of the house, kill some time, and see people.

Finally, one more person-environment interaction occurred after Fannie had a fall and stated that she was afraid to go out walking alone because

I was afraid that I'd fall again and not having family close by and with the neighborhood changing, I don't know many people in the neighborhood anymore. I got scared that if I fell, I might be laying in the street for a while before someone would come and help. So I started figuring out a walking program at the Senior Center where I would walk laps around the exercise room. After a while, I got

too confused trying to count how many times I circled the room, so I just went for time and kept increasing the time. I walk around the room for 20 to 30 minutes five days a week in addition to the exercise group and the line dancing.

These examples indicate that although people may have disabilities or physical limitations due to aging or chronic diseases, the motivation to do a specific task may inspire them to adapt their environment to be able to perform a desired activity.

The next section will demonstrate how individuals and social factors interact and may influence participation in physical activity.

#### *Person-social interactions*

During the course of hearing the older women's stories, many of them gave examples of having people who persistently encouraged them to be more physically active or who through their desire to be socially active, encouraged people to be more physically active. Wanda and Virginia indicated that they were depressed and knew that they needed to be around people to help overcome their health problem. For both of them, social interaction that was afforded by participating in the exercise group and helped their physical as well as their mental health.

Another person-social interaction that was displayed in the stories shared by the older woman was Fannie's willingness to be a role model to encourage individuals to be more physically active. Fannie reported that she did not mind at all being pointed out as the oldest member of the exercise group and that she took every opportunity to encourage others to join the exercise group:

I try to talk some of them into that [joining the exercise group]. If they have never started, I try to tell them to get started because it does you so much good. And I

have some of them now - we have a couple of 'em that just started three or four months ago and they say how much better they feel and it is just wonderful.

Lastly, many of the participants discussed a person-social interaction when they discussed being encouraged by a friend or a professional to become physically active. Participants discussed being proud when they went back to their doctors or their physicians making comments about how much physical activity has helped them. Many of the participants stated that hearing positive comments from others helped them to stay motivated to keep participating in physical activity. Several of the staff and the participants also noted that “keeping up with people,” expressing concern, and finding out where they are or if they are sick when they do not come to the exercise program actually encourages people to stay in the group.

Social interactions might also create a barrier to physical activity if one is dependent on the relationship. For example, Joan shared that when her walking “buddy” stopped exercising it temporarily hindered her involvement in physical activity:

Now I had a girlfriend and we walked every morning and we walked every night and sometimes it would be two miles in the morning, maybe four miles at night depending on what kind of gossip was going on or what was going on in the world, you know or whatever. When she moved away and then my other neighbor that liked to walk, we walked one day, and then she just flunked out on us, she had gained a lot of weight and I guess it was more of an effort for her to get out there and go. So I stopped walking for a while when I had nobody to walk with.

*Social-environment interactions*

As mentioned above in Doris' stories, she deliberately placed herself into environments that would facilitate social interaction and in the case of going to stores or the local post office; this added physical activity to what would otherwise be a very sedentary lifestyle. In Doris' participant description, however, I mentioned that people seem to ignore her attempts for social interaction, so perhaps Doris is at risk to have a negative interaction between her social world and the physical environments in which she seeks to be engaged. In short, if people keep ignoring Doris' attempt to gain friends, she may stop going to the stores or the post office, or even coming into the exercise group at the Senior Center. If a person does not receive positive social responses, they may stop seeking out ways to place themselves in social environments and ultimately may reduce their drive to get out and be more physically active.

Staff members and a few participants discussed the fact that some activities at the Senior Center and at local churches occurred in the evening, which may represent a negative social-environmental interaction. Many women discussed not wanting to ask friends to transport them in the evening and because there is no public transportation in this community, they no longer attend evening activities. Virginia's story demonstrates this negative interaction:

I'd like to know how to operate the computer the way I would like to, and things like that. I'd like to um go to school really, but I am at an inconvenient place to get to Minton Tech or South Georgia College. I want to do it though, but I don't like to drive at night and all the computer classes for adults seem like they're at night.

Many of the older adults noted that they self-limited driving at night due to difficulty seeing and tolerating glare. Several women shared their disappointment at not being able to attend dances held at the Senior Center or evening activities at their church. One possible facilitator to involvement in evening activities, which a few participants shared, was the fact that they accepted rides from friends or family members who were able to drive at night.

One final example of how social and environmental factors might be a facilitator to physical activity might be evident in a story told by Virginia about a woman who used the political process to have a walking track in her local community:

Where I live, in Pine Nut, it's a ways from Minton. And there's not much out there. There's no sidewalks so people really have no place to walk where folks are safe. This one lady started a campaign to get walking track built out near the community house and by gosh, she whooped and hollered until she got it built. Somehow, she talked to the right politicians and got it done. I have been out there walking and it's real nice.

#### Barriers and Facilitators for Physical Activity Participation

Many of the factors identified were described as being both barriers and facilitators to physical activity. It appeared from all evidence that barriers are much easier to identify whereas facilitators may be taken for granted and not clearly identified as encouraging physical activity. Nevertheless, several trends did emerge in terms of clearly identifying barriers and facilitators.

After each of the factors was identified, I went back and constructed a grid (See Table 5.6) noting whether these factors seemed to function as barriers or facilitators for

each participant. I noticed first of all, that the five most inactive participants discussed the presence of more barriers than facilitators in their lives while only two out of the nine more active participants identified having a greater number of barriers than facilitators. Second, all of the inactive people had little to no life history of physical activity. Although three of the five had jobs that required them to be more physically active, none of the five inactive participants had a childhood history of doing farm work, a history of participation in sports, or having lifelong hobbies or interests such as gardening that encouraged physical activity.

A third theme that emerged when comparing the participants with each other, was the fact that nearly all of the active participants identified interpersonal support as a facilitator to involvement in physical activity. Additionally, interpersonal support proved to be more of a barrier for sedentary women. Two aspects of interpersonal support emerged from the data. First, the inactive participants seemed to have a much smaller network of friends and family to support them. Second, only one out of the five sedentary participants were encouraged by health professionals to become physically active.

