DISTRESS OR EUSTRESS – UNDERSTANDING THE ROLE OF SELF-REGULATION IN THE CONTEXT OF LEISURE AMONG OLDER ADULTS WITH CHRONIC CONDITIONS

BY

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THESIS

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ABSTRACT

As the number of older adults around the world is expected to almost double its number by 2040 and with longer life expectancy, older adults’ healthy aging process has become essential part of individual’s life (U.S. Bureau of the Census, 2010). More than 90 percent of older adults in the United States have at least one chronic condition, and this overwhelming reality can lead to serious stress problems, in fact, chronic condition is one of the biggest stressors among older adults (Miller, Chen & Parker, 2011). Although past research has examined a variety of important constructs related to the healthy aging process such as leisure and self-regulation, the role of eustress (i.e., good stress) has not been thoroughly examined. Further research on eustress and its relationship with adopting self-regulation strategies via selective optimization with compensation (SOC) in a leisure context will offer important insights into the complex phenomena of older adults’ healthy aging process.

Using grounded theory as the qualitative framework, 11 semi-structured interviews were conducted to better understand the role of eustress and SOC among older adults with chronic conditions. Five males and six females participated in the interviews and they either lived in their own home, in a retirement community or in assistant living.

Older adults in this study experienced changes in their leisure behaviors mainly due to physical limitations (e.g., chronic conditions) and lack of resources (e.g., not being able to drive, lack of leisure programs), however they were still engaging in meaningful leisure activities which allows older adults to experience cognitive, psychological, and social benefits. Participants experienced healthy aging process with the help of self-regulation (SOC) strategy, leisure and eustress. Avoiding boredom, keeping mind and brain active, meaningful social connection, sense of purpose and satisfaction and enjoyment were important characteristics of healthy aging process defined by the older adults. These emerged
themes were essential to their healthy aging process which were primarily attained from active leisure participation.

Eustress was important among older adults in that it helps them to overcome challenges and difficulties they face in the aging process. Older adults’ participation in leisure activities and use of self-regulation strategy helped them to experience leisure oriented eustress, which is a positive psychological reaction to stressors in the context of leisure. As an outcome, they reported they experienced increase in sense of control, perseverance, positive attitude and feelings of satisfaction. These four emerged themes also encouraged older adults to experience a stronger form of eustress in the context of their daily lives.
To my grandfathers, Kyungsik An and Yongwoo Cho, who are now in heaven and my grandmothers, Sukhwan Kim and Kijung Sung living in Korea. Our dearest memories have been the strongest motivator of this study.
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CHAPTER 1: INTRODUCTION

Growing up close to both of my grandmothers was a privilege not everyone could experience. The intimate relationships between myself and both of my grandmothers allowed me to observe their daily stress which mostly came from their chronic conditions. The way they managed chronic illnesses and pursued better quality of life was significantly different from one another. One was ready and prepared for it as if she knew what was coming, whereas the other one showed the opposite psychological state. Similar to their psychological response to chronic health conditions, both of them reacted differently to the functional limitations that they encountered from physical decline. One took it as a challenge and implemented new strategies to daily living and leisure activities. On the other hand, the other one viewed the change as a threat, wanting to give up everything. After observing these two distinct processes of managing chronic illnesses, I wondered what made them react so differently.

Just like my grandmothers, aging is an experience that every human being shares. Although all humans start to age from the moment of birth, it is difficult to fully understand the process of aging. The World Health Organization (WHO) states that the aging process is of course a biological reality which has its own dynamic, largely beyond human control, however it is also subject to the constructions by which each society makes sense of old age (WHO, 2015). Furthermore, the four processes of aging which are chronological, biological, psychological, and social, help us to better understand and guide individuals through this complicated phenomena (Hooyman & Kiyak, 2010). Understanding the process of aging especially in later life is essential as the number of older adults in the United States is expected to increase from 34.8 million to 77.2 million by 2040 (U.S. Bureau of the Census, 2005). Because it is inevitable that older adults experience some type of decline in their
physical and psychological functioning during later life, negative indicators such as chronic diseases and stress need to be carefully examined to improve quality of life (U.S. Bureau of the Census, 2010).

One of the biggest changes that people experience from aging is physiological decline. Respiratory changes such as lungs becoming more rigid, decreased pulmonary function, and decreased maximal oxygen uptake are common among older adults (Westerterp & Meijer, 2001). Cardiovascular and body composition changes can limit older adults’ Instrumental Activities of Daily Living (IADLs) and eventually their Activities of Daily Living (ADLs) as well (Steffens, Krishnan, Crump & Burke, 2002). Along with physiological changes, older adults experience substantial changes in their psychological function. Depression and anxiety are examples of psychological disorders that are common for older adults. Cognitive changes also occur with age such as, loss of memory, longer reaction time, and decreases in crystallized intelligence (Horn & Cattell, 1967; Klap, Unroe & Unutzer, 2003; Seitz, Purandare & Conn, 2010).

Although physical, cognitive and psychological decline are often expected among older adults, sudden change in health status from chronic diseases may force older adults beyond their expectations and resources (e.g., sudden decline in mobility due to arthritis or a fall may be the cause of early retirement, change in financial planning, modified place of living) (Jopp & Smith, 2006). More older adults are living with chronic health conditions due to longer life expectancy and lower mortality rate which can compromise their chance to experience healthy aging (Schultz & Kopec, 2003). More than 90 percent of older adults 65 years and older in the United States have at least one chronic condition, and 70 percent have at least two chronic conditions (Anderson, 2010). This overwhelming reality can lead to serious stress problems, in fact, chronic illness is one of the biggest stressors among older
adults (Bosch, 2003). Therefore, it is critically important to determine ways to help older adults successfully adapt to the changes associated with chronic health conditions, so they can be less burdened by stress.

Self-Regulation, Stress and Aging

Although stress can affect people across the lifespan, older adults are particularly vulnerable to the effects of stress (Cairney & Krause, 2008). The effects of stress for older adults include the development of physical and psychological health conditions, such as decreased autonomic nervous system function, decreased immune function, and an increase in anxiety and depression (Chang, 2015). Therefore, managing stress levels of older adults is key to maintaining psychological well-being and increasing quality of life. Health promotion programs for chronic disease management are often used to help people develop adaptive processes to manage their symptoms (Bussing, Ostermann, Neugebauer & Heusser, 2010). However, it is important to realize that these programs do not appeal to everyone or meet their needs. Especially when dealing with stress, such a subjective matter, people have their own unique ways of responding to stressors and managing them (Chang, 2015). In addition, fatigue, pain, and other symptoms associated with chronic health conditions can limit participation in programmed activities. This means they need to find ways to adapt their chronic conditions and self-regulate their own valued activities (Janke, Jones, Payne, and Son, 2012).

Self-regulation of daily stress, which in many cases results from chronic health conditions, will help older adults to facilitate their valued day to day life activities. Selective optimization with compensation (SOC) provides a general framework of aging for understanding developmental change and resilience across the life span in order to age
successfully (Baltes, 1997). It builds on the assumption that throughout the entire life span, people encounter certain opportunity structures as well as limitations in resources that can be mastered adaptively by a control of three components: selection, optimization, and compensation (Freund & Baltes, 1998). The SOC framework is commonly used to understand how older adults’ self-regulate in the face of limitations (e.g., physical, cognitive, socioemotional) to optimize their experience of healthy aging. Therefore in this study, the term SOC is used to describe one’s self-regulatory process. Self-regulation using the SOC framework has been examined in different contexts such as disability (e.g., Gignac, Cott & Badley, 2002), major disruptive life changes (e.g., Boerner & Jopp, 2007), acute health conditions that result in ongoing activity limitations (Hutchinson & Warner, 2014), and therapeutic recreation service delivery (e.g., Wilhite, Keller & Caldwell, 1999).

Self-regulation processes among older adults using the SOC framework has covered diverse contexts as shown above, however it is important to note that a majority of the studies have been focused only on the negative effects of stress, so called ‘distress’. Whereas ‘eustress’ – “positive psychological response to a stressor” (Simmons 2000, p.42) – has been largely ignored, making it difficult to fully understand this construct. Not only has this concept been under appreciated by researchers, it also has potential as a mechanism to better understand and analyze self-regulation among older adults.

**Leisure & Healthy Aging**

Since this research aims to investigate the role of self-regulation among older adults’ in response to stressors in the context of leisure, it is essential to review different values of leisure as well. According to past research, leisure promotes positive physical health (Wendel-Vos, Schuit, Tijhuis & Kromhout, 2004), emotional health (Wiersma & Parry, 2010),
spiritual health (Heintzman & Mannell, 2003), cognitive health (Singh-Manoux, Richards & Marmot, 2003), and social health (Keller, Fleury & Rogers, 2010).

The most commonly studied leisure activities in regards to health have been physically active leisure pursuits, volunteerism, and passive or sedentary leisure pursuits. Leisure is important to healthy aging because it is freely chosen, intrinsically motivated, enjoyable and personally meaningful activity that facilitates engagement with life (Rowe & Kahn, 1998). Increased levels of social interaction is another positive outcome gained from leisure participation (Dattilo et al., 2015). Moreover, self-efficacy can be increased in the context of leisure participation. Self-efficacy is a primary psychological component of social-cognitive theory and involves the belief that one can successfully cope with challenging conditions (Bandura, 1997). Self-efficacy can play a role in an individual’s adjustment to the symptoms and uncertainty associated with chronic health conditions (Motl & Snook, 2008).

In addition to the benefits that leisure offers, extensive research has provided strong support for the effectiveness of leisure as a resource to cope with stress (Iwasaki, 2010; Kleiber & Hutchinson, 2010). In one of the earliest studies addressing the relationship between leisure and stress, Coleman andIso-Ahola (1993) hypothesized that social support and self-determination gained through leisure were important buffers to stress. The studies by Iwasaki and colleagues during their early research (e.g., Kirkcaldy & Cooper, 1993; Caltabiano, 1995; Zuzanek, Robinson, & Iwasaki, 1998), mainly assessed health and well-being as coping outcomes. A few years later, the importance of psychological well-being as a coping outcome has been emphasized by researchers (Iwasaki & Mannell, 2000; Mroczek, 2001). Although there have been changes and developments throughout the years on the research of stress and leisure, the fact that leisure can be an effective source of stress coping has not changed.
Fortunately, research has examined important factors of the aging experience that will be specifically explored in this paper: as it was discussed above, stress and leisure have been studied hand in hand for years. Leisure participation provides not only a positive resource for stressful situations, it is often analyzed as a prominent component of healthy aging as well (Dodge et al., 2008). Even with a sudden decrease in physical health, retaining social connections and a sense of purpose are central to older adults’ views of successful aging. By pursuing personally meaningful leisure activities, both of these goals could most likely be accomplished (Warner, Doble & Hutchinson, 2012).

**SOC & Leisure**

Because leisure is a key factor during older adults’ aging process, it is important to understand its relevance to the SOC process, the self-regulation strategy that is also effectively used among older adults. Older adults who can no longer participate in their daily leisure activities due to limitations from chronic health conditions may use SOC strategies and adapt valued leisure activities. Because leisure plays such an important role among older adults in their aging process, the SOC framework is critical among older adults with chronic health conditions. SOC was also used within therapeutic recreation settings (Wilhite, Keller & Caldwell, 1999), and leisure education and facilitation sessions to assist clients who want to select, optimize, and compensate in the context of leisure participation. For example, Wilhite et al. (2004) found that participants met their personal goals by applying SOC strategies to remain involved in valued activities. Another study on individuals living with arthritis found that participants used a number of SOC strategies to both manage their arthritis and to adapt their leisure in order to maintain participation (Janke et al., 2012).
**Need for the Study**

Although past research has examined each construct and its relationship to one another (e.g., stress & leisure and SOC & leisure), the role of eustress on self-regulation (SOC) has not been thoroughly examined. Because chronic diseases and stress are one of the biggest concerns among older adults, understanding those connections may help older adults to achieve psychological well-being which is highly linked to quality of life and healthy aging. Also, despite an increased emphasis on quality of life in today’s society, it is surprising that so little research has actually been conducted on the topic of eustress, especially from the perspectives of older adults. Since Selye (1964) first introduced the concept of eustress, there has been some research about eustress in relation to occupational settings (Le Fevre, Matheny & Kolt, 2003), life satisfaction (O’Sullivan, 2011), and genetic expression (Sanchis-Gomar et al., 2012). However, lack of interest on this specific topic limits further development of what could possibly have a significant impact on achieving better quality of life. Therefore, further research on eustress and its relationship with adopting SOC strategies in a leisure context is needed in order to better understand the complex phenomena of older adults’ healthy aging process.

**Purpose and Research Goals**

The purpose of this study is to explore the experiences of stress, leisure and self-regulation among older adults with at least one chronic condition. The overall aims of this study are to explore: 1) How, if at all, do older adults experience eustress in the context of leisure; 2) The role, if any, of eustress on adoption of SOC strategies in leisure; 3) Examine whether people who view stress as a positive challenge (eustress) are able to better maintain involvement in their valued leisure activities; 4) Understand the role of distress in
engagement in valued leisure activities, and 5) Understand the meaning of leisure activities to older adults and if and how leisure engagement contributes to healthy aging.
CHAPTER 2: LITERATURE REVIEW

Introduction

The purpose of this study is to study the experiences of stress, leisure and self-regulation among older adults with at least one chronic condition. This literature review consists of five important sections essential to this study: quality of life, healthy aging, leisure, stress & eustress, and self-regulation. Introduction of these concepts, implications, and unique relationships are reviewed in this chapter to justify and contextualize the study.