Though all of the five inactive participants did have smaller support networks of family and friends, the type of support, rather than the number of people in their network, may have been more of a barrier. Perhaps, they had ineffective or “too much” interpersonal support. For example, three of the five sedentary participants lived with or very close to their adult children who aided (or hired help for them) the older women to perform tasks such as household chores, meal preparation, and transportation.



Table 5.6: Summary of Perceived Barriers and Facilitators as Identified by the Participants

[illegible]

Bessie, for example, stated that her doctors and nurses encouraged her to be active, but that her daughter told her not to go out walking alone for fear that she would fall. Although she had a niece who occasionally came and took her walking, her daughter apparently frowned on this because she felt it was too physically taxing for her mother. The daughter, according to Mitzi, the Senior Center Director, was rather overprotective of her mother and discouraged her from taking walks or resuming attendance at the Senior Center after being homebound for more than a year. While I was interviewing this participant, the daughter telephoned several times and during one phone call asked to speak with me instructing me to make sure her mother didn't overexert herself. It appears that Bessie assumed a passive stance towards her daughter's efforts to not have her mother "exert herself."

Mary: So tell me about your typical day at home...

Bessie: Well, I straighten up my house whenever I feel like it and uh wash the dishes and wash my self. My daughter, she come by after school, about somewhere around 3:30. She comes and does most of the big cleaning for me and takes care of me, see what else I need, what else I have to have to do. We do our *runnin', out payin' bills, or pickin' up a little groceries for me*

Mary: Do you go with her?

Geraldine: I goes with her and *we* (italics added) decide what I want

### Chapter Summary

In summary, barriers and facilitators were identified for individual, environmental, and social factors that influenced physical activity participation in older women. Individual factors included health, life context, and behavioral or emotional

characteristics. Environmental factors included both the natural and the built environment including weather, terrain, availability of facilities, and safety. Social factors included interpersonal support, organizational factors, and public portrayals of physically active older adults.

Individual factors that were readily identified as barriers to physical activity included physical health conditions such as arthritis, diabetes, or heart problems. Depression was identified as an emotional health problem that might inhibit participation in physical activity. Life context was also identified as an individual factor, with the caregiving role emerging as a barrier more often than a facilitator to physical activity. In addition, those individuals who had more roles, did volunteer work, or had more community involvement were more physically active. Lastly and perhaps most important, are personal attributes which were facilitators to physical activity. Subcategories under personal attributes included having a life history of physical activity, the presence of interests and activities in one's life, and having positive attitudes that encourage physical activity.

Environmental factors included aspects of the natural and the structural environment. Weather arose as the most prominent natural environmental barrier. The amount of daylight also arose as a barrier to participation in physical activity even in the presence of artificial lighting, which was present at all the walking tracks. Participants stated that they would not walk in the very early morning or at dusk because of the lack of daylight for fear of crime and falling.

The structural environment included geography or terrain, availability and proximity of facilities, and perceptions of safety within the community. Although a few

participants reported walking on grassy or gravel paths, most participants saw the lack of footpaths and poor traffic safety as a barrier to physical activity. Participants all saw the Senior Center and the walking tracks within this community as facilitators to physical activity, but the fact that there are limited numbers of facilities and for some individuals, lack of transportation to those facilities was seen as a barrier to physical activity. The perception of crime was also seen as a barrier to promoting physical activity in this rural community

Social factors that emerged from the data consisted of interpersonal support, organizational factors, and public images of older adults. Generally, interpersonal support was seen as a facilitator to physical activity except in cases where it interfered with engagement in physical activities such as household chores. Organizational factors, which included programmatic issues, interorganizational relationships, commitment and leadership, and financial issues, were for the most part perceived as barriers to physical activity.

It should also be noted that financial issues were not only found at the social level of influence, but also at the individual and the environmental level of influence. For example, personal finances may influence the older women's motivation to attend courses at the college if they know that it is not financially feasible. Caring for an ill family member may also limit the amount of disposable income available for taking leisure or fitness courses. Finally, many of the older adults expressed that they had no prescription drug coverage; so finding extra money for engagement in leisure activities that promote physical activity was not high on their priority lists. At the environmental level of influence, financial issues were also identified a barrier within this community.

Financial concerns include having limited private or public funds for sidewalks, transportation systems, or constructing more facilities like the Senior Center that might promote physical activity in this community.

Most, if not all of the factors were identified as both barriers and facilitators to physical activity in older women. For example, social interaction was reported as not having an influence one way or the other by two of the women, while most women stated that social interaction was a facilitator for physical activity. Family interactions also functioned as a barrier and a facilitator to physical activity, especially where that family support disengaged the older women from daily life tasks that might promote physical activity. Finally, there appear to be some individually created interactions between the individual and her environment as well as the individual and her social world. These interactions seem to occur as older women attempt to adapt to a less than perfect environment or to accommodate to personal changes in an effort to accomplish desired daily life activities. This process of adaptation may ultimately enable involvement in physical activity. These findings will be discussed further in the next chapter.

## CHAPTER 6

### SUMMARY, CONCLUSIONS, DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to identify factors that influence participation in physical activity for older women living in a rural community. A qualitative case study approach was used because the nature of the research questions warranted an inductive method of analysis. The following questions guided the study:

1. What individual factors influence participation in physical activity in rural-dwelling older women?
2. What environmental factors influence participation in physical activity in rural-dwelling older women?
3. What social factors influence participation in physical activity in rural-dwelling older women?
4. What are the barriers and facilitators in the community that influence participation in physical activity in the community?

In order to answer the four research questions, I used purposive sampling to find a rural community that was of typical size and racial composition to other rural communities in Georgia. I looked for a community that was considered a rural decline community because, according to Boatwright and Bachtel (2001), these communities typically have higher percentages of older adults, reduced access to health care and health promotion services, and typically they have fewer community services for local citizens.

The choice of the community was a critical factor in this study not only for finding a “typical rural decline” community, but also because it was assumed that this type of rural community would present greater challenges to older adults being physically active and therefore barriers and facilitators might be more evident than in larger more complex communities. One other criterion for selecting the community was to look at the physical activity status of the community. This criteria had to be selected on the basis of the county in which the community was located, and I purposively chose potential communities that had activity rates where less than 20% of adults reported being physically active on a regular basis. The purpose of choosing a community with lower activity rates than other parts in Georgia (where rates were above 25%) was to further magnify the problem of physical inactivity as a concern for rural older women. Using the criteria of rural decline and physical activity were helpful in identifying a community that provided enough data to explore research questions.