Defining Quality of Life

Quality of life (QoL) is a complex, multifaceted construct that requires multiple approaches from different theoretical angles (Theofilou, 2013). As defined by the World Health Organization (1993), “quality of life is a person’s interpretation of one’s own conditions in life with regard to the culture and the value systems one belongs to and the goals, expectations, standards and concerns that one has set for oneself” (p. 154). Therefore, QoL involves a vast range of concepts well beyond physical well-being. An important aspect of QoL is its subjective and multidimensional nature and Felce & Perry (1995) categorized five dimensions that cover QoL: physical wellbeing, material wellbeing, social wellbeing, emotional wellbeing, and development and activity. Within the realm of general QoL components, health related QoL which concerns specifically the health aspects and should be considered for this research. Although some scholars (e.g., McDowell & Newell, 1995; O’Connor, 2004) suggest that there is little difference between general health and QoL, and that the two can be measured in similar ways, the focus of this study emphasizes healthy aging. This is because healthy aging is one element to quality of life, but it is much narrower and directly related to the focus of this research.
Healthy Aging as a Goal in Later Life

Defining health aging. ‘Healthy aging’ has become a major concern given current and prospective demographic changes. It is well established that population aging is occurring in almost all world regions (World Health Organization, 2008), and that projections of rising health-care and long-term care costs have prompted more people to adopt this important phenomena. Despite decades of academic studies in different disciplines (e.g., geriatrics, psychology, sociology, and gerontology), no consensual definition for healthy aging exists (Hung, Kempen & De Vries, 2010). Some attributes, factors of influence, antecedents and consequences of healthy aging tend to have more consensus in the literature. For this paper, Peel, McClure & Bartlett’s (2005) definition of healthy aging will be used: “Healthy aging is described as a lifelong process optimizing opportunities for improving and preserving health and physical, social, and mental wellness; independence; quality of life; and enhancing successful life-course transitions” (p. 298). This definition encompasses a wide range of elements that healthy aging should address. Also, it is well suited to be used in the field of leisure studies and its relationship with older adults, especially regarding the use of self-regulation processes that can enhance the experience of healthy aging.

Healthy aging as a process. Hansen-Kyle (2005), focused on the continual process (e.g., work through negative life events, continual self-assessment, redefine self-abilities) as to be an important attribute of healthy aging. Continual physical change occurs as an individual ages, and changes in physical ability and physical resilience caused by the slowing of the body processes result in a need for continual adaptation (Bryant et al., 2001). Because each individual defines healthy aging on an individual basis, the ability to continually modify, reassess, and redefine oneself was identified as an essential attribute of healthy aging by both
older individuals and by researchers (Roe, Whattam, Young & Dimond, 2001). Other attributes of healthy aging include desire to continue to actively participate in life processes (e.g., participating in weekly religious services, family gatherings, managing doctor’s appointments), acceptance and movement towards death, and continual modification, self-assessment, and redefinition of self and abilities are all important values that need to be considered when defining and studying healthy aging (Hansen-Kyle, 2005).

**Antecedents and consequences of healthy aging.** Healthy aging, as a process, is preceded by several specific events which are considered to be the antecedents to healthy aging, and it also produces specific consequences (Hansen-Kyle, 2005). According to Walker and Avant (1998), antecedents are those events which must be necessary for the concept to occur and consequences are those events which are a result of the concept occurring. Three of each antecedents and consequences of healthy aging have been proposed in the literature (Hansen-Kyle, 2005). The first antecedent is adaptation which is the ability to redefine oneself in terms of independence and autonomy. Next is the compensation, which is the ability to change one’s lifestyle to accommodate the physical changes that have occurred. Lastly, resilience is the ability to bounce back, to change, and to adapt. Resilience is a precedent of healthy aging, but it is also the consequence of both adaptation and compensation at the same time. Therefore, one’s ability to adapt and compensate can lead to increased resilience which facilitates healthy aging. In addition to antecedents, there are consequences of healthy aging: successful aging, independence, and autonomy (Hansen-Kyle, 2005). Each of these consequences is a similar concept to healthy aging, however, it is important to remember that the consequences of healthy aging can only occur if the antecedents to healthy aging are in place. However, successful aging, independence, and autonomy continue to be concepts that are socially and culturally based, which are usually more important to Western European concepts compared to African and Eastern cultures.
(Wang, 1999; Morgan et al., 2000; Westerhoff et al., 2001; Karch, 2001). For instance, independence is a cultural value and may not be seen as healthy aging in some cultures. Therefore, healthy aging is a universally good phenomena, but some consequences may vary and show in different forms.

**Characteristics of Healthy Aging**

**Physical.** Physiological-focused research has shown that physical ability, nutrition, and lifestyle are important for healthy aging (Guralnik & Kaplan, 1989; Bowling & Grund, 1997; Blain et al., 2000). Individuals who maintain physical conditioning and exercise tend to have fewer medical problems. Additionally, a nutritionally balanced diet high in protein and fiber has been found to be a factor which contributes to overall health (Guralnik & Kaplan, 1989). Along with these factors, genetics, exercise, and absence or effective control of chronic disease also play important roles in healthy aging (Katz, 2000; Morgan et al., 2000). Examinations of activities of daily living, changes as a result of chronic illness, exercise and health, and diet and health are abundant in the literature (Bowling & Grund, 1997; Gama et al., 2000). According to Bowling & Grund (1997), activities of daily living (ADLs) and instrumental activities of daily living (IADLs) in older individuals were accurate indicators of health and aging. Although there are older adults with some degrees of physical deterioration who still maintain vital and active lifestyles, indications of decreased ability to perform these everyday tasks are the first signals of frailty (Hansen-Kyle, 2005).

**Social.** In addition to physical factors, healthy aging is also dependent on social support and social interactions, in fact they are considered to be one of the most important factors (Hansen-Kyle, 2005). Social support includes internal and external support structures (e.g., environment, family, and community) which are all important aspects of healthy aging
Ebersole and Hess (1994) found that social interaction and nurturing through nursing were key in helping older individuals remain active members of the community. Especially important were the attitude and self-dialogue of the individual. The role the older adults envisions is the culmination of social and cultural perspectives (Peake, 1998; Carpenter et al., 2000; Phillips et al., 2001). If the older individual perceives aging as an isolated existence, the individual will isolate himself and begin to fail; however, if the older individual perceives aging as an integral part of the social structure in which he/she lives, that person will most likely thrive. Social support and perception has a very powerful influence on adaptation to physical and cognitive limitations (Hansen-Kyle, 2005).

Cognitive. The third category of factors contributing to healthy aging, cognitive and mental factors, is important as well. Interestingly, there are correlations between education levels and acquired knowledge and healthy aging (Vaillant, 2002; Paxton, Barch, Racine & Braver, 2008). These researchers have shown that mental activity keeps the individual alert and healthy and life skills and mental abilities also play a role in healthy aging. Cognitive abilities are especially important in healthy aging (Crabtree & Antrim, 1989). Continual learning and stimulation through community classes or social interactions help older individuals to maintain cognitive function. Without some aspect of these cognitive and mental abilities, healthy aging cannot occur (Hansen-Kyle, 2005). Leisure is an important context to facilitate healthy aging. The activities and experiences older people engage in can benefit physical, social, cognitive and psychological dimensions of aging. Therefore, the role of leisure in healthy aging is examined next.

Leisure’s Role in Healthy Aging
**Definition of leisure.** Although leisure has always been part of the lives of people in all places and at all times in human history (Payne, Ainsworth & Godbey, 2010), one of the ongoing problems surrounding the whole area of leisure studies concerns the conceptualization of the term leisure itself (Purrington & Hickerson, 2013). This problem has been increasingly recognized by researchers and the lack of definitional consistency in the literature has been widely commented on (e.g., Kelly, 1972; Iso-Ahola, 1979; Neulinger, 1981; Shaw, 1985; and others). Previous research into the meaning of leisure included studies in which people have been asked how they define leisure (e.g., Tinsley, Tinsley & Croskeys, 2002). These studies have indicated important factors such as pleasure, relaxation, the absence of obligations and the absence of pressure. Another set of researchers examined the values and satisfaction associated with leisure (e.g., Hawes, 1978; Pierce, 1980; Beard & Ragheb, 1980). This approach is oriented toward the outcomes of leisure rather than the underlying factors which cause an activity or situation to be defined as leisure. A third approach has been the empirical testing of particular factors believed to be associated with leisure. Kelly (1978) demonstrated the importance of the freedom-constraint dimension and the intrinsic-social dimension in distinguishing different types of non-work activities. Focusing more on the distinction between leisure and non-leisure, Iso-Ahola (1979) tested the relative contributions of perceived freedom, motivation, and work-relation using college students' definitions of eight hypothetical situations.

For this paper, I would like to characterize leisure to include three components: leisure as time, leisure as activity and leisure as state of mind with sub-components of freedom of choice, intrinsic motivation, enjoyment and experience. First, leisure occurs in free or otherwise unobligated time and where freedom of choice is both important and possible (Chick, 2010). Freedom of choice is also important when mentioning free time, because people who do not have an option to freely choose (e.g., prisoners in solitary ...)
confinement or hospitalized people) will most likely not experience their free time to be regarded as leisure. In addition, intrinsic motivation is an important element that goes hand in hand with freedom of choice. Arguably, extrinsic motivation may lead to leisurely experience in some cases, however it is evident that intrinsic motivation allows person to be more motivated, devoted, and passionate (Walker, 2008). Second, certain activities or kinds of activities are usually associated with leisure. Although certain activities (e.g., volunteering, running a marathon) may or may not be leisure depending on one’s interest, an important element to consider is enjoyment. Because everyone has different interests and needs, their definition of enjoyable activities will vary, but the fact that enjoyment is one of the key factors of defining leisure is unquestionable. While free time and activity type are thought of as more objective measures of leisure, leisure is also often regarded, more subjectively, as a state of mind. The meaning that an individual attributes to his or her activities is considered to be important. In other words, leisure as state of mind means, if it feels like leisure, then it is leisure. In this case, personal experience plays an important role because a big part of a person’s state of mind is formed based on his/her past experience. For instance, one person’s memory of swimming could be negative because he/she had almost drown. That person may not consider swimming or other water related activities to be a leisure, because of the personal experience he/she had. Each individual’s elements of leisure are unique and important, however they need to be all put together in order to build solid definition of leisure.

**Why leisure is important to healthy aging.** Remaining actively engaged with life in older adulthood is considered a key aspect of healthy aging (Menec, 2003; Stobert, Dosman & Keating, 2006; Warr, Butcher & Ronson, 2004). Leisure participation may enable older adults to remain physically, socially, and mentally active and express their remaining strengths and enduring interests (Hutchinson & Nimrod, 2012). This notion extends to older
adults with one or multiple chronic health conditions. Hutchinson & Nimrod (2012) proposed three ways that leisure participation may help older adults manage and even live well with their chronic conditions. First, leisure participation may serve as a positive distraction, thereby improving affect and fostering hope (e.g., Hutchinson, Loy, Kleiber & Dattilo, 2003; Son, Kerstetter, Yarnal & Baker, 2007; Hutchinson, Yarnal, Son & Kerstter, 2008). Second, leisure participation may provide opportunities for people to maintain or improve their physical and/or mental health. For instance, physically active leisure has been associated with enhanced longevity, independence, and improved cognitive and physical functioning in later life (e.g., Lampinen, Heikkinen, Kauppinen & Heikkinen, 2006; Orsega-Smith et al., 2007). Lastly, participation in leisure that is personally meaningful may contribute to persons’ well-being and successful aging (Kelly, 1993; Dupuis, 2008).

In addition, healthy aging is determined with objective and with subjective factors which influence human life. According to Brajsa-Zganec, Merkas & Sverko (2011), leisure activities play a very important role in subjective well-being because it provides opportunities to meet life values and needs. Previous studies have shown a positive relationship between participation in physical leisure activities and subjective well-being (Leung & Lee, 2005), and healthy aging (Wendel-Vos et al., 2004). Lloyd & Auld’s study findings (2002) supported the positive relationship between social activities (e.g., going out with friends, visiting relatives or families) and subjective well-being. Overall, participation in leisure activities is associated with increases in positive emotions, acquisition of additional skills and knowledge, and enhanced social relationships, which in turn contribute to healthy aging (Brajsa-Zganec, Merkas & Sverko, 2011). In addition, leisure was also looked as an intentional activity which was goal oriented and directed toward particular benefits (i.e., intrinsic & extrinsic) (Shaw & Dawson, 2001). Although freely chosen activity is an important aspect of leisure, people’s view of leisure as central to their lives helped them to achieve their desiring outcomes.
Therefore, purposive leisure may be relevant to older adults’ healthy aging process (Shaw & Dawson, 2001).

**Aging, Chronic Conditions & Leisure**

While healthy aging is a common goal and people are living longer, the prevalence of chronic conditions is also very high among older adults, which can interfere with healthy aging and quality of life. (Payne, Ainsworth & Godbey, 2010). According to the Centers for Diseases Control and Prevention (2010), the leading chronic diseases in the U.S. are heart disease, cancer, diabetes, and arthritis. Over 85 percent of older adults report to have at least one chronic disease (Hoffman, Rice & Sung, 1996) and these individuals have a higher risk for inactivity. Therefore, the increased incidence of chronic disease in later life can interfere with leisure engagement and ultimately healthy aging (Ashe, Miller, Eng & Noreau, 2009). Because people are concerned about learning how to live with and successfully manage a host of ongoing health conditions, public health has emphasized lifestyle factors (e.g., nutrition, smoking, daily physical activity) to prevent and manage chronic conditions. This movement towards facing negative health issues has signified the importance of leisure in health. Payne, Ainsworth & Godbey (2010) mentioned that individuals in their life context have the most choice and freedom to pursue what they want to do during free time or non-obligated time. Therefore, people have more opportunity to engage in healthy behaviors during free time which demonstrates the important role of leisure in maintaining and optimizing health.

Many strategies can be used to prevent or manage chronic conditions. One that is particularly effective is physical activity. (U.S. Centers for Disease Control and Prevention, 1996). Numerous studies highlight the strong association with physical activity and lower
risk of developing chronic diseases such as stroke, diabetes, osteoporosis and heart disease (Blair et al., 1995; Evenson et al., 1999; Bloomfield, Little, Nelson & Yingling, 2004; Bassuk & Manson, 2005). Although physical activity is a broad term that encompasses both leisure-time activity (e.g., sports, exercise) and activities of daily living (e.g., household living tasks, transportation), an increased number of older adults are spending more time on leisure-time physical activities (Ashe, Miller, Eng & Noreau, 2009).

It was also stated that stress whether it is acute or chronic, brought on by chronic health conditions can also interfere with older adults’ engagement in leisure activities (Rodmer & Boekamerts, 1999). Thus, the onset of chronic disease involves dealing with symptoms and limitations that can often cause one to reduce or withdraw from some valued leisure activities, which can then result in feelings of stress which negatively affect physical and mental health (Miller, Chen & Parker, 2011).

Stress

Defining eustress & distress. In this paper, stress is examined from two different perspectives: distress and eustress. Selye (1964) was the first to use the term “stress” to describe a set of physical and psychological responses to adverse conditions or influences. It was originally accepted as a syndrome of just being sick (Selye, 1936), however Selye constructed an engineering term “stress” to cover this typical body response. Unfortunately, this term has been used with mixed definitions in various disciplines over the past decades, contributing to difficulties in understanding the concept of stress and impeding the development of any coherent theory (Le Fevre, Matheny & Kolt, 2003). Selye (1956) used the term “stressor” to describe the external force or influences acting on the individual and “stress” to denote the resulting reaction. Some researchers have used stress to denote such
external forces and strain to denote the resulting reaction (Edwards, 1998; Smit and Schabracq, 1998). Further, some have simply used stress as a blanket term covering the whole process of external influence, appraisal, reaction, and effect (Deary et al., 1996). “Stress”, as used in the papers, may refer to external influences that act on individual’s physiological reactions to such influences, psychological interpretation of both the external influences and the physiological reactions (Selye, 1956), and adverse behavioral reactions exhibited in work, or social situations, or both (Richmond and Kehoe, 1999). Therefore, for the purpose of consistency, this paper uses the following terminology and translation from the original authors: “stressor” will denote the external force or situation acting on the individual and “stress” will denote the deformation or changes produced in the individual as a result of those forces (Le Fevre, Matheny & Kolt, 2003).

Eustress or so called “good stress” is a term first used and defined by Selye (1987). Where Selye defined stress as “…the non-specific response of the body to any demand placed upon it” (Selye, 1987, p.17), he differentiated between distress and eustress which used to be subsumed within the larger definition of stress. Distress is a negative response of either physical or psychological status when a person encounters certain stressors (Selye, 1964). Before stress was considered in terms of both eustress and distress, scholars used the term stress in order to describe distress. Nelson & Simmons (2011) defined eustress as “a positive psychological response to a stressor, as indicated by the presence of positive psychological state” (p. 59). However, scholars view eustress to be more than just the absence of distress (Zohar, Tzischinski & Epstein, 2003; Parker & Ragsdale, 2015). These positive states include attitudes and emotions such as positive affect, meaningfulness, and satisfaction. It has been argued that eustress might help to replenish energy, increase self-efficacy, and improve cognitive processing, which can also help rebuild other resources such as thought-action repertoires, facilitating creativity (e.g., trying out new ways to reach a work goal) and
flexibility (Gross et al., 2011). In addition, eustress has been indicated to be a predictor of life satisfaction followed by hope and self-efficacy among undergraduate students (O’Sullivan, 2011).

**Distinction between eustress & distress.** Spector’s model (1998) is useful to understand how eustress and distress are distinguished from one another. It describes the process of how the “individual” (i.e., characterized by perceptions of one’s locus of control, efficacy, and affective disposition) and the “stressor” (an environmental stimulus characterized by the perceived source, timing, and desirability) combine to trigger the “perception of stressors” (i.e., the interface of environmental stimuli and the individual’s way of understanding). Then the perception of stressors become the “experience of stress” whether that is eustress or distress experienced by the individual leading to behavioral, physical, and/or psychological outcomes (Spector, 1998). Therefore, it is also true to state that it is a combination of both the individual and the stressor that determines an individual’s experience of stress. This explains, for instance, why some basketball players in the last two minutes of the game with only three points to catch up may experience eustress during gameplay, whereas others might feel distressed in the same situation. On the other hand, the same athlete who experienced eustress, may experience distress over different games he/she plays during the season, because the stressor (e.g., desire to win a game or pressure to perform better) may not be the same as before.

Le Fevre, Matheny & Kolt (2003) have suggested that rather than minimizing the level of stress, practical advice has been to manage the stress to optimal levels. The Yerkes Dodson Law offers a way to understand this process (Benson & Allen, 1980; Lussier, 2010; Certo, 2015). The law states that performance increases with physiological or mental arousal, but only up to a point. This law is a common management practice that assumes a
“reasonable” amount of pressure, anxiety, or fear in the environment leads to a higher performance among people than if stress is not present (Le Fevre, Matheny & Kolt, 2003). The application of this lesson encourages people to attempt to maintain stress at optimal levels for performance rather than endeavoring to minimize stress. Optimal arousal theory helps to explain the Yerkes Dodson Law, because it suggests that humans are motivated to maintain a comfortable level of arousal (Kerr, 1985). The concept of optimal arousal can be connected to the context of eustress. Optimal arousal serves as a precursor of eustress allowing people to experience positive outcomes from the right amount stress. Therefore, eustress can be experienced and be beneficial to individuals until some optimum level is reached, not too high, and not too low.

**Use of eustress.** While distress has received much attention over the past years from many different disciplines, eustress has yet been studied thoroughly. In the boundary of eustress studies, occupational stress in nursing homes or nursing students has received some attention (Scocco, Rapattoni & Fantoni, 2006) along with physical activities and how they may help to increase their ability to focus and perform at the higher level (Sanchis-Gomar et al., 2012). A majority of the existing studies on eustress only examined the baselines of the concept rather than the practical implications or applicable relationships with other health related topics. However, as individual’s health and quality of life have been emphasized by both scholars and practitioners in recent years, eustress may serve as a positive experience that has meaningful benefits with one’s health and well-being. Kelly McGonigal (2015), a health psychologist and lecturer at Stanford University, has discovered that individuals’ beliefs about designated stressors is what really matters in its effect on one’s physiological health. For instance, it was the people who believed that the stressor was harmful rather than those who actually experienced severe stress who resulted in negative health status. Even when people experience a profound level of stress, if they believe that things will be okay,
their body functions such as blood vessels and hormones reacted normally. This finding opens up an opportunity for eustress to shed more light and be considered as an important factor that actually influences physical health. As mentioned earlier, one of the ways to experience eustress is from an individual’s perception and response to the stressor, and a positive reaction from the stressor leads to experiencing eustress. Therefore, eustress needs to be further developed in connection with McGonigal’s findings in order to increase older adults’ physical health.

**Stress & Leisure**

Although people experience differential stress in various settings and environments (e.g., occupational stress), this study focuses on daily stress (both eustress and distress). Older adults who are mostly retired, experience a majority of their stress from their daily activities (McHugh & Lawlor, 2013). Researchers documented the frequency of daily stressors among adult Americans and it was found that the participants experienced at least one daily stressor on nearly 40 percent of the study days (eight consecutive days). On more than 10 percent of study days, participants experienced multiple daily stressors (Almeida, Wethington, and Kessler, 2002). Other studies have demonstrated that daily stressors have a powerful influence on well-being, by having separate and immediate effects that are confined to a single day, and by piling up over several days to create lasting frustrations and irritations (Lazarus, 1999; Almeida, 2005).

Given the significance of daily stressors, researchers have examined various resources that facilitate coping, such as social support and self-esteem (e.g., Russell & Cutrona, 1991; Lou et al., 2010). Yet, another significant resource that has been identified is leisure. For instance, Reich and Zautra (1981) found that regular weekly participation in pleasurable
activities (including leisure) was related to lower distress, especially among those who experienced a high level of daily stress. Wheeler and Frank (1988) identified four stress buffers, one of which is leisure activity. Given the promise of leisure as a coping resource, multiple stress researchers (Folkman et al., 1997; Pressman et al., 2009) suggested that studying leisure is important because it can shed light on how people effectively cope with stress. More recently different models (e.g., dynamic model of affect, moderation and mediation model) have been proposed by researchers to suggest stress coping strategies within the context of leisure (Qian, Yarnal & Almeida, 2014).

Despite the fact that many stress coping strategies exist in the context of leisure, people are particularly vulnerable to the effects of stress in older age (Cairney & Krause, 2008). In addition to morbidity (e.g., decreased autonomic nervous system function, decreased immune function, increase in anxiety and depress), stress increases the mortality risk of older adults (Fredman et al., 2010; Vasunilashorn, Glei, Weinstein & Goldman, 2013). Therefore, managing stress levels of older adults is key to maintaining their healthy aging process. In a central study of leisure, Coleman and Iso-Ahola (1993) indicated that leisure-based self-determination and leisure-based social support were two crucial leisure generated constructs that moderated the negative effects of stress on health. Leisure self-determination refers to the belief that participants are allowed to freely choose their leisure activities and leisure social support pertains to the belief that participants are cared for by leisure companions and that adequate support is available when they need it (Chang, 2015). Craike and Coleman (2005) demonstrated that leisure generated self-determination might mitigate the negative effects of stress on psychological health among older adults. Recently, leisure self-determination and leisure social support were observed to exert mitigating effects on stress among older adults (Chang & Yu, 2013). Thus, enhancing levels of leisure self-determination and leisure social support should be an effective method to reduce stress.
among older adults. While distress and the effects of leisure have been steadily studied over the years, eustress has not received any recognition so far. Its implication on daily leisure behaviors and its relationship to how leisure incorporates eustress or vice versa needs to be examined in the future. Furthermore, self-regulating behaviors in the face of challenges or limitations (e.g., fatigue, pain) may also be a way to reduce daily stress. Importantly, older adults who utilize self-regulation strategies may also be more likely to experience eustress versus distress. Therefore, self-regulation through selective optimization with compensation is explored in the next section.

**Defining Self-Regulation & Selective Optimization with Compensation (SOC) Framework**

Self-regulation (self-management) refers to the activities that older adults adopt, or choose not to adopt, when they face challenges in their daily lives (Janke et al., 2015). Because there is a positive relationship between level of self-regulation and health improving behavior which helps people to gain meaningful skills, self-regulation has been widely encouraged and used among older adults with chronic health conditions (Ovayolu, Ovayolu & Karadag, 2012). It has been seen as a key pillar of the National Prevention Strategy for empowering Americans to achieve better health and wellness (National Prevention Council, 2011). Although some self-management activities are more successful than others, empowering people to make important health decisions can help foster engagement and independence among community-dwelling older adults (Montross et al., 2006).

The selective, optimization with compensation (SOC) model provides a general framework for the understanding of developmental change and resilience across the life span which has been widely used as a self-regulation strategy among older adults (Baltes, 1997). It
builds on the assumption that throughout the entire life span, people encounter certain opportunity structures (e.g., education) as well as limitations in resources (e.g., illnesses) that can be mastered adaptively by an orchestration of three components: selection, optimization, and compensation (Freund & Baltes, 1998). According to the SOC framework, healthy aging could be defined as minimizing negative (undesired) outcomes while maximizing positive (desired) outcomes. In order for older adults to experience healthy aging, they adapt a goal-oriented self-regulation strategy to deal with functional declines across the life span resulting from one or multiple chronic conditions (Son, Kerstetter, Mowen & Payne, 2009).

In the context of individual adaptation, selection pertains to the “identification, prioritization, and commitment to goals” in which the goal selection may be either “elective based or loss based” (Son et al., 2009, p. 309). Elective selection refers to regulative processes that are involved in selecting from a pool of alternative developmental pathways and individual preference guiding goal pursuits (e.g., deciding to stop participating in a weekly golf scramble because it is no longer of interest). Loss based selection occurs in response to a decline of resources or an absence of previously available goal-oriented means (e.g., loss of physical functioning results in the decision to no longer play golf). Loss based selection usually encompasses the process of reconstruction or reprioritization of an individual’s goal hierarchies (Freund & Baltes, 1998).

Optimization is defined as the “allocation and refinement of internal or external resources as a means of achieving higher levels of functioning in selected domains (goals)” (Freund & Baltes, 1998, p. 531). An example of optimization is maximizing every effort to achieve a desired goal until achieving success (e.g., playing golf for shorter periods of time wearing a back support brace). Finally, compensation involves finding and using alternative means to maintain functioning in the face of anticipated or experienced limitations.
(Hutchinson & Warner, 2014). An example of compensation is participating in a bingo club instead of playing golf in order to achieve social interaction and a feeling of competitiveness. SOC strategies allow older adults to adapt to changes (e.g., decrease in physical ability, loss of family) and make decisions (e.g., participating in different activities) which enable them to continue to participate in their daily valued activities. More likely, these activities are considered leisure which makes the SOC process an important strategy promoting leisure for older adults with chronic conditions. Therefore, relationship between SOC strategy and leisure will be examined next.

**SOC & Leisure**

Leisure participation is a prominent component of healthy aging because it serves to fulfill social connections and a sense of purpose (Warner et al., 2012). This is one of the ultimate goals of the SOC process, therefore connection between leisure participation and use of the SOC framework is important. In other words, it is necessary to examine whether SOC strategy plays a relevant role to support continued leisure participation for individuals who need to adapt to changes in abilities. Although some research on this has been done, scholars (Lang, Rieckmann & Baltes, 2002; Ryan, Anas, Beamer & Bajorek, 2003; Oh, 2005; Janke & Davey, 2006; Hutchinson et al., 2014) have suggested that SOC might contribute positively to healthy aging in diverse leisure contexts. SOC suggests that positive adaptation to challenges is more likely when people select personal goals that match or optimize their available resources (Baltes & Carstensen, 1996; Lang, Rieckmann & Baltes, 2002). Even more important is the way that older adults make use of these resources through the process of selection, optimization and compensation in order to remain engaged in valued life activities, including leisure participation (Baltes & Lang, 1997).
Hutchinson & Nimrod (2012) presented two factors within SOC that were identified as predicting factors of well-being in the face of diminishing abilities. The first is personal resources such as self-esteem, confidence or perceived control. Although there is some controversy as to whether social resources are personal resources (Jopp & Smith, 2006) or external assets that support successful engagement with one’s community (e.g., Hood & Carruthers, 2007; Heylen, 2010), access to instrumental or emotional supports is also acknowledged to be a valuable resource (Hutchinson & Nimrod, 2012). The second factor is the use of self-regulatory processes or what are referred to within SOC as life management strategies (Jopp & Smith, 2006). Life management strategies are learned and practiced skills which include the ability to revise goals based on a realistic appraisal of resources and to use strategies to compensate for personal limitations (Jopp & Smith, 2006). Self-esteem, confidence or perceived control are all prominent outcomes of leisure participation (Janssen, 2004), and these various benefits are experienced based on self-management strategy, especially SOC framework (Iwasaki, 2003). Therefore, leisure and SOC goes hand in hand, helping older adults with chronic conditions to remain actively engaged in leisure activities that best fits his/her interest and physical abilities.