In order to find out about how the community supported the physical activity of older women, I conducted interviews, observations and analysis of documents. Seventeen in depth interviews were conducted with fourteen older women and three Senior Center staff members in this community. Additionally, I conducted fifteen informal interviews with service providers in the community who might have interactions with older adults on a regular basis. Observations included driving and walking about in the community, observing and interacting with older adults at the Senior Center, the Baptist Church exercise group, and a group of older hospital volunteers, as well as informal observations in stores, restaurants, and the post office. Field notes were recorded after each of these observations. Document analysis included in-depth review of the local newspaper,

analysis of brochures and program materials, and extensive review of the websites for Minton and Elijah County.

Findings from this study included individual, environmental, and social factors that generally have been documented in the literature as influencing physical activity participation. Individual factors include health, life context and personal attributes. The environmental factors are comprised of the natural and the structural or built environment. Social factors found to influence physical activity included interpersonal, organizational, and public images of older adults.

### Conclusions and Discussion

Three conclusions from this study have been identified. First, a combination of factors shape activity levels of older women. Second, whether a factor is described as a barrier or a facilitator for physical activity is dependent on individual perceptions. Third, the environment (physical, social, or the task environment) may be adapted and thus influence participation in physical activity.

*Conclusion One: A Combination of factors influences physical activity participation in older women*

Consistent with the literature in the area of physical activity and aging (AHRQ & CDC, 2002), there is no clear “formula” that emerged from this study that explicates how individual, environmental, and social factors combine to influence participation in physical activity. It is clear, however, that factors at each level influence older women in different ways. For example, for one 85 year-old woman, an individual facilitator which was the motivation to “avoid a nursing home” outweighed the environmental barriers of driving 36 miles three times a week to participate in an exercise group. Additionally, this



desire to avoid institutionalization also outweighed the barrier of walking five times weekly on her uneven gravel road in her rural community. For one 79 year-old- woman, the individual factors such as her attitude about aging and her current living situation combined with social factors including an overprotective daughter as her main social support, may have swayed Betty to believing that she is “too old” to be physically active.

In general, the individual, environmental, and social factors identified in this study were of no great surprise as they are identified in the literature on physical activity and aging (AHRQ & CDC, 2002; King, Rejeski, et al, 1998). Much of the research on determinants of health behaviors has explored many of the individual, social, and to a lesser extent, the environmental factors that influence participation in physical activity (Pullen, Walker and Fiandt, 2001; Wilcox, et al., 2000). My findings were consistent with findings of Wilcox and colleagues (2000) who found that people in rural communities identified more individual, environmental and social barriers to physical activity. In their study, they found that rural women reported having more personal barriers, particularly caregiving duties. Older women in their study of rural women also identified a greater number of environmental barriers such as reduced access, lighting, and limited availability of facilities. Finally, Wilcox et al. (2000) also noted that rural women were much less likely to see others exercising in their neighborhood, which gives further evidence to the lack of role models for older adults.

In terms of individual factors, health has been identified as the greatest reason why older adults may not exercise and at the same time is also identified as the number one reason why people may benefit from physical activity (King et al., 2000; Satariano, Haight & Tager, 2000, Scharff et al., 1999). Although Rita Mae actually entered the

exercise group because she was bored, she noted the benefits she has seen physically and she stated that these health benefits make her want to sustain engagement in the program. Depression has also been cited in the literature as a factor that may impede participation in physical activity and may be ameliorated through engagement in physical activity (Satariano et al., 2000; Fox, 1999). Virginia and Wanda each shared personal stories of how depression limited their involvement in physical activity and went on to explain that once they reengaged in physical activity their depressive symptoms subsided.

Although one would think that retired adults have more free time, Judy and other participants in this study (including some of the less active women) described their lives as busy and that they had to juggle things in order to be physically active. Consistent with my findings, time has been identified as a barrier to participation in exercise in the literature on physical activity and aging (King, et al., 2000).

Personal attributes as a factor that influences physical activity has been studied with respect to individual motivations and behaviors of older adults (though rural women have had little study). O'Brien-Cousins and Vertinsky (1995) found, for example, that lifelong patterns of physical activity had a positive influence on late life participation in physical activity. Values, attitudes, and motivational factors using concepts from social cognitive theory and other models have explored the relationships between more positive psychological or "personality" attributes that influence participation in physical activity (Dishman, 1994; Lucas et al., 2000; Pullen et al., 2001). The most prominent values that seemed to be described by my participants included a work ethic and a related value of being engaged. Three of the participants used the phrase: "I just can't sit and hold my hands" when they discussed the need to stay busy and active. Several of the participants

traced their value for engagement back to their upbringing in “Christian” homes or “growing up in a farming family that worked hard.”

For older adults who suffer disproportionately from chronic diseases and disability, the environment has potential to be more of a barrier (AHRQ & CDD, 2002) for involvement in physical activity. Environmental factors that emerged from this study have also been discussed in the literature (Owen et al., 2000; King et al., 2000) though few studies specifically address older adults living in rural communities. This study and other reviews identify weather, crime, traffic, terrain, lighting, and transportation as factors that impact on physical activity (Balfour & Kaplan, 2002; Humpel et al., 2002). I classified environmental factors into natural and structural factors. The natural environment includes weather, lighting, and aesthetics. The structural environment was comprised of factors such as terrain, availability and proximity of facilities, and perceptions about safety.

The natural environment in this community, particularly the weather, was more frequently identified a barrier to physical activity. While all interview participants identified the weather as a barrier, in this area of the country, the temperate climate should actually be a facilitator to outdoor physical activity in all months except the hot summer months. Although I have no literature to support this, I suspect that weather, because it is a non-controllable factor, often takes credit for what are actually motivational factors that influence physical activity participation. In short, it may be easier to blame the weather, than to “lose face” and state that one is not motivated to exercise.