In addition, eustress may be important during the process of SOC. Although this has yet to be examined, it is plausible that people who use SOC are more likely to see challenges as eustress rather than distress. For example, if arthritis makes gardening more difficult and less feasible because kneeling and bending over is painful, then eustress may propel a person to assess the situation and identify adaptations (such as sitting on a stool instead of kneeling or using a chair to aid in standing up to reduce the risk of falling) that enable the person to continue gardening. On the other hand, it is also important to study whether distress prevents older adults from adopting SOC strategies in the context of leisure. For instance, someone who perceives the difficulty in gardening as distress, may be so overwhelmed with negative
emotions that he/she withdraws from the activity feeling disappointed and sad. These two
different relationships of how eustress may positively affect the SOC process and distress
negatively affect older adults adoption of SOC strategies may be critical to individual’s
journey of healthy aging. Therefore, further research on these topics is needed.
CHAPTER 3: METHODS

The purpose of this study was to understand the relationship between eustress/distress and SOC strategy with the use of leisure activities for older adults with at least one or more ongoing health conditions. The objectives were: 1) How, if at all, do older adults experience eustress in the context of leisure; 2) The role, if any, or eustress on adoption of SOC strategies in leisure; 3) Examine whether people who view stress as a positive challenge (eustress) able to better maintain involvement in their valued leisure activities; 4) Understand the role of distress in engagement in valued leisure activities, and 5) Understand the meaning of leisure activities to older adults and if and how leisure engagement contributes to healthy aging. Examining the relationship of each construct and understanding the role of eustress and distress in a person’s SOC process within the context of leisure will help older adults with chronic conditions to better experience healthy aging.

Research Paradigm

Qualitative research. Qualitative inquiry employs unique philosophical assumptions; strategies of inquiry; and methods of data collection, analysis, and interpretation than quantitative research (Creswell, 2009). For qualitative methods, researchers are a key instrument as they build their patterns, categories, and themes from the bottom up, by organizing the data into increasingly more concise units of information. This inductive process is necessary in order to establish a comprehensive set of themes from the data (Marshall & Rossman, 2006). In addition, qualitative methods are flexible in adapting a wide range of human diversity and eccentricity because it is a form of interpretive inquiry in which researchers make an interpretation of what they see, hear, and understand (Creswell, 2009). Lastly, qualitative researchers tend to collect data in natural settings. This up close
information gathered by actually talking directly to people and seeing them behave and act within their context is a major characteristic of qualitative research (Hatch, 2002). At the same time, qualitative research methods continue to gain popularity and credibility within the research community which for many years was primarily focused on quantitative methods to produce valid results (Wyatt, 2013). Qualitative research methods are also appropriate within the field of leisure studies to better understand leisure experiences in different contexts (Dupuis, 1999).

**Grounded theory.** Grounded theory which guided this study design, was introduced in *The Discovery of Grounded Theory* (1967) by Glaser and Strauss as “the discovery of theory from data – systematically obtained and analyzed in social research” (p.1). They introduced a research method to arrive at a “theory suited to its supposed uses” instead of verification of theories (p.3). According to Strauss and Corbin (1994) it is “a general methodology, a way of thinking about and conceptualizing data” (p. 275). According to Corbin & Strauss (2014), grounded theory is defined as a form of qualitative research developed by Glaser and Strauss (1967) for the purpose of constructing theory grounded in data. Though the methodology was developed by two sociologists, its use is not limited to sociology. It has applicability to many disciplines because it allows for identification of general concepts, the development of theoretical explanations that reach beyond the known, and offers new insights into a variety of experiences and phenomena (Corbin & Strauss, 2014). Grounded theory is recommended when investigating social problems or situations to which people must adapt (Schreiber, 2001; Corbin & Strauss, 2008). A focus on social process, social structure and social interactions is considered an appropriate inquiry focus for grounded theory (Cooney, 2012). The area of interest of this study matched as it focused on how older adults experience healthy aging with ongoing chronic conditions, the processes they use to cope with this situation (e.g., SOC strategy, leisure participation) and their
perception of experiencing eustress in the context of leisure.

When framing the research questions, grounded theorists inquire about how social structures and processes influence how things are accomplished through a given set of social interactions (Starks & Trinidad, 2007). This continues to the sampling part of the research. Grounded theory relies on theoretical sampling, which involves recruiting participants with differing experiences of the phenomenon so as to explore multiple dimensions of the social processes under study. The researcher continues to add individuals to the sample until he/she reaches theoretical saturation: that is, when the complete range of constructs that make up the theory is fully represented by the data (Starks & Trinidad, 2007).

Study Setting

This study took place at three locations in a medium sized city in Illinois including: Inman Place which is an independent living community, the Champaign Park District (Hays Recreation Center & Douglass Annex), and an assisted living community called Autumn Fields. Because this research seeks to explore the relationship between leisure, self-regulation process (SOC strategy), stress (eustress & distress), and healthy aging, recruitment process took in places where older adults would have some level of independence and resources for leisure within their daily living. For this purpose, nursing homes have been excluded and instead independent living communities and assisted living place have been selected.

Inman Place. Inman place prides itself for offering one of the finest senior living facilities in the region. It first opened the doors almost a century ago as the Inman Hotel and after renovations this historical landmark has turned into independent living community. Its long lasting history and elegance has been acknowledged by the United States Department of the Interior by being selected as a National Register of Historic Places. It is located in the
heart of downtown Champaign, just few steps away from shopping, dining, and entertainment. The place provides independence for older adults and services that they require with 60 studio, one-bedroom, and two-bedroom apartments. With the monthly rent, residents get three meals per day, weekly housekeeping and laundry services, all utilities (including telephone, cable, and internet), 24-hour on-site security, on-site home healthcare provider, and shuttle bus services. Minimum levels of care in terms of their health conditions is provided such as specific medical requirements or apartment arrangements. Individuals are responsible for all the rest of care depending on their own necessity.

**Champaign Park District (Hays Recreation Center & Douglass Annex).**

The Champaign Park District provides programs for adults who are 50 and above in two different locations: Hays Recreation Center and Douglass Annex. Programs are available for adults who have a membership which is 20 dollars for residents of Champaign and Urbana and 30 dollars for non-residents. A majority of the members who participate regularly in the programs have some external access (e.g., transportation, membership) and ability (e.g., mobility functions, able to manage their ADLs and IADLs). Some benefits for the Champaign Park District members include discounted rates on programs, admission to play cards, bridge, trivia, and Wii (held at Hays Recreation Center), admission to open game day, chair exercises, and computer class (held at Douglass Annex), and the opportunity to voice opinions at monthly meetings. The Champaign Park District also provides many amenities free of charge at both locations (i.e., fresh coffee, space to play or gather around, access to a computer lab). Their main programs can be divided into two bigger sections which are recreational and meal oriented. During every meal they have different programs such as lunch potlucks, breakfast club outings, and supper club nights. Other recreational programs include bridge group, Wii, Bunco Club, bingo games, trivia, cards and games, Chair exercises,
Computer lessons, and a monthly mystery trip. Occasionally, they take day trips to different locations around the area (e.g., Mahomet, Decatur) and do special activities such as visit museums, miniature golf, shopping, and so on.

**Autumn Fields.** Autumn Fields Adult Community is an assisted living community offering both independent and assisted living options. They offer an active independent home-like atmosphere for seniors while providing individualized care and personal assistance with normal daily activities. For residents who are in need of supervision, their assistance may include medication management, personal care service by trained staff, arrangement of medical, dental, or rehabilitation appointments or assistance with dressing and bathing. They focus a lot on offering an active lifestyle while promoting social, spiritual, and physical health for each resident. Upon moving into the Autumn Fields community, their health service director meets with new residents and families to develop an individualized care plan with each resident to coordinate the delivery of services and care. The care plan, which includes an assessment of the resident’s physical and psychosocial needs, is reviewed 30 days after move in and updated annually or as needs progress. They provide three different types of suites with additional amenities such as onsite movie theater, fireplaces, salon, baking kitchen, personal training and fitness room, outdoor patio and gardens, and private dining rooms. On average, Autumn Fields organizes four or five activities per day that are all facilitated within the community. Although it is one of the newly built assisted living places in town, they provide well organized care and programs for older adults needing assistance.

**Data Collection Procedures**

**Permission to recruit at the Inman Place.** Initial contact was made via email to the general email address that was listed on the website. The manager of the Inman Place was
kind enough to personally email me back with the message stating that it is not only an interesting and contributing subject that I am researching, but also will be a great opportunity for both the residents and myself. After receiving a written permission from the manager of the Inman Place, Tammy, I visited the facility to familiarize myself and to have more in depth conversation with the manager about my research. During that meeting, I was able to explain details of my research topic and she gave me an overview of the facility and how residents interact with different programs that are being offered. The Inman Place had major interior renovation that was just finished couple months prior to my visit, so they had only about half of their apartments filled. However, Tammy organized the group of people during their social hours which allowed me to have conversation with majority of the people who were present during that time.

Inman place is a private apartment type facility which provides less structured settings and more freedom to the residents. However, I have noticed the majority of residents like to spend their afternoon in the facility hanging around with other residents and staff. They had groups of people who play the card game bridge on a regular basis after lunch every day, and another group of people who would just sit around and enjoy reading or socializing with others. None of that was programmed or run by the facility, but it was all voluntarily wanted by the residents. I was given a time to speak to the groups of people who were playing card games and socializing. I briefly explained about myself, my research interest, how they could volunteer to be part of the research, and what they should expect when they choose to sign up for an interview. I went to speak with individuals who had further questions about the process while the sign-up sheets were being passed around.

**Permission to recruit at the Hays Recreation Center.** Having helped my colleague doing his research about several months ago at the Hays Recreation Center through
Champaign Park District, I had a pre-existing relationship with the staffs. Therefore, I contacted their senior program coordinator, Darius, and special events & volunteer coordinator, Claudia. This personal relationship made it easier for me to get in contact with them and I was able to easily schedule a meeting to discuss more about my research. I made my initial visit during one of their weekly program “Hays Potlucks”. During that visit, I made some acquaintance with the older adults and spoke with staff members who were running the program. I received a verbal permission from Darius and later that day, Claudia emailed me and gave me a written permission as well as a set of times I could come to speak to the participants of their programs.

The Hays Potluck is a weekly program held at the Hays Recreation Center every Thursday. Champaign Park District offers a membership for anyone who is older than 50 years old and you have to have a membership in order to join any of the 50 Plus! Programs. Annual membership cost is twenty dollars for residents of Champaign & Urbana and thirty dollars for non-residents. Any members of the Champaign Park District are welcome to come to the Hays Potluck Program with a dish to share. You can also come and pay four dollars instead of bringing your own dish. They celebrate birthdays every month and also some holidays as well. On average, the potluck program usually has about 25 to 35 participants every week. I was told that the majority of them would come every week to not only enjoy having delicious food, but also to socialize. I was invited in one of the tables to join them for a lunch and it was full of laughter the whole time. Some older adults were actively engaged in conversations with each other while some were more focusing on eating itself. Before the Potluck started, I had a chance to speak to the crowd about my research and asked for their help to volunteer for an interview. During lunch, I was able to talk more in depth with individuals who were interested and answered some of their questions.
**Permission to recruit at the Autumn Fields.** I sent an initial email explaining about my research and how the residents at the Autumn Fields Savoy could be part of it. Tiny, who is the manager of the place, replied with a positive response about my offer and asked me to come to the facility. I met with Tiny and we discussed more in depth about my research. Most of our conversation focused on the residents and what they should be expecting and what I should be expecting from them. After Tiny had given me both verbal and written permission, she introduced me to Jesse, who is the activities coordinator at the Autumn Fields. She and I talked over email about the best time I should come for recruitment, because she said it would not be possible to gather around every resident just to have me explain about my research. Therefore, I chose to visit the group of people who usually sit around the television lounge after lunch. Jesse helped me a lot in gathering some additional residents who were around the area at that time.

Autumn Fields is an assisted living place that provides various medical and personal care for residents who are in need of assistance. Residents who usually come down to the television lounge after supper are a group of people who are comparatively more active and less limited with their health conditions although they all have several ongoing health conditions. Jesse and I agreed that we would find more people who are willing to volunteer within that group of residents. Usually, they would gather around and watch television, chat, read books or play card games. I briefly introduced myself first and I sat around with them to join their conversations and games. Before they started to spread out to their own rooms, I spoke about my research and how they can be part of it. Fortunately, the majority of them found it very interesting and asked me lots of questions regarding my research. While I was talking to some individuals who wanted to know more about it, a sign-up sheet was distributed to the group.
Interviews were conducted until theoretical saturation was reached. Constant comparison of the data was done by the researcher and when eleventh participant was interviewed, both my thesis committee chair and I agreed to stop.

**Sampling**

In this study, 11 older adults ages 60 and over with at least one or more ongoing health conditions participated. To collect data, participants were recruited through nearby selected locations in Champaign, Urbana, and Savoy. Data were collected from three different sites (Inman Place, Champaign Park District, and Autumn Fields) with the permission to access older adults attained by directors of each locations. The study was also approved by the University of Illinois Institutional Research Board (IRB). The researcher thoroughly explained the purpose of the study and that there was no disadvantage for skipping any questions or how they decides to answer any of the questions. All respondents read and signed an informed consent form before the start of each interview. All interviews took place where the participants wanted and at the end everyone were given ten dollars gift card of the stores they requested previous to the interview. Thank you cards were followed after the interviews and I shared major findings of the study with the participants who wanted to know.

**Description of participants.** I met with and conducted one-on-one semi-structured interviews with 11 participants, five male and six female (see Table, 1), who ranged in age from 64 to 90 years. The participants were all Caucasian and they were all retired. Most of the participants were widowed; however two were divorced and one was married. List of participants’ chronic conditions varied, however such conditions like arthritis, heart problems, and high blood pressure were more common among older adults.
Table 1.

*Description of Participants*

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Study Setting</th>
<th>Marital Status</th>
<th>Work Status</th>
<th>Education Level</th>
<th>Ongoing Health Conditions</th>
</tr>
</thead>
<tbody>
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<td>Abby</td>
<td>81</td>
<td>CPD</td>
<td>W</td>
<td>R</td>
<td>High School</td>
<td>Arthritis, Stage four cancer, Temporal arteritis, COPD</td>
</tr>
<tr>
<td>Daniel</td>
<td>90</td>
<td>IP</td>
<td>M</td>
<td>R</td>
<td>Bachelor’s Degree</td>
<td>High blood pressure, Back problem</td>
</tr>
<tr>
<td>Luke</td>
<td>64</td>
<td>IP</td>
<td>D</td>
<td>R</td>
<td>Bachelor’s Degree</td>
<td>High blood pressure, Obesity, Vision (detached retina)</td>
</tr>
<tr>
<td>Beth</td>
<td>87</td>
<td>IP</td>
<td>W</td>
<td>R</td>
<td>Some College</td>
<td>Arthritis, Fibromyalgia, Broken hip, Bad knee</td>
</tr>
<tr>
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<td>IP</td>
<td>D</td>
<td>R</td>
<td>Some College</td>
<td>Diabetes, Irregular heart rate, Obesity, Aches &amp; pains</td>
</tr>
<tr>
<td>Grant</td>
<td>87</td>
<td>AF</td>
<td>W</td>
<td>R</td>
<td>High School</td>
<td>Walking problem (from stroke), insomnia</td>
</tr>
<tr>
<td>Ron</td>
<td>84</td>
<td>AF</td>
<td>W</td>
<td>R</td>
<td>Some High School</td>
<td>Arthritis, Hearing &amp; Vision problem</td>
</tr>
<tr>
<td>Harry</td>
<td>80</td>
<td>AF</td>
<td>W</td>
<td>R</td>
<td>High School</td>
<td>Congestive heart failure, walking problem</td>
</tr>
<tr>
<td>Lisa</td>
<td>71</td>
<td>CPD</td>
<td>W</td>
<td>R</td>
<td>Bachelor’s Degree</td>
<td>Atrial fibrillation, Lower back problem, Knee (fall)</td>
</tr>
<tr>
<td>Lauren</td>
<td>79</td>
<td>CPD</td>
<td>W</td>
<td>R</td>
<td>Some College</td>
<td>Erratic heart rate, Walking problem (balance), Vertigo</td>
</tr>
<tr>
<td>Jessica</td>
<td>90</td>
<td>CPD</td>
<td>W</td>
<td>R</td>
<td>Some College</td>
<td>Bad heart (pacemaker), Right shoulder (fall)</td>
</tr>
</tbody>
</table>

M- Married, D- Divorced, W- Widowed  
R- Retired  
IP- Inman Place, AF- Autumn Fields, CPD- Champaign Park District

**Interviews**

After participants from three different locations felt somewhat understood and comfortable about my research topic, I asked them if they would be interested in participating in one-on-one interviews. Although I did not limit the number of participants to sign up for an interview, because the participants were recruited from three different locations, I tried to
spread out the number of interviews within those three different sites. The three different locations (Inman Place, Champaign Park District, and Autumn Fields) were purposefully selected because they are a rich source of information that will bring light to my questions (Patton, 2002). Inclusion criteria for this study was defined as older adults over the age of 60 with at least one or more ongoing health conditions who are able to speak about their experience. All of the participants were informed they will not be identified in the study and pseudonyms were used.

The interviews were scheduled between each participant and myself at a time most convenient to the participants. Most of the interviews occurred during morning and right after lunch hours. It was important to conduct interviews in a location where the participants were comfortable and the interviews could ensue without too much interruption. Each of the 11 interviews took places at three different locations (i.e., the three settings), were audio recorded and transcribed. Interviews lasted between 40 and 70 minutes, with an average of 50 minutes per interview. I concluded interviews when the data was saturated after the eleventh interview was conducted.

I created an interview guide to assist my conversation with older adults (Figure, 1). It served as a guide that shaped our conversation and sharing of information (Dupuis, 2008). I also asked the participants several demographic questions and noted them after the interview was completed (Figure, 2). When interviewing the participants, I started with general questions (e.g., how long have you lived/been involved in the facility?), I then asked each participant additional questions depending upon the person and where the interview was leading. I tried to lead the conversation from one topic to the next, flowing as if there was not an interview taking place but a conversation among two people.

During the interview, none of the questions directly used the terms “self-regulation”,

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“SOC strategy”, and “eustress.” Instead, I asked questions in broader terms to better understand their experiences with leisure, stress and changes brought on by normal aging and chronic conditions. In order to understand older adults’ use of SOC strategy I asked how their leisure activities changed from the past and why. Also, I asked how their health conditions and stress have affected their leisure behaviors to explore older adults’ use of SOC strategies. In addition to some of the specific questions, participants’ stories on how they managed their daily lives with chronic conditions offered important insights to understanding the use of SOC. In order to explore older adults’ use of eustress, I asked them how they reacted to some of the challenges or difficulties they faced. During the conversation, I asked them if they had experienced seeing negative situations as something they can overcome in positive ways by using a hypothetical situation question.
# Interview Guide

## Introductory Question

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How long have you lived here? / How long have you been involved at the park district?</td>
<td>Tell me about your experience living in _____. / Tell me about your experience visiting in Champaign Park District programs.</td>
</tr>
<tr>
<td>What is an average day like for you?</td>
<td></td>
</tr>
</tbody>
</table>

## Topic Based Question

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Let’s talk about leisure activities. Leisure is any free time activity you choose that is meaningful and enjoyable. What leisure activities do you do?</td>
<td>What are some of things that you benefit the most from participating in leisure activities? For example, talk about what ______ means to you (and then go down the list of things they shared with you).</td>
</tr>
<tr>
<td>a) What do you like about it? (ask about each activity)</td>
<td>a) How important are those leisure activities in your life?</td>
</tr>
<tr>
<td>b) How do you feel afterward?</td>
<td></td>
</tr>
<tr>
<td>c) How would you feel if you were not able to do those activities?</td>
<td></td>
</tr>
<tr>
<td>What are some of things that you benefit the most from participating in leisure activities? For example, talk about what ______ means to you (and then go down the list of things they shared with you).</td>
<td>In what ways, if any, have your leisure activities changed since you moved here / over the years?</td>
</tr>
<tr>
<td>a) How important are those leisure activities in your life?</td>
<td>a) Did retirement had any effect?</td>
</tr>
<tr>
<td></td>
<td>b) How did you alter your participation, if at all?</td>
</tr>
<tr>
<td></td>
<td>c) Are there any activities you used to do that you don’t engage in any more? If yes, what factors caused that to happen?</td>
</tr>
<tr>
<td>In what ways, if any, have your leisure activities changed since you moved here / over the years?</td>
<td>Have you ever had a time when you felt challenged with or from your leisure participation? If so, explain the situation and how you dealt with it.</td>
</tr>
<tr>
<td>a) Did retirement had any effect?</td>
<td>a) How did it make you feel?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Are there any days that you won’t participate in your regular leisure activities? If so, what made you to skip a day?</td>
</tr>
</tbody>
</table>

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**Health Based Questions**

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Let’s talk about your health. What, if any, ongoing health conditions affect your quality of life?</td>
</tr>
<tr>
<td>In what ways does your health affect your engagement in your valued leisure activities?</td>
</tr>
<tr>
<td>I want to talk about the aging process a little bit. What does healthy aging mean to you?</td>
</tr>
<tr>
<td>How important is healthy aging process for you and why?</td>
</tr>
<tr>
<td>What role, if any, do you think leisure has in healthy aging?</td>
</tr>
<tr>
<td>Situation Description: Think of a time when you had to face any challenges due to your health condition(s). Describe to me how you got through those challenges and how did it affect your leisure participation?</td>
</tr>
</tbody>
</table>

**Stress Based Questions**

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Let’s talk about stress. How would you rate your overall stress level from 1 to 10, 1 being the least stressed and 10 being the most stressed?</td>
</tr>
<tr>
<td>What things increase stress for you? (you may want to leave some space here as they may mention a few things)</td>
</tr>
<tr>
<td>a) When ______ happens, how do you handle it?</td>
</tr>
<tr>
<td>What are some of the challenges that you face in your daily life?</td>
</tr>
<tr>
<td>So you said your overall stress level was <strong>(a)</strong> and <strong>(b)</strong> are things that increase stress for you. So, when <strong>(b)</strong> occurs, how does that affect your leisure participation? (e.g., avoid participating any leisure activities or continue to participate in order to escape from the stressors)</td>
</tr>
<tr>
<td>I would like to elaborate more on how you handle stressful situations. So, you said you handled stress ______ ways, can you explain whether your reaction towards handling stress has changed over the years? If so, how and why do you think they have changed?</td>
</tr>
</tbody>
</table>
People can have different reactions to stress. Sometimes a person can view a stress as a positive challenge that they can work through to a positive outcome while another person might feel overwhelmed and down which can result in feeling really bad. So can you tell me your personal experience with this?

a) What are the factors that made you act that way?
b) How does that relate to your leisure participation
c) Does that have any connection with how you deal with your health conditions?

- If not eustress ➔ ask about the “process”, whether he/she has any experience that instead of just the result
- If a person experienced Eustress ➔ ask if “control of your life” is a factor and if he is more able to do leisure

So, you said ______ are some factors that made you handle stressful situations in ______ way. Do you think those factors would have any impact on your participation on leisure activities? If, so how much and why?

| Have you ever participated in leisure activities while you were under some kind of stress? If so, how did it affect your leisure experience? |
| Have you ever been stressed from participating in leisure activities? If so, describe that experience and how you got through it. How did you feel about it? |
| Suppose one of your favorite leisure activities is walking. However, due to arthritis, walking becomes much more difficult. How would you cope with this challenge? |
Figure 2

Demographic Questions

1. How old were you on your last birthday? _______________

2. Are you … (check all that apply)
   □ American Indian or Alaska Native
   □ Asian
   □ African American or Black
   □ Native Hawaiian or Other Pacific Islander
   □ White or Caucasian
   □ Hispanic or Latin

3. What is the highest level of education you’ve completed?
   □ Some High School
   □ High School Degree
   □ Some College/Tech School
   □ Associate’s Degree
   □ Bachelor’s Degree
   □ Graduate Degree

4. What is your marital status?
   □ Married
   □ Divorced
   □ Widowed
   □ Living with partner
   □ Never married

5. What is your work status? (Paid, non-volunteer work.)
   □ Work full-time
   □ Work part-time
   □ I am retired

6. Name some ongoing health condition(s) that you experience
Data Analysis

Data analysis in grounded theory was originally introduced by Glaser and Strauss (1967) as a method of constant comparative analysis; they proposed that constant comparative analysis consists of “explicit coding and analytic procedures” (p. 102). Grounded theory involves a constant comparison method of coding and analyzing data through three stages: open coding (e.g., examining, comparing, conceptualizing, and categorizing data); axial coding (i.e., reassembling data into groupings based on relationships and patterns within and among the categories identified in the data); and selective coding (i.e., identifying and describing the central phenomenon, or core category in the data) (Strauss & Corbin, 1998; Dey, 1999). In the beginning of data collection, the constant comparative technique is important to assure the researcher is immersed in the data. Also, a researcher can acknowledge some overlapping themes that emerge between data and modify interview questions if necessary (Cooney, 2012).

Although there are different versions of coding processes (e.g., Glaser, 1992; Harry, Sturges & Klingner, 2005; Charmaz, 2006), I used Corbin and Strauss’s (1990) three stages of coding because I am interested in understanding the meaning of eustress among older adults’ use of SOC strategy and their daily leisure behaviors. Corbin and Strauss’s (1990) three stages of coding is effective to understand concepts and relationships of themes that are fairly new or have been less examined (Cho & Lee, 2014). Since eustress is a comparatively less studied topic in the context of leisure and the SOC process, this approach was appropriate to use.

After each interview, I transcribed the data right away for analysis and constant comparison. By conducting constant comparison analysis, I was able to make some adjustments to the interview questions to explore some meaningful emerging themes. The
data was transcribed with the use of Express Scribe Transcription Software and a foot pedal. When analyzing the data, open coding was done on the copy of transcripts using different colored pens. Axial coding was conducted after that, which was organized with an Excel file with categories that were identified in the data. Selective coding was done after all the axial coding is finished with the whole sample where I could focus on exploring the central phenomenon and core categories. Investigator triangulation between committee chair, colleague and I was done and none of the analysis had been shared with each other in order to avoid being influenced by it. Each of us did own analysis using the three steps of coding. Once we were all done with axial coding and selective coding process, we met and discussed what themes overlapped and what did not.

**Credibility, Trustworthiness & Dependability**

All research is concerned with producing valid and reliable knowledge and ensuring validity and reliability in qualitative research involves conducting the investigation in an ethical manner (Merriam, 2009). Firestone (1987) stated that “the qualitative study provides the reader with a depiction in enough detail to show that the author’s conclusion ‘makes sense’” (p.19). During qualitative studies, threats such as researcher bias and reactivity (i.e., effect of the researcher on the individual in the study) occurs and needs to be prevented or mitigated. Ethics of the investigator is important in order to avoid those threats. In addition, it is important to check if the findings match the data.