The amount of daylight present was perceived to be a barrier for older adults in this community as many of them stated that they would wait until light before they would go to the walking track. In this study, the perceptions of daylight were of concern for two reasons for the participants. First, two of the older women stated that they waited to go to the walking trails until it was light out because they feared falling on the sidewalks. Second, lighting functioned as a barrier to physical activity as it related to perceptions about crime. Although several older women mentioned that the three tracks in the community all had artificial lighting, one woman I spoke to at the church exercise group expressed her concern noting that it was walking to her car she feared more than walking on the track at night because “Someone might come out of the bushes and hit me over the head to take my car keys.”

Although aesthetics was not mentioned in great detail throughout my interviews, the presence of flowers, trees and gardens appeared to promote physical activity, whereas more mundane or homogenous flora (recall Betty’s comment: “What do you expect me to do, sit in the front yard and watch pine needles fall?”) may inhibit physical activity. A literature review done by Balfour and Kaplan (2002) found that people who live in more scenic areas such as coastal regions or in mountainous areas tend to be more physically active. Though I have no literature to support this speculation, I wonder whether or not people who live in a community for many years, habituate or take for granted the environmental aesthetics and hence have difficulty ascertaining whether or not the aesthetics of the environment influence them. Perhaps this area warrants further research in terms of the role of the aesthetic environment in promoting physical activity.

The structural environment was a barrier for older adults in this community in terms of promoting physical activity. Geography and terrain inhibited many women from being more active than they might have been if they lived in environments with facilities closer to their home or safe terrain on which to walk (e.g. level sidewalks). The terrain was also perceived more negatively than positively in this rural community. The lack of sidewalks in many residential areas inhibited at least three participants from the convenience of walking in their neighborhood.

Proximity also was identified as an environmental barrier to physical activity. Despite the fact that Judy drove sixteen miles each way two days a week to participate in the Senior Center exercise program, she noted: “I would come five days a week if I lived closer...and I try to justify making it worth my while because I run all my errands on the two days I come into Minton to do the exercise group.” In this case, proximity could have been more of a barrier for Judy, but her motivation to exercise and see her friends as well as her practicality of combining exercise on the days she does her errands helped Judy overcome this barrier. Nevertheless, being near a closer facility might have helped Judy to exercise more frequently. In sum, the proximity of facilities was a facilitator for residents living in “town” but a barrier for residents living outside the city limits.

In my observations and interviews, once an individual has access to the facilities (via transportation or financial access), the physical accessibility of the buildings at the college, at the Senior Center and the Baptist Church exercise program was not a barrier for the older women who participated in these programs. In each case, the facilities were one level, the flooring and lighting was appropriate for older adults who might have reduced glare tolerance or balance problems. Additionally, the aesthetics within each of

these exercise facilities as well as the three walking tracks located in Minton, appear to be more of a facilitator as opposed to being a barrier to physical activity.

Unique aspects of the rural community including the geography and limited resources seem to be more of a barrier to participation in physical activity. The limited availability of facilities and the distance that elders living outside the city limits must drive to access facilities may be a factor that is present in many rural Georgia counties. In my review of population data about the 40 rural decline counties in Georgia, more often than not, over half of a county's population resided outside the city limits of the largest municipality. This implies that most residents have a distance to travel and/or limited availability of facilities if they live in unincorporated areas of the county. Additionally, another aspect of the rural community lies in the fact that the terrain and road safety also may be more of a barrier to physical activity. Lastly, perceptions of crime (real or imagined) may limit rural dwelling older women from being physically active.

In terms of social factors that influence physical activity participation, interpersonal and social support has been discussed at length in the literature and generally concludes as was true in this study that positive social support enhances older adult participation in physical activity (Chogahara et al., 1998). Organizational and community support for promoting physical activity have been discussed by King et al. (2000) and by Green and Krueter (1999). Similar to their discussions of organizational factors, specific barriers identified in this study include financial issues, programmatic and staff development concerns, and commitment and leadership.

Participants described organizational leadership and commitment, financial issues, and low priorities within the community for promoting “physical activity for older adults” (e.g. unemployment and community development were much more important). Although the Senior Center is well known and respected by health professionals and others in this community, there are only a few healthcare and recreational professionals who have a specific interest or training in working with older adults. Older adults in this community seem dependent on professional leadership to implement and/or direct the exercise programs and other than Mitzi, the Senior Center Director; I saw no evidence of leadership (lay or professional) advocating for more services for older adults within this community. Finally, there were limited relationships between agencies in terms of referrals, but rarely were there collaborative relationships between agencies. For the most part, the burden of activity programming in this community fell upon the Senior Center. Haber (2000), reports that for some 25% of older adults, the senior center is a major source for accessing health programming. He also notes that nearly 80% of senior centers in the U.S. report having some relationship with physicians, hospitals and public health departments within their communities. This community seems to demonstrate minimal evidence of collaborative efforts to promote the health of older citizens.

Although community members had a keen awareness of facilities and activities within the community, there is limited coordination and collaboration between agencies that might influence physical activity for older adults. There was significant compartmentalization among agencies and most agencies seem to point to the Senior Center as the key (and in most informal interviews was identified as the only) resource in the community for promoting physical activity. Representatives from the County

Executive, the hospital staff, the Recreation Department, the local college lifelong learning program, the Public Health department, and the Department of Housing each stated (perhaps rightly so) in one form or another, that physical activity for older adults was not the primary mission of their organization. This attitude seems to put a heavy burden on the Senior Center (and to a lesser extent, the exercise program at the Baptist Church) for all of the elder physical activity programming in this community. As Amy put it: “They’ve got bigger fish to fry...you have to have passion about an issue like health or physical activity to make changes.”

When thinking about the community as the unit of analysis for this study, one has to ask a more global question: “How does the overall community influence physical activity for older women?” I would first say that the community of Minton provides more opportunities for physical activity than I would have expected in a rural community. This is particularly true with respect to the fact that there are two walking trails inside the city limits of a town with almost 7000 residents. All of the older women were aware of the walking trails in the community and more than half of the women had used the trails.