**Ethics.** To a large extent, the credibility and trustworthiness of a study depend upon the ethics of the investigator. Patton (2002) identified the credibility of the researcher along with rigorous methods and “a fundamental appreciation” of qualitative inquiry as three essential components to ensure the credibility of qualitative research (p. 552).
studies, ethical dilemmas are likely to emerge with regard to the collection of data and in the dissemination of findings (Merriam, 2009). Bias that a researcher may have could influence the analysis, findings, and interviews of the study, disallowing the true results to emerge. In summary, one of the most essential ways to ensure trustworthiness of a study is that the researcher himself or herself is trustworthy in carrying out the study in as ethical a manner as possible. There are several ways to make sure the trustworthiness and credibility in qualitative research and they will be examined next.

**Credibility.** Credibility deals with question of how research findings match reality or how congruent are the findings with reality. A well-known strategy to shore up the credibility is called triangulation. Denzin (1978) proposed four types of triangulation: the use of multiple methods, multiple sources of data, multiple investigators, or multiple theories to confirm emerging findings. For my research, I used multiple investigators to ensure credibility. Investigator triangulation occurs when there are multiple investigators collecting and analyzing data. This can help to ensure the meaning and interview occurred as the participant intended and also assist in identifying what biases I may have. My thesis committee chair was provided with some recorded interview files and transcriptions, and she engaged in data analysis with me where we discussed the data and emerging themes. Sharing our findings, and discussing the similarities and differences of our analysis helped to make sure emerging themes met the reality.

Another common strategy for ensuring internal credibility is member checks. It is also called respondent validation and the idea here is that I solicit feedback on my emerging findings from some of the people that I interviewed. “This is the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on,, as well as being an important way of
identifying your own biases and misunderstanding of what you observed” (Maxwell, 2008, p. 111). I took my preliminary analysis back to some of the participants and asked whether my interpretation “rings true.” Lastly, adequate time was spent collecting data such that the data become “saturated”; that is, I began to see or hear the same things over and over again, and no new information surfaced as I collected more data.
CHAPTER 4: FINDINGS

The analysis of participants’ interview responses was guided by the central research questions addressed by the thesis: to understand the relationship between eustress/distress and SOC strategy with the use of leisure activities for older adults with one or more ongoing health conditions. This chapter portrays the themes that emerged from the participants. Major themes that surfaced include: (a) change in leisure and SOC strategies (b) benefits and meaning of leisure (c) healthy aging and the value of leisure (d) stress and leisure (e) eustress and distress (f) SOC and eustress/distress. Because I wanted to explore the relationship of eustress/distress, self-regulation and healthy aging in the context of leisure, it was necessary for me to understand how they perceived leisure and how it has impacted them.

Changes in Leisure and SOC Strategies

Leisure changes. A majority of the participants reported changes in leisure activities they once enjoyed, which they cannot do any more due to health issues and their living situation (e.g., unable to drive, or drive at night). It applied to almost everyone, but physical limitations of some sort was the main factor that caused them to no longer be engaged in more physically demanding leisure activities such as playing golf, gardening and traveling. Instead, they were doing such leisure activities like reading, playing cards, listening to music, arts & craft, watching television, and quilting. Many were also engaged in some sort of targeted exercise/physical activity to help themselves cope with their health conditions which included chair exercise, walking, and some yard work. Jessica who used to love travel and traveled all 50 states of the United States said,

Well, see I would probably if it wasn’t for my health, I would pick some more trips or traveling with the groups where I would stay about a week or more, but I just don’t really trust myself to do that anymore … I am kind of scared to go with my
heart and everything. I don’t have the energy that I used to have so I am kind of a skeptic about going on a big trip for several days.

The lack of resources which included their current living situation and not being able to drive limited their leisure participation. Beth who moved to Inman Place from her own house a couple years ago told me that her setting has limited a lot of her leisure participation. She said,

Well, after I moved here I had to entertain myself. I like to play cards, but I can’t find anybody to play cards with … I enjoy traveling, but I don’t enjoy traveling alone and I can’t find anybody to travel with here … Before I moved here I had real nice neighbors, I had a dog and I went out a lot and participated in a lot of activities, you know I went to different places to play cards and talk and everything. I think I would have better off staying at my own house and hiring a caregiver. That way, I think I would have been able to do a lot more of what I like to do. Because see, I have to arrange everything that I do around their meal schedule and such, and that is not always that easy.

Being able to drive was really important for older adults as well. For example, Luke said “I lost my independence because I couldn’t drive”, many older adults took driving as one privilege they still have which helps them to better achieve leisure opportunities and maintain their independence. Courtney said,

See my first six months here I didn’t have a car, I gave my car to my son to see if I wanted to give it up and I decided I didn’t because it took away too much of my own time where if I have to wait for driver to drive us around, you can’t get very much done because you get maybe one thing done a day. So, to me that was very important to maintain my driving, so I got my car back and I said I am not giving it up. So, now that I have my car back, I would probably go more often.

Because they can drive, they were more able to participate in different leisure activities around town.

The number of leisure activities they participated varied. Some people were doing more and some were doing less and it was mainly due to their different health conditions. People who were comparatively healthier than others were able to be more actively engaged in different kinds of leisure whether that was within their facility or somewhere outside. They
described selectively investing in various activities based upon energy level and health. Abby who was comparatively doing fewer leisure activities than others said,

See the problem is I can’t do things that I used to do. Physically I don’t have the energy. I am not as you know, I used to you know the card game bridge? Well, I used to play bridge and then I would go out in the evening Wednesday night with the group that I was introduced to, but the problem is when you get old like that, I say going to play bridge that was very satisfactory for my needs, well I can’t do that anymore. I don’t have the energy.

People with less energy had to give up participating in some leisure activities or take time off for a rest in between leisure activities. Also, fear of their health conditions impacted the number of leisure activities they did. Lauren learned to overcome the fear and manage her leisure participation much better now, but she pointed out that many of her friends and relatives gave up some leisure activities because they feared something negative would happen with their health. It is important to always be aware of your health conditions, however she said when describing her experience of being challenged by her health condition in the context of leisure, “I am just always glad that I went. After I get up, first I think no I don’t feel good, but next thing you know well, that is not right, I will be sorry if I didn’t go to programs”.

**SOC strategies with leisure.** Despite changes in their leisure activities due to physical limitations and lack of resources, most of these older adults have successfully substituted and adapted new leisure activities, which indicates their use of selective optimization with compensation (SOC) strategies. Generally, they described ways they adapted into new leisure activities according to their interests. For instance, Ron who enjoyed playing golf mainly for the social aspects, found a coffee group where he could still be around and socialize with people. For those who enjoyed the competition of leisure activities, Lisa for example, started to participate in card games with a group where their primary goal was to win. Another good example of how they have successfully adapted leisure activities is
Courtney. Gardening was one of her favorite leisure activities. When she couldn’t do that anymore because she moved from her own place to Inman Place, she found a perfect alternative to satisfy her needs. She said,

I can’t do my vegetable gardening and that is what I used to like to do. Now I am doing African Violets, so I joined the African Violets Society last year and learned to grow African Violets. So I use that in place of the vegetable gardening.

Growing African Violets and vegetable gardening is not the same, however she sounded pretty satisfied and happy when she told me how she enjoys growing African Violets. In addition to people who changed leisure activities, some people explored and added new leisure activities they were not interested in before. Harry who was never involved in reading previously, took up reading. He said,

I can’t believe what I have done. I was never a reader. I was never a reader and now I am reading one to two books a week. I can’t believe I have done that and believe it or not, I don’t even get sleepy that often reading a book which is amazing. I can’t comprehend all if what’s been read, but it is amazing to me that I am doing that. That has been the big change of my life. I used to never read that much.

In many ways, older adults substituted their leisure activities and maintained their engagement with what they love to do or at least something similar or new.

Use of SOC strategies during their changes in leisure was recognized mentioned frequently during participant interviews. When I asked Daniel, who was the oldest participant, about how he would feel if he could no longer do his regular leisure activities, he said,

Well, you know I would not feel right about it, but I do like to read. If for some reason, I am stuck in a chair and not able, I do enjoy reading and have read a lot. I had a problem last year, my wife’s memory was so bad that she did not like me to do things (leisure) like that. She wanted the attention and so for it, so I wasn’t able to go anywhere, but I can easily make myself to do by just reading different kinds of books.

Even in a situation like this, he was able to face that challenge and substitute his preferred leisure activities for something else rather than giving up all of his leisure. Most of the older
participants had been using SOC strategies. Since they were using SOC strategies, they also seemed to have a positive attitude. Harry who had survived multiple bouts of several cancers and has congestive heart failure described how he maintains his involvement in leisure activities.

Well, I would probably just have to start doing something else. That way I get compensated for it you know, you have to. If you can’t do something, you have to compensate for some other way. What that would lead to? I don’t know, maybe doing more board games or stuff like that to use my mind and I don’t know anything about the computer, but who knows if I get to that point, I might even get a computer and start doing some games on that.

Many of these older adults described that they anticipated what may happen in the future, and most of them described ways they planned to continue using SOC strategies to maintain their leisure participation.

However, some indication of giving up leisure activities was also seen through the interviews. Although some of these older adults indicated they had at least one or more leisure activities they still participate in, physical limitations and lack of resources resulted in narrowing their leisure repertoire. These people were currently not happy with their leisure engagement, however they were hoping to find a solution. For example, Abby and Beth planned to move to different places (i.e., to assisted living and from a retirement community to a home, respectively) where they expect to have more access and opportunity for leisure activities. When I talked to them about that, I could feel how much they looked forward to doing more leisure activities at new places. Once again I noticed how important leisure is for these people, regardless of how satisfied they are with their current experience.

Benefits and Meaning of Leisure
Benefits. Even though all of my interviewees experienced some sort of change and limitations with their leisure participation, the benefits and meaning of it did not seemed to change in negative way. When they were asked about why they liked doing each leisure activity, benefits they mentioned included things such as “it gets your mind and brain going,” fun and enjoyment, attaining information and learning opportunities, maintaining memory, and socializing with people. It was surprising to see how participants were not likely to expect physical benefits from leisure, but they were emphasized the desire to seek social, cognitive, and mental benefits from leisure activities. When Harry was asked about what he thinks benefits the most from leisure activities, he said,

Positive attitude. That is the best by far. You think positive if you start feeling better and stuff like that, everything is more positive. It is absolutely the mental aspect, you might still get aches and stuff like that, but you still get the positive attitude that you get out of it and that is the main thing.

When Lisa was asked the same question, she said “When I do leisure, I am with people that have been through what I have been through and they understand where I am coming from you know, what I am saying. We have a lot in common.” They believed that leisure has helped them gain mental and social benefits and also played an important role in what they liked about their leisure activities.

After participating in leisure activities they expressed they felt relaxed, refreshed, and content, that the activity was rewarding, and it improved their spirits. Even Luke who were talking about the outdoor leisure activities have said,

To me leisure is [to] relax. If I can relax, I know golf doesn’t sound like it would be relaxing but it was. It was about getting outside, wasn’t so much golfing but to be in the nature and you know to have that outdoor activity where you are not too formal. I am not a serious golfer but I enjoyed it and being relaxed was the main thing.

When they were asked how they would feel if they were not able to participate in their regular leisure activities, all of them have expressed very negative feelings. They mentioned
that they would feel not happy, not right, bored, and up-tight as their first expression because they could not do leisure activities anymore. They also connected lack of leisure to extreme boredom and depression. When I asked Lauren how she would feel if she was not able to do leisure activities and she said, “Oh I would be sad. I would feel like I am locked up or something. You know, it is out, it is getting out for me and it helps me.” As a follow up question, I asked if that feeling relates to boredom, she immediately agreed firmly. When Ron was asked about how he would feel without leisure he instantly said, “It would make me depressed. It will probably, my health will deteriorate.”

**Meaning of leisure.** For these people, not being able to participate in leisure activities almost equaled to not being able to do anything in their life anymore. When I interviewed Jessica, I asked her how not being able to do leisure activities would make her feel, and she said,

I feel I probably need to go to a nursing home or like that. See I am living by myself now, so if I can’t take care of the house and can’t do the things, I will probably have to get rid of everything and go to the nursing home.

She directly connected not being able to do leisure into not being able to take care of herself anymore. Other participants also mentioned similar things about this which supports the important role and meaning of leisure in their life. It seemed as though for these older adults, leisure was the last rescue rope they are holding onto and if they have to let go of that, they have no more to expect with their lives. Every interview I had, I was amazed by how important leisure was for all of them.

As participants described mainly cognitive (e.g., getting your mind going, keeps your brain active), mental (avoid depression, boredom) and social (e.g., sharing stories with friends, listening and talking to others) aspects of leisure activities, they were still experiencing some physical benefits from leisure. However, participants’ mostly focused on
cognitive and social benefits of leisure when they shared examples of the benefits of leisure in their lives. This is because these older adults were engaged in purposive leisure in which they seek to gain a sense of purpose to enrich meaning of their life. For them, the cognitive and social benefits of leisure were more salient than the physical benefits. Lisa who was a very positive and strong lady. I asked her how important is leisure in her life and she said “Very much so. Because if I didn’t have them, I would feel useless, very useless. Very lost.” For all of the participants, various leisure activities they were engaging in play a very important role in helping them maintain the life they have now.