The recent construction on the park located in the center of town may provide more scenery for those elders who are not interested in going downtown to the shops. As mentioned earlier, I witnessed older adults traveling on foot to grocery stores, pharmacies, and into the post-office downtown. I was also surprised that most of the shops and businesses located downtown consisted of active businesses. This ongoing downtown development is different from many rural communities I have visited where empty storefronts provide evidence of losing the “downtown” character to the “Super-WalMart.” When a “SuperWalMart” is built (it is currently in the planning stages), the



vibrancy of downtown Minton may be threatened and seniors may once again flock to their automobiles for a discount shopping experience.

Despite being a walkable community for residents who live “downtown,” residents who live more a mile or two from town have no choice but to use automobiles to access goods and services. There is no public transportation in this town, nor are there bicycle paths so most adults in the community must drive to meet the needs of daily life.

Overall this community facilitates activity through its social structure where people know each other and will socialize while out in the community. The people of Minton demonstrate civic pride by displaying the U.S. flag, decorating for holidays, and supporting the high school and recreation department sporting events. They also attend cultural programming, parades, festivals and church functions open to the community. Regardless of whether they attend these functions for civic pride, or because there are limited social opportunities, residents in this community do not take community events for granted. These activities may actually encourage physical activity within this community. The community also encourages physical activity by having an active downtown where citizens might get outside and walk around. Lastly, this community supports physical activity programming through the use of the media to promote public awareness of existing programs that might encourage older adults to be more active.

Despite having good points, the community also inhibits physical activity for older people and all citizens because of its lack of transportation system. The community for the most part, views the Senior Center as the main source of physical activity programming. Thinking “out-of-the-box” by using existing facilities for multipurpose functions that go beyond fitness programming for children, might serve this community

well. For example, using the public auditorium and the public gymnasium to start a walking club for seniors would be an excellent way for this community to encourage older adult physical activity. Lastly, agencies in this community are aware of each other, but have limited interaction related to specific health programming for target populations.

*Conclusion Two: Identification of a factor as a barrier or a facilitator is shaped by individual perceptions*

During the course of my data analysis, I struggled with identifying whether a factor was a positive or negative influence on physical activity for these older women. Although I cannot definitively state which factors are universally identified as barriers and facilitators, I feel fairly confident in concluding that the perception of whether or not something is a barrier depends on many of the individual factors identified such as one's health, life context, and attitude. First, it is clear that those individuals with more health problems perceive more barriers to physical activity. Second, life roles such as caregiving, work, and civic leadership influence the perceptions of whether a factor is a barrier or a facilitator. Third and finally, attitude determines whether or not a factor is perceived as a barrier or a facilitator.

Self-perceptions may have also influenced the identification of factors as being a barrier or a facilitator, though a somewhat surprising finding in this study was the fact that all of the older women participants considered themselves to be physically active regardless of their "activity level" designation according to the *U.S. Surgeon General's Recommendation for Physical Activity* (USDHHS, 1996). All of the older women participants reported being satisfied with their level of physical activity, though the more sedentary participants defined themselves as "physically active" in comparison to

someone who was younger and/or worse off physically. It appears that many participants compared themselves to other people their own age who were less active, or they compared themselves to a notion of how active a “typical” older adult their age might be. Melillo (1996) also found that older adult women tended to use age reference when discussing their self-perceptions about physical fitness.

One reason why women may have labeled themselves as being physically active may lie in the concept of “self-preservation.” Perhaps we perform self-talk statements like “I’m not that bad off,” or compare ourselves to people who have worse situations to preserve self-esteem. I witnessed several of the participants, for example, who reported to being excellent and safe drivers take extra wide turns or be unable to park their vehicle in one parking spot in the Senior Center parking lot, and yet claim that they were much safer drivers than most older people they knew. Weinstein (1987) discusses the concept of an “optimistic bias” where people, when faced with the potential of developing a specific health condition may recognize it as a serious problem, but will deny that it applies to them. Perhaps the strategy of comparing oneself to others who are worse off is a form of optimistic bias.

*Conclusion Three: The environment may be adapted and thus influence participation in physical activity*

Despite labeling themselves as physically active and being satisfied with their level of activity, many of the older women in this study made comments regarding their “down-grading” or adapting their activity levels or the tasks they perform. This downgrading of activities may actually serve to decrease the amount of physical activity of older women as women make choices about meaningful activities and the choice to

modify, accept help, or stop a task altogether. To enable performance in meaningful tasks, other participants employed adaptation strategies to accommodate for physical changes and maintain their activity level. Some of these adaptations included the use of devices such as a long handled scrub brush, or a wheeled cart which enabled one women to be able to continue the tasks of cleaning her bathtub and doing her laundry.

Because many physical changes due to “typical aging” or due to the presence of chronic diseases such as arthritis are often gradual, people adapt gradually, perhaps without a conscious recognition of how their task performance might have changed. More specifically, adaptation may be accomplished unconsciously when there is high motivation to perform a task because motivation may drive people will figure out a way to adapt themselves, the task, or their environment to accomplish the desired activity.

The Model of Occupational Adaptation (Schkade & Schultz, 1996) states that an individual’s expectation of mastery may determine their ability to adapt to environmental or individual changes. Similar to Bandura’s (1986) concept of self-efficacy, when the individual’s expectations of his or her own performance are not a fit with the nature or the degree of the challenge, their capacity to meet the challenge is impeded. In other words, if an older adult believes that a task is too difficult, or their ability to overcome a barrier is too great, they may not even attempt an activity.

In my opinion, for older adults, adaptation may be more challenging because the impact of the environment may be magnified due to sensory, motor, and/or cognitive changes that may be associated with “typical” aging and more often, the presence of chronic diseases many older adults experience. For example, a reduced tolerance to glare and/or impaired reaction times may inhibit older adults from attending nighttime

programming for social, church, or fitness-related activities because they do not drive after dark.

### Implications for Practice

Results from this study inform educational gerontologists, health promotion specialists, city planners, politicians, and program planners about possible ways that individual, social, and environmental factors might influence older women's participation in physical activity. It is my hope that this study has encouraged the participants and will encourage politicians and planners to evaluate what their community has to offer older citizens in terms of health promotion programming.

In this community, some facilities (such as both indoor gymnasiums and to a lesser degree, the walking tracks) were underutilized by older adults. Hopefully, this study demonstrates to planners that they need to look to all age groups as potential consumers of recreation, leisure, and other services within a community. In particular, this study pointed out that most of the programming through the Public Health Department was geared toward younger people and as epidemiologists, they need to know that chronic diseases older adults experience could be prevented on some level through physical activity. The underutilization of facilities and services by older adults in this community warrants further intervention and study. In short, both health and recreation professionals as well as city planners must start looking at older adults as potential consumers of their services. Incorporating older adults into the planning of services may ultimately enhance the quality of life for many residents in the community.

In terms of older adult learning, this study provides a broader view of how the environment inhibits or facilitates the effective transfer of learning for older adults. For

example, older adults may participate in walking classes or other classes to promote physical activity within the confines of the Senior Center, but they may be unable to transfer skills to their home environment because of individual, environmental, or social factors that hinder activity. For example, Judy only did her walking program on the days she came to the Senior Center because she did not feel safe walking in her home neighborhood. The distance she lives from the Senior Center limited the frequency of attendance to two days a week, which places Judy in the Surgeon General's category of insufficiently active.

Social factors such as limited funds, contextual factors such as an emotional obligation to a family member, and biological factors such as women living longer, often place older women in the position of caregiving for spouses or other family members. King and colleagues (2000) note, for example, that caregiving responsibilities often interfere with participation in physical activity and this issue has implications well beyond the level of the individual. Understanding multiple levels of an issue such as caregiving, may help program planners and consumers to advocate for increased funding for respite care programs to promote health for elderly caregivers. It would seem that this multilevel analysis helps program planners and participants gain deeper insights into the complexities of health promotion for rural elderly women, and hence enhance the quality of programming and advocacy for larger social issues related to this population.

Older adults in this community as well as service providers seemed genuinely surprised at being interviewed regarding physical activity for older adults as if the two ideas were mutually exclusive. The healthy communities movement shows us that coalitions of people need to critically analyze their community and the issues that affect

the health of its citizens to affect change. The few pilot projects that have been done throughout the U.S. were not done in rural areas, but instead done in larger municipalities with more infrastructure and resources to affect change. The potential in small communities, however, seems greater, because community members and service providers may begin with some degree of awareness regarding programs as well as strengths and weaknesses in a community.

As identified in other studies (King et al., 2000), there are combinations of factors that influence physical activity behaviors; therefore, careful assessment of individuals or target populations is critical in matching the most appropriate intervention with the barriers and facilitators identified. While we may know that individuals do not see themselves as having barriers to physical activity, careful thought about how to raise awareness of consumers must occur. Educational approaches that “scare” people or focus on prevention may be ineffective because of the self-preservation old people may do in order to maintain dignity.

Applying principles of adult education when working with older populations may help address motivational factors and thus enhance the quality of programming provided for older adults. While adult educators may not conduct physical activity or health promotion programs, they could teach concepts of adult education to groups of professionals who work in the area of aging and health promotion. Key tenants of adult education that include meeting the learner where they are, assessing learner needs and motivations, and the use of participative planning, might go a long way in helping motivate more sedentary older adults.

For adult educators who do work directly with older adults in health promotion or enrichment settings, we must empower women in rural communities to become involved in civic and political activities to advocate for more facilities and services in rural communities. Additionally, adult educators could also work to help build coalitions interlinking organizations (public and private) that deal with health related issues for older adults. Our expertise in facilitating teams and in organizational development would serve any community coalition. Through planning, legislation, and the use of media, health coalitions can change and enhance the community environment.

McCluskey's theory of margin (Merriam & Cafarella, 1999) and Lawton's Environmental Press Model (Lawton & Namehow, 1973) both discuss the interaction of the individual and his or her environment. These models advocate a balance between the "Load and Power" in McCluskey's theory or a balance between the "demands of the environment and the competence of the individual" in Lawton's model. McCluskey and Lawton both state that the individual must have some degree of "power" or competence over their situation. One strategy for helping older adults to enhance performance and abilities is to reduce the load or the demands of the environment.

Humpel and associates (2002) note that public health strategies to promote physical activity stress the importance of environmental factors to provide and reduce barriers of the national objective to reduce sedentary behavior in the U.S. They state: "While the importance of such influences would seem to be self-evident, the assertive pursuit of advocacy for physical activity opportunities must be strengthened by relevant empirical evidence" (p. 197). Knowledge of these environmental factors may create opportunities and/or help practitioners and researchers to identify barriers to participation



in physical activity that go beyond the level of the individual and lead to a more comprehensive model of intervention than current (more individually-based) intervention models for promoting physical activity in older adults.

Interpersonal support and educational approaches may require continued multilevel interventions that address individual, social, and environmental factors to influence physical activity participation. Both the CDC (2002) and the Robert Wood Johnson Foundation (2001) advocate the development of community wide campaigns, more community-based programs, and coalitions that promote physical activity. King (2000) notes that a shift from focusing health promotion on the individual to focusing on the community requires shifting not merely implementation of programs, but more importantly, the thinking of professionals to relinquish some control and lessen the view that they are the “expert.” In short, a community-based perspective should empower consumers to be active participants in the program planning process.

Adult education has much to offer the field of health promotion in terms of influencing social factors. As a discipline, our knowledge of program planning and models of organizational development make us ideal professionals to inform coalitions trying to promote healthy communities. In the rural community, where funding and available infrastructures are often limited, it is particularly important that organizations share resources to collaborate in health promotion efforts. Adult educators may not consistently be thought of as viable members of “healthy communities coalitions,” but our knowledge of models of empowerment, program planning, organizational development, as well as educational gerontology, makes us ideal contributors to community coalitions trying to promote healthy communities.

Politics pervades program planning in small and large communities. Consumers of services may or may not be cognizant of political or economic forces that facilitate or inhibit program planning. In more recent years, public health professionals have “borrowed” from the discipline of adult education in their discussion of community empowerment and the need to work in coalitions. Often, professionals in public health, though well intentioned, do not have the background in critical theory or adult learning to aide them in critical consciousness raising, empowerment, organizational development, and student-centered learning opportunities.