**Healthy Aging and the Value of Leisure**

While these older adults’ physical health conditions affected their leisure patterns, they still described a variety of benefits (e.g., mental, cognitive, social) of leisure. Because healthy aging is a concept that encompasses all of those factors, another goal of the study was to better understand the relationship between healthy aging and leisure and what healthy aging really means to them. When they were asked about the healthy aging process, they described its connection to their physical functions (e.g., not being sick, mobility, energy level, ADL’s & IADL’s), however when they were asked about how leisure plays a role with the healthy aging process they offered interesting and rich insights. Throughout the interviews, five sub-themes of how these older adults defined health aging in the context of leisure emerged: avoiding boredom, keep mind and body active, meaningful social connection, sense of purpose, and enjoyment and satisfaction. These are very important because these older adults who already have one or more ongoing health condition described how they actively manage their leisure participation and health to optimize their experience of healthy aging.
Avoiding boredom. Boredom was one of these older adults’ most prevalent fears and was a strong purpose for their leisure participation. For these older adults, boredom meant not being able to do anything, feeling locked up, and almost like giving up their last hope. They actively sought to manage their health to optimize their experience of healthy aging and further delay any onset of disability that might keep them from engaging in valued leisure activities. During the interview, Luke told me how he thought about the possibility of having a disability that would limit his activities. He said,

Well, I have a 93 year old mother and I see her go through these different progressions, the falling stage and then she had to have some hip replacement and on a walker and finally just can’t live by herself. So, I am aware all that is going to happen you know. And my mom, she also experienced vision and hearing problems, so she doesn’t see well and she doesn’t hear well, can’t walk, so I am getting adjusted to what could happen in the long run. I think the leisure end of it can offset some mental problems, take your mind off your troubles, whether it is board game or card game, it is really important to these people.

Luke also told me that when he thinks of boredom, he pictures a very old lady just sitting on a chair all day, waiting to die. Several participants connected boredom to the very opposite side of the healthy aging process. Courtney mentioned that “if you sit around at home by yourself and have nothing to do, you will get depressed”, this suggested a connection between depression and boredom. When Lisa was asked about healthy aging and the role of leisure, she mentioned how boredom would lead to losing everything, she said, “If you get to a point where you are sitting and doing nothing, you are going to age a lot faster and you are going to lose your muscles you know and your mental and your mind.” In addition, when I asked Harry about the role of leisure in the healthy aging process he related avoiding boredom to healthy aging. He said “It is everything. How you plan your leisure you know, some of the people here, all they do is just bored and they stay in the room. It is not healthy.”

Keeping the mind and brain active. During the interview, one of the most frequent answers about why they engage in particular leisure activities was because it keeps their mind
and brain active. As that was one of the main purposes of leisure, it also emerged as an important aspect of healthy the aging process. These benefits could be more important because they are less likely to engage in physically active leisure, instead they mentioned they participate in more passive leisure where they use more brain and mind than body. Beth who enjoys playing cards, doing puzzles, and spending time on computer, she said,

I think keeping active is important. Sitting still all day is no good for you and it’s not healthy. You need to get up and move and keep your brain active and that is important is to keep your brain active, like I play too many games on computer, but it keeps you active you know, you still have to think all the time.

Ron who emphasized the value of healthy aging and the role that leisure plays in it said “The most thing that I benefit from leisure is peace in mind. It helps me to postpone old age.”

When I asked Daniel how he thinks about the healthy aging process and the role of leisure, he immediately mentioned that people should have some leisure to maintain cognitive function. He believed that to be critical and shared his own story of how he utilizes leisure to maintain his healthy aging process. He said,

Leisure keeps your mind working. I have a program that I got six or seven years ago through my health insurance which tests your memory and brain functions, and that is really something that does assist and kept me going. And another simple thing is I play a computer game called Spider. You have to think ahead and match and do this and that, and by doing that regularly, I think it keeps your mind going. I am telling you, when you get to the retirement home, not nursing homes even, the retirement home, you see some people and they are just hardly there. You think you know, I wonder if they had something previously whether kept them going because some people have no interest and they let their mind just go. That is problem.

As one of the oldest participants at 90 years old, he seemed very certain and proud when he described how he still uses his brain and mind to maintain his health.

**Meaningful social connections.** Being socially active and having people around to share and listen to different stories was really important part of these older adults’ lives. As older adults start losing loved ones and friends, these social connection seemed to play a bigger role in their healthy aging process and overall quality of life. For example, after they
lost their spouse, many of these older adults started to make meaningful social connections with people. Lisa who lost her husband to cancer three years ago, started to participate in Champaign Park District programs. She calls herself a people person and she shared what leisure means for her in order to experience healthy aging, she said

I am with people that have been through what I have been through and they understand where I am coming from you know, what I am saying and we have a lot in common in that way. It is just kind of nice to hear their story and not feel sorry for myself because they have been through a lot more tragedy that I have you know. It is very hard to be having been married for 43 and half years and all of sudden your mate is gone, part of you dies too. I want to be positive instead of negative and that is not always easy to do. It fluctuates you know, I need to talk it out and get rid of it and I am better.

For some older adults, these meaningful social connections were very deep and connected. They described how they shared their struggles and were comforted by the support from friends. In this sample, some liked to socialize with as many people as they could. Luke, for instance, liked to meet new people and make them laugh. He said, “If they want somebody to listen, I am there supporting, but I always thought that the laughter was good medicine. I like to talk to people and make them laugh, happy.”

**Sense of purpose and meaning.** Maintaining a sense of purpose and meaning was something that all of the participant conveyed regarding healthy aging. While they described challenges managing their health and maintaining their leisure activities, they described leisure as central to their lives. For example, Harry has congestive heart failure tried not to give up on leisure because it serves as the purpose of his definition of healthy aging, he said,

I don’t think my health condition can stop me from leisure. I am still doing everything and nothing is holding me back. In fact, they ask me to slow down once in a while, but you know even the walking, it is not that I have hard time walking, it is just I can’t do the length that I want to go. So, instead of giving up, I want to walk more so I can increase my strength. Leisure is everything. It’s everything. You must participate in leisure within your life.
He was very clear about his goals for healthy aging of what he wants and therefore he was able to better maintain the purposes of her life. Lauren believes that healthy aging has nothing to do with chronological age, and all how you live your life said “I believe in it. I believe maintaining leisure is everything with healthy aging, I believe in not quitting. It keeps you going.” To her, constant effort on maintaining her valuable leisure and not giving it up was purpose of her life and that meant healthy aging for her.

**Enjoyment and satisfaction.** Lastly, being able to enjoy their lives meant a lot to participants. Because leisure participation was one of their most valuable activities during the day, it played a key factor in their enjoyment, satisfaction and overall quality of life. The level at which they expressed satisfaction varied by the individual. Some people seemed satisfied and expressed enjoyment because they have more freedom and time for themselves during later life. For instance, Daniel recently moved from his own place where he had to take care of his wife who has severe memory problems. Although he was able to barely manage it, he said it was extremely stressful and he couldn’t do anything for himself. Now that he lives alone with no one to take care of, he is doing much better. Although he is still adjusting to his new life at a retirement community and hasn’t participated in many recreation programs they offer, he is enjoying life and is very happy. On the other hand, Harry who was fairly involved with various leisure activities has higher needs in order to make him satisfied. He spends fills every minute of the day doing different leisure activities such as exercise, reading, watching sports, and socializing, but he truly enjoys every bit of his life and exhibited a high level of vitality, despite having serious chronic conditions. I asked him how he feels after doing leisure and he said,

> I feel great. Oh yeah, you don’t feel tired at all. You feel great. You can’t believe it but I feel like I am 30 years old again. I just can’t move like I am 30 years old, but give me a baseball glove and I can go out there and play third base again. I feel that good.
These five themes that emerged provide important insights into how they define and perceive healthy aging process. They connected healthy aging with avoiding boredom, keeping the mind and brain active, having meaningful social connections, a sense of purpose and meaning in life, and enjoyment and satisfaction. Everyone strongly agreed that leisure plays a very important role in their healthy aging process. They also frequently mentioned the mental, cognitive, and social benefits of leisure directly and related these benefits to how they overcome difficulties and maintain a healthier lifestyle. Jessica who has been participating at the Champaign Park District programs for little over 10 years, she said,

What role does leisure has on the healthy aging process? I think it has a lot. I think if I were to just sit home after my husband passed away, I don’t believe I would be as good as I am now you know, if I just stayed home and took care of the house … but I got out and met people, meeting people has been important to me. See, I don’t have any family around here so most people would have family looking on them, but I was the only child, so I grew up more less than by myself … I enjoy meeting people at the card games and talking to them. I feel good that I have got something done and I need it.

Stress and Leisure

Stressors. When participants were asked to rate their stress level one to ten, one being the least stressed and ten being the most stressed, responses averaged about three or four. Despite having one or more chronic conditions, the majority of them said they are not that stressed. Family issues and their own health challenges were the main factors that affected their stress levels. When they were asked to talk about some of their stressors, most participants said some family related issues caused their stress. They described stress that emerged from conflict with their sons/daughters or other family members or being a caregiver of their spouse or parents. Courtney, who identified herself as a very family oriented person, described the causes of her stress. She said,
Problems in the family because they are still a big part of my life. When either one of them is fighting with each other or one of them is upset with me, I don’t like that kind of things and I try to resolve it. Um, probably my family causes me the most stress because they are still my circle of people.

In this case, she was mostly stressed about different things going on within her family because she cares so much about them. In addition, quite a few of them mentioned relationships with their daughters/sons being a big stressor of their life. Lisa who has moved in with her son and his family recently said her relationship with her son can be quite stressful. She said,

Sometimes my son can be crabby. I understand, he is a teacher too and so is his wife and they had a rough day and you kind of when you are living with someone, you take things wrong sometimes. I have been living by myself for years and all of sudden now I am living with somebody, yeah he is my son, but they live differently than I was raised you know and so that makes it different. He is 35 years old and I am 71 years old, we don’t think alike.

When I asked Jessica who claimed to experience very little stress in her life about reasons she is less stressed, she mentioned her positive attitude but also she said, “Well, also not having much family. I hear some other people talking about family you know this happens in family and that happens and see, I never had all that to go through, maybe fighting or something like that.”

In addition to family being one of the major stressors, health issues also cause and stress among these older adults. Health related stressors usually stemmed from symptoms (e.g., pain was reported frequently) from their ongoing health conditions. Although, they all have had their ongoing health conditions for years and many have chronic pain it seems to bother them a great deal. For example, Beth said,

Well, the pain kind of stresses me out. You know like yesterday I went and I got my blood pressure checked in my legs and my arms to see if there is any problem with my legs because I have been having trouble with my legs. The pain from the fibromyalgia when he was doing those blood pressure test, oh boy yeah I was stressed. I was breathing hard.
Similar stories to what Beth experienced applied for everyone. The difficulty of managing the symptoms of chronic disease, especially pain was a large source of stress for these older adults.

**Handling stress.** Although they all mentioned stressors that impact their daily lives, they seem to manage their stress pretty well. When they describe their encounters with some sort of stress, they all conveyed that they remained calm, cool off, rationalize, and apply logical reasoning to the situation. If it wasn’t related to their health, some avoided the situation initially, to create some space and time for themselves to cope and manage the situation. I asked Grant, who is mostly stressed about not being able to do things that he supposed to do and his own health conditions, about how he usually handles stressful situation, he said, “Well, I just try to calm myself down and usually they are not stressful things that I have to get done right away. And I just try to rationalize the time that I have or something.” When I asked Lisa the same question she said,

> I go and hide, I mean, I just go to my room and stay away. I will eventually talk it out, you know you should always talk it out, but yes if something is said that bothers me, instead of coming back and saying something that I wish I hadn’t, it is better to walk away and I have two cats and I go in there and they give me loving, so helps me to calm down. I don’t get mad, I don’t say anything that I shouldn’t.

Just as Lisa mentioned, they all tend to be doing a good job with managing stress. Some said this was how they had been handling stress for years, however others said the way they handle stress now changed from the past. Instead of becoming mad and upsetting people around them, they have learned to manage their stressors. Most of it came from the maturity and wisdom they have now, and through their life experiences. However, when they are stressed about their own health, they never tried to avoid that situation. At this point, they all know what to expect and what to do when their ongoing health conditions cause problems.
Stress and leisure. Stress and leisure seems to have a complex but interesting interrelationship. Because leisure plays such an important role in their lives and it is a valued part of their daily lives not being able to engage in leisure was associated with stress among some of these older adults. Skipping a valued leisure activity was also a stressor and the boredom they described taking over exacerbated the stress. One of Luke’s stressors was dealing with unexpected hoops to jump through whether that was insurance company suddenly wanting to increase the bill or doctor’s appointment due to health issues. When I asked him what makes him skip his regular leisure activities, he said,

It will just be prior commitments which I have under control. However, something happens you know the things you didn’t expect, typically you got to physically go take care of the problems, so you don’t have time to do your leisure. That is stressful for me and if you can’t do leisure activities you will be bored alone where everyone else is happy doing their leisure activities.

Although their health conditions (mostly manifested in physical limitations) affected and changed their leisure activities, stress did not necessarily impact their leisure behavior too much. Just like Daniel said, “If stress is serious enough, you are going to think about that so much that you can’t really concentrate on your leisure”, and people do get distracted by stress if it is severe. However, most of them said it does not really bother them too much, because when they do leisure activities it makes them happy and it distracts them from negative thoughts. In fact, many of them engaged in more leisure activities when they were not under too much stress as a distraction. Daniel who mentioned severe stress took away his leisure activities said, “If I have something like a stomach problem you know or something not too serious, I get on the computer and play the game spider. Just feeling that it kind of takes that off of you.” Courtney who has aches and pains quite often said,

Well, you have to go to the doctor if it is something that you are not normally handling with, and medicine helps getting back, but if not, going to you know leisure activities can also be a diversional thing. So it can take some of the pain away and stuff like that.
Lisa who was usually stressed about family issues also participated in leisure to relieve some of her stress. She said, “Stress doesn’t really effect my leisure, probably I would go out more, do more things. It is to block them, walk it off. I enjoy shopping you know, it makes me feel better.” So, it was evident that stress had some effect on their leisure experience, but at the same time they were using leisure as a positive distraction to well manage their stress. However, they all admitted that without stressors they would be able to do more leisure.