The Cervero and Wilson model (1994) offers health coalitions who are interested in multilevel interventions a program planning model that takes into account barriers at the environmental and the social level. This model discusses strategies for negotiating power and interests to form successful interagency relationships. This model takes into account sociopolitical factors and attends to the integration of the individual and contextual factors that might impede engagement of a target population (i.e. older women) in physical activity. Ultimately, implementation of an “integrated” model will help program planners, policy makers, and older adults to develop and participate in programs that are more effective and thus, reduce sedentary behavior in older adults.

#### Implications for Research

Because there are multiple findings from this study, there are numerous avenues of further research that might be conducted. This section will discuss possible methodologies and different topic areas warranting further investigation. With regard to methodology, it is evident that a socioecological approach employs multiple methodologies in research.

Specific content areas also warrant further study in terms of the individual, environmental, and the social factors found in this study. In terms of individual factors, the process of adapting to be able to engage in meaningful activities and how self-image relates to engagement in physical activity are both worth more investigation.

Environmental areas that merit further exploration include: 1) the area of aesthetics in a community and its relationship to engagement in physical activity, and 2) how adaptations to the physical environment actually influence physical activity in older adults. Finally, the social factors that need further study include: 1) how agencies can work together to promote healthy rural communities 2) How healthy communities movements can target older populations, and 3) How adult education might contribute to a healthy communities coalition.

In an ideal world, multilevel analysis of a community and its residents would involve multiple research methodologies. A qualitative case study was chosen because it was believed that it would best help me uncover factors from studying multiple facets of this community. The Robert Wood Johnson Foundation (2001) and the Centers for Disease Control (2002) recommend that studying a community and its ability to promote physical activity warrants both collaborative research efforts as well as multiple research methodologies. For example, to get at some of the individual factors, interview and/or survey research might be employed whereas study of groups and organizations trying to promote physical activity within a community might employ the use of participatory action research. In performing a multilevel analysis in a smaller rural area, researchers may have more potential to control and manage a community-based research project, which could become unwieldy in a large community.

It is clear that at present there are no clear “formulas” for determining a personality type and modifying the social, natural, or physical environment accordingly to accurately predict physical activity behaviors. Social ecological theory offers us some insight into the complexity of analysis looking well beyond the level of the individual, but does not give us clear models for understanding how social and environmental factors influence physical activity behavior in adult populations. It would appear that using the factors identified in this study could be applied to concept mapping, critical pathway analysis or even structural equation modeling to determine if there is any predictability of physical activity behaviors in older adults.

Despite more recent efforts to equalize gender inequities, older women are still an understudied group with regard to health promotion and the influence of the community. Moreover, the women in this study resided in a rural community and this population has had even less study. Because these women typically have higher rates of disability and reduced access to healthcare services it is imperative that rural older women be given more voice via community collaborations and through participatory research to enhance health promotion efforts for these groups.

An interesting area of study would be to consider how self-image factors into older women’s perceived need for engagement in physical activity. As mentioned earlier in this chapter, all of the women in this study described themselves as physically active. I suspect that women are adapting one or several personal attributes. First, they may be adapting their self-image as they age to preserve dignity. There is work on changes in self-concept with aging (Hooyman, & Kiak, 1999). There is also a significant amount of work on self-efficacy for exercise (Clark, 1997) yet, it seems that no one has explored

how self-concept in older adults influences physical activity participation. In particular, no research is apparent on how a positive self-concept might hinder engagement in physical activity.

Older adults are at increased risk for a variety of physical and functional limitations that threaten their independence and quality of life. Clark and colleagues (1996), studied adaptive strategies of older adults in urban Los Angeles and found 10 different domains in which older adults adapt. These include: activities of daily living (ADL), adaptation to a multicultural environment, free time usage, grave illness and death-spirituality, health maintenance, mobility maintenance, personal finances, personal safety, psychological well-being and happiness, and relationships with others. While these domains are useful to understand, no research on how adapting within any or all of these domains might influence engagement in activity and/or health promoting behaviors. This is an area of personal and professional interest for me, and I could see myself pursuing further study of these domains and their impact on actual behavior.

Schkade and Schulz (1992) studied the process of adaptation (though not specifically with older adults) and they propose a model where the individual's sense of mastery as well as their appraisal of a situation will influence their process of adaptation. This research may be useful when working with older adults studying their engagement in physical activity and other health promoting behaviors. Taking their work further, one might explore how a desire to engage in meaningful activities affects the process of adaptation.

At the environmental level, one conclusion from this study was that aesthetics may have something to do with engagement in physical activity, but this finding was not

well articulated. It appeared that women habituated to their environment and had little awareness of how the natural surroundings may have influenced them. This certainly warrants further study. One other aspect of the environment that deserves continued study is whether or not making physical or psychological adaptations actually enhances engagement in physical activity. It is apparent that women whose adaptation to their environment was self-driven used adaptation strategies to be engaged in activities. I question, however, if others make adaptations to the physical environment, how does this influence engagement in physical activities?

In terms of the social factors in this study that necessitate more study, there has been little work in rural communities in terms of coalitions to promote physical activity. Obviously more pilot projects are indicated if program planners are to use evidence-based practice in promoting physical activity in rural communities. Of particular interest to me for study are: 1) How older women can be involved in “Healthy Communities” Campaigns, 2) What impact do Healthy Community Campaigns have in rural communities, and 3) What contributions, if any can adult educators make to the Healthy Communities Movement.

Although a body of knowledge is emerging from recent research in the “Healthy Communities” Movement, specific effects of these campaigns have not been reported for target populations of older adults. In addition, most of the research in healthy communities focuses on medium to larger cities and not on rural areas. It would appear from a logistical and financial point of view that collaborative coalition development, health communication strategies and social marketing in rural areas which usually have

higher percentages of older adults might be an efficient way to study the area of community health promotion with older adults.

Another social-environmental area of much needed research lies in the fact that rural communities lack transportation infrastructure and at the same time have few places where older people feel safe traveling on foot. The concept of a mixed-use community (Kunstler, 1996) has seen some research in the past 30 years as a way to counteract our automobile dependent society, but no studies have specifically addressed the impact of a mixed-use community upon older adults. While we may see older women in Europe walking daily to shop at the local market or to visit a neighborhood physician, mixed use communities in the U.S. still seem limited in their ability to help citizens, particularly older residents access services that they may need on a daily basis.

In terms of promoting positive social images of older adults, there is little work on how the public images of older adults or more local role models of physically activity older adults influences physical activity behavior. In this study, the age range of the participants was from 65 to 93, and generally all participants had few positive images of older adults that they could clearly identify. It would be interesting to try a study that could be controlled for generational effects, for gender, and for geography (rural versus metropolitan) to better understand if any one factor (older, female, or rural) has more of an impact on physical activity behaviors.

This multilevel analysis of a rural community serves as a wake-up call to program planners and older adults in realizing the strengths and weaknesses of a community in terms of health promotion. In order to facilitate meaningful participation in physical activity and community life, individuals and groups may find value using many concepts

familiar to adult education including: peer education, experiential learning, and adoption of politically active roles in the community. The field of adult education has much to offer this area of research in terms of informing researchers and practitioners about models of empowerment; adult, social, and community development; and gaining increasing understanding of older adult learning needs.

In the beginning of this document, I presented a vignette about a woman named Claire. I would briefly like to comment on how this study and its findings might help Claire to become more physically active. Recall that Claire had the motivation and desire to be physically active. The individual barriers for Claire include limited social support, and a need for more challenging programming. Environmental barriers include the fact that Claire lives on a busy street. Finally, social factors influencing Claire are that she cannot drive, nor can she afford to join a fitness facility.

Conclusions from this study indicate that Claire's level of physical activity could be influenced through several channels: 1) Having the senior center exercise leader develop a buddy system for Claire to have someone to compete with or gain social benefits through exercise, 2) Enhancing the programming at the senior center to better meet Claire's needs for higher level programming. This may entail dividing members into "high and low" level groups. 3) In the short term, we may not be able to solve the traffic problem in Claire's neighborhood, but local churches, stores, and civic groups might open their buildings during the day so older adults could "walk laps" in their facilities. In the long term, the installation of sidewalks or walking paths within neighborhoods is the ideal situation to promote physical activity for all citizens in a community. 4) The local community spurred on by Claire and a leader at the Senior



Center, might begin or join an existing health promotion coalition to lobby for programming, public policies, and more facilities within the community, and 5) More leisure programming and volunteer opportunities within the rural community sponsored by churches or civic groups might help Claire to be more physically active.

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## APPENDIX A: INTERVIEW GUIDE FOR OLDER ADULT WOMEN

1. Talk about a typical day for you.
  - In what activities do you regularly participate?
  - How frequently do you participate in these activities?
  - Tell me about chores, fun things, and the personal tasks you do on a daily basis
2. Define physical activity
  - Physical activity is more than just exercise. Discuss the activities that you are involved in that *you consider* to be physical activity and that *help promote your health*
3. Talk about any physical activity programs you have started
  - i. What enticed you to participate or what keeps you participating?
  - ii. How satisfied are you with your level of physical activity?
  - iii. What would cause you to change your level of physical activity?
  - iv. Talk about any groups or organizations you participate in that help you to be physically active
4. Tell me about your community:
  - Probes:

- i. Where do you live? tell me about your home and neighborhood
    - ii. Talk about how people get around in your community
      1. How do you get to activities within your community?
      2. Do you drive? Is there public transport of any kind in your area?
    - iii. What activities do you participate in within your community?
  - Talk about your level of participation in physical activity.
5. In your life, be it yourself, your friends or family... there are people that give you strength talk about yourself and others in your life who seem to help you participate in physical activity.
6. In your life, be it yourself, your friends or family... there are people that sometimes hinder you.... talk about yourself and others in your life who seem to hinder your participation in physical activity.
7. Talk about the community you live in... In what ways does it help you be involved in physical activity? What ways does it hinder you?
8. Talk about any issues larger than your community, (might need to give examples here) such as policies, the media that help or hinder participation in physical activity.

## APPENDIX B: INTERVIEW GUIDE FOR STAFF MEMBERS

1. Tell me about the local community
  - a. Do you live in this community
  - b. Talk about the strengths and weaknesses in the community as you see it.
2. Tell me about your daily activities in the context of promoting health for older adults:
3. Physical activity is more than just exercise.... Discuss the activities that you are involved in that *you consider* to be physical activity and that *help promote health for your clients*
4. Both the client and those around them can help or hinder their participation in physical activity. Can you share some examples of when you've seen cases of each.(may need probes here)
5. Talk about the joys and some of the concerns you have in doing your job in terms of promoting physical activity for older adults
6. In your context, talk about the things that hinder or help you do your job in promoting health for older adults. What things help you do your job? What things continue to discourage you?
7. Talk about any issues larger than your community, (might need to give examples here) such as policies, the media that help or hinder participation in physical activity.



## APPENDIX C: INFORMAL INTERVIEW GUIDE FOR COMMUNITY MEMBERS

### Informal Interview Data Sheet

Person:

Address and phone #:

Title:

Agency:

Types of programs:

Tell me about your involvement with older adults:

In your community, what programs are available for older adults?

Describe any facilities or programs that promote physical activity or health promotion for older adults:

What other agencies do you work with?

Can you talk about active seniors and seniors you know that are not so active and share your opinions regarding how the community might support physical activity for each of these older adults:

## APPENDIX D: COMMUNITY CHECKLIST

### Community Analysis Worksheet (Factors to consider)

#### **Facilities:**

- Location
- Accessibility
- Programming for Seniors (including marketing)
- Training of Staff
- Involvement of seniors in decision making about programs
- Scheduled activities geared toward seniors
- Mentoring and additional support for seniors
- Adaptations/ accommodations for those with disabilities

#### **Organizations and types of facilities:**

- Parks
- Swimming pools
- Fitness centers
- Hiking/ Walking facilities
- Learning in retirement programs
- Arts and Crafts facilities
- Bowling Alleys
- Senior Centers
- YW/YMCA's
- Churches
- Intergenerational learning programs/ public schools
- RSVP programs/ SCORE programs
- Lodges and fraternal organizations

#### **Public Policies:**

- Coalitions
- Integration of agencies  
Public Health, Transportation, Housing, Parks & Recreation, Senior groups, Health Care organizations, Educational concerns
- Development and community planning
- Integrated community design and zoning

#### **Marketing and Communications:**

- Active senior role models in the community
- Social marketing geared toward seniors and active living