**Eustress and Distress**

Understanding the role of eustress/distress on older adults’ leisure activities and their use of SOC strategy was a central research question of this research. Therefore, it was important to explore the concept of eustress and how they described experiencing it in their lives. A series of questions were asked about how they viewed challenges and difficulties, how they coped with certain situations, how they managed both the process and result of dealing with stressors, and whether they view them as a positive challenge or overwhelming burden were used to measure their level of eustress. Some participants described experiences of eustress. Eustress was not only limited to the context of leisure, participants also discussed it as a part of their daily life. During the interviews and data analysis, five sub-themes emerged related to eustress: satisfaction with their current leisure, sense of control, having a high levels of perseverance, having a positive attitude, and spiritual beliefs.

**Satisfaction with their current leisure activities.** Older adults who were currently satisfied with their leisure activities also reported experiencing eustress in their daily living. The level of eustress they experience varied, but all of interviewees who were happy with their environment and amount of leisure they pursued, also talked about experiences of eustress. Beth who was upset about the salty and greasy food provided at her retirement
community, also complained it exacerbated her weight and health problems. Moreover, she
described not getting along too well with the other residents. She said it was hard to find
people who fit with her and she is not able to engage in as many leisure activities as she
would like. When she was asked about her eustress she said, “No, it is overwhelming and
well normally I am just an old grouch and bite everybody’s head off when I get stress.” Then
I asked her what were some factors that made her to react that way and she said,

I don’t know, boredom and pain mainly and when you have been living with pain as
long as I have, the only thing that keeps me going is trying to find something to
laugh about and finding somebody to laugh with is difficult here. When I am by
myself just dealing you know the negative contents, it is really difficult. I think it is
important to have leisure, I think it is important you know to get out and do as much
as you can, I think it is much better for you. Because if I get out and visit people
around and such, I think I can keep it down.

Leisure seems to play an important role in maintaining mental, cognitive and social health
and it also adds meanings and purpose to their lives. Recognizing leisure’s value and role in
healthy aging seemed to connect with eustress since participants were aware that overcoming
challenges to leisure led to benefits of leisure. When I asked Luke who was actively engaged
in all sorts of leisure about what helped him to experience eustress (versus distress) in other
life contexts aside from leisure, he said,

To be happy in your own environment, to be comfortable where you live, to be happy
with your apartment. Just didn’t throw you in duplex somewhere and you are just
like caged in. I had an opportunity to help decorate myself upstairs, so I am very
happy with where I live. It is not like I am being punished, if I go back into my
apartment, so I think that means a lot, if you are comfortable with your environment.
He also stressed that he gets along with all the people living in the retirement community and
mentioned his high level of leisure activity and how he tries to make people laugh. People’s
leisure involvement was definitely associated with how they described the experience of
eustress versus distress.
**Sense of control.** Having a sense of control in their lives motivated participants to view stress as a challenge (eustress) rather than a threat (distress). While these older adults suggested they attained better sense of control after retirement, being a caregiver, and negative life events such as deaths and major health problems presented challenges for them. Grant who had recently been discharged from physical rehabilitation from his stroke was doing much better at the time of the interview. His propensity to view stressful events as a challenge seemed to stem from his disposition and nature. He used golf as an analogy to describe how eustress related to his stroke experience and aging. He described how optimal arousal was important for motivating him to negotiate the stressful experience and how he looked to the rewards for satisfaction. For instance, he said

> Having more control of my life yes, well if you face tough shots in golf and you don’t do it, there is nothing you can do about it, but if you do make the good shot, that feeling of arousal and happiness is rewarding. It is good to have that feeling of success, accomplishment and so I am able to view those as a positive challenge.

Luke was experiencing eustress mainly due to awareness of optimal arousal, the rewards to the challenge and it helped him maintain his sense of control. However, Grant described his experience differently. Grant represented the case in which he had sense of control of the stressor and the situation, so he was able to look at the positive side of it instead of only seeing the down side of the situation. When I asked him, how his attitude toward handling stress changed, he said,

> It has changed a lot because whenever I was in the workforce, or in the family setting, more people depended on me to get the job done or to be the leader you know, where now I please myself. I still help my mom and my son and his wife, they live here in town and we are close, but there is no friction or anything.

So, having fewer responsibilities and obligations helped him maintain his sense of control which led to better stress management. When I asked him to share his experience with eustress, he told me how his attitude changed over the years and of course obtaining sense of control was the main factor, he said,
Back again, whenever I was younger these things (stress) it would be like a domino effect or snowball effect and I mean it makes you mad, it makes you sick, you are just overwhelmed, you didn't know how to handle it in a lot of cases. Now, if I have a problem, I do take it as a positive challenge and I am going to get through this because I feel like now I am in control of my life. But before you know there were too many bosses in my life.

Lastly, Lisa who also described eustress in terms of maintaining a sense of control shared her experience, she said,

You never had a time for leisure and for yourself when you had to work all the time and raise the family and so on. And now that I am by myself, I can do that Lisa wants to do and even though that is hard sometimes, I am going to do it … Well, you try to do one thing and you can’t do, and you try some other things to get that. I mean, I am in control, I am in control. I can do whatever I set my mind to do, I never say I can’t, I say I can.

Although they may have had some limitations with their physical abilities, it was their attitude and disposition that seemed to shape the understanding of eustress and the need for maintaining a sense of control.

**Perseverance.** Older adults in this sample who could be described as having a high levels of perseverance also had demanding careers and were more likely to describe stress and challenges as eustress instead of distress. Older adults whose career was very demanding seemed to also have high levels of perseverance after their retirement and this perseverance facilitated viewing challenges as eustress versus distress. This also seemed to connect with a desire to maintain a sense of control. With work obligations out of the way during retirement, they described approaching challenges with the same zeal they tackled a problem or demanding project in their careers. This connection between a demanding career and perseverance was also shown during the interviews. Perseverance allowed older adults to not give up on challenges they face, but helped them to overcome them. Courtney, who worked as a nurse for over ten years, explained that she never gave up when she was going through really difficult time with her son. This even happened while she was working, so even though “most of her emotions were caught up in helping him and being worried and things like that”,
she still managed to work the night shifts. Her perseverance was also helpful to resolve the issue and when she was telling me about that story, she emphasized how strong of a person she had to be.

People who have high levels of perseverance also engaged in more serious leisure activities both before retirement and now. Harry used to officiate ball games and coached for 20 years and more, and those two activities were serious leisure for him. Even though he did get paid to do those, his primary reason to coach and officiate was because he loved it. Now that he can’t do those anymore, he still participated in leisure activities pretty seriously. He was a diehard Cardinal’s baseball fan and he watched every single game throughout the season. His room was filled with Cardinal merchandise and he knew every detail about the team. Also, exercise is a serious leisure activity for him. He said,

I do my exercise on the machines and then I quit and time to go to my ten o’clock exercise that I do it in a chair. I do six days a week of exercise normally. Sunday is the day of rest, I do not do exercises on Sunday. I usually do it in the morning, but if I have a meeting or anything, I will do it in the afternoon. I don’t miss six days a week. It is my routine here.

This not only helped him with his heart conditions, but it also kept the competitive side in him to be able to be more persevering and better overcome challenges and difficulties he faced.

**Positive attitude.** Older adults’ personality, specifically having a positive attitude was also a motivator of eustress. Personality is a broader concept which may affect a person’s decisions and their approach to daily life and lifestyle, but it specifically connected to the ways they described eustress as well. Although, such factors as one’s resilience or endurance may also be important for viewing stress as a positive challenge, during the interviews it seemed that having a positive attitude contributed to their own perception of being a strong person and to view challenges in a positive ways. Lauren, managed various stressors
including the death of a spouse and conflicts with people around her very well. When I asked her what was the main factor that made her to view stress in a positive way or something to overcome, she said,

Oh, I think I am strong. I don’t know why I am, I don’t because as a child I was not. But my mother died when she was 39 years old and I was still in high school and I had to grow up quickly. I am not sure, but I think it is, I am strong.

When I asked her to elaborate little more on the meaning of strong, she said “It is mental. Mentally for sure, age wise being more mature.”

The participants also related positive attitude with being able to do more leisure. This is important because they felt stress if they could not participate in their regular leisure activities, and also leisure helped to not only relieve their current stress, but also helped them to better cope so they can experience eustress. When I was talking with Luke about his health issues and how that may negatively impact his leisure activities, he said

I am certainly not depressed like I used to be and that’s again about your positive attitude. When you wake up every morning and there is still a bright side of things you know, the glass is half full instead of half empty then that is a good thing.

Harry also strongly agreed with this, saying, “Well, staying positive absolutely is important. You take positive attitude and there is more leisure absolutely. They go hand in hand.” The older adults perceived that their mental attitude (e.g., positive attitude, being strong person) was important part of experiencing eustress.

**Spiritual beliefs.** Spiritual beliefs were something that did not apply to everyone, but for those who had it, it was really a strong influence for them. Their spiritual beliefs not only had a positive impact on experiencing eustress, but affected their view of life. Lisa emphasized the importance of spiritual beliefs by saying, “Another thing that comes in my life is God. If I didn’t have him, spiritually I am not sure if I could have made it you know.”
Harry, who claimed the main factor to facilitate eustress was because of his spiritual belief said,

Sunday morning, I go drive myself to church, that is the main part in life. A person has to believe. It doesn’t matter what religion you are, just having that belief absolutely. I am better able to handle stress and view it as a positive challenge now, because I have gotten more what you would say the Christian lifestyle little bit better. It wasn’t there when I was younger, well it was there but it wasn’t like it is now. I didn’t have it that way and I didn’t handle it that way when I was younger, but I am doing much better job now.

It was very interesting that these people mentioned how God is in control of their life and that was one of the most important parts about their spiritual belief. When Harry encountered health issues (three different cancers and congestive heart failure), he was able to overcome all of those and he said,

A person has to believe, you can’t be cured with anything without believing. You got to believe. Even though you may be on a death bed, if you believe, you can recover. It may not be the God’s will to recover, but it could happen. You got to believe, you put it in God’s hands and you can recover.

Whether God has really cured him or not is not important, but it was noticeable that spiritual belief certainly shaped how we viewed stress and how he managed stressful situations and events. He then directly mentioned, “I could overcome challenges and difficulties with Lord’s help and I can overcome anything. That is the way I feel about it.” Because he believed that God is in control of his life, he had will to overcome and cope with anything whether that is bad or good. The spiritual belief which occupied their sense of control and purpose towards God was really powerful endorsement for them. Lisa shared her opinion about this and she said,

Something happens and you say “why”, “why did that happen to me”, but God is in control of us. Because I believe this and I think about this a lot, I thought about my husband and how he died from cancer. He was ten years older than I was and when it hit, it went really fast. It makes you think, “why?” There is a reason for me to still be here and it is just the way you have to take it. There is reason for everything.
Both Harry and Lisa were living a happy life with full of leisure and joy. They were also one of the participants who had been experiencing eustress at the highest level.

**SOC Strategy and Eustress/Distress**

Use of SOC strategies with changes in their leisure activities has been explored already and it was found to be actively used among older adults. In order to understand the central research question of this study, it was also necessary to explore what facilitates and motivates older adults’ use of SOC strategies and how SOC connects with their eustress or distress experiences. Fortunately, during the interview, I was able to better understand these relationships.

**Facilitators of SOC strategy.** Every older adult from the interview perceived benefits of leisure whether physical, mental, cognitive, or social. Individuals described a variety of benefits they sought, but their strong desire for leisure participation was what really motivated them to use SOC strategy. This applied to older adults who were typically more limited with their physical abilities which also negatively affected their leisure engagement. Abby who was not able to do many leisure activities due to lack of energy and resources (e.g., no place and people to play bridge with) seemed to use SOC strategy in order to meet her desire for leisure. I asked her a hypothetical question where her favorite leisure is walking and due to arthritis that becomes difficult, how she would cope with this challenge and she said,

Well, that is kind of interesting because I am going to move to another place soon and I am hoping that I just move out along in positive manner you know, if I find like I can’t walk 20 minutes, I will cut it down to ten minutes. Be happy that still walked in, because these legs aren’t too good.

When I asked Daniel the same question he said,
Well, first of all, I will help myself you know, I will figure out a way to make it easier, but if I don’t have a good answer and I could not to any of those, I think I can find an alternative that I could do like reading or playing computer games.

Both Abby and Daniel, are using SOC to meet their desire for leisure whether that is altering the duration of the activity or doing some other activities instead. All of the participants described using SOC strategies to continue some sort of leisure activities. It was a very strong motivator for them.

Another strong facilitator of SOC was avoiding loss of meaning and maintaining their health. Loss of meaning connected to boredom and feeling useless. Jessica for instance, mentioned not being able to do any leisure activities as equal to not being able to do anything with their lives anymore. They directly related not being able to do leisure into terms such as “moving to nursing home”, “useless”, and “lost”. Because these older adults have the burden of one or more ongoing health conditions, their effort to maintain purpose and meaning in life was a high priority in lives. Whether they realized it or not, avoiding loss was an important facilitator of using SOC strategies. Lastly, maintaining health was also an important facilitator of using SOC strategies. In this case, older adults sought to find alternatives that would match with the main purpose and benefits of their leisure pursuits. For instance, Beth whose main purpose was to maintain her physical health, with the use of SOC strategy she was looking to meet the same need, she said,

Well, I was told that I need to exercise every day and I need to lose all the weight that I have put on. But, there are days when I am hurt so bad that I can’t exercise and so I have been trying to work up into it like, uh what I will do is I will start exercising with tape that I have got in my room. So, if I am tired or sick, I can sit down and rest and then I will go on and I am just trying to work myself back up to where I can do the exercises again.

Many people described their desire to maintain social connections through leisure. When they were no longer able to maintain certain activities or relationships, they actively sought ways to replace those activities or find new social outlets. Ron, who belonged to the YMCA for
many years because he enjoyed social contact, especially with younger people, could no longer go to the YMCA because of his health (i.e., arthritis, hearing and vision problems) and because he could no longer drive. However, right after he moved to the assisted living facility, he instantly found a coffee group where he could be around people to socialize. He also mentioned that some high school youth come to that coffee group occasionally which boosted his spirit and brightened his day. So, whether it is physical, cognitive, mental, or social health, these older adults actively used SOC in order to maintain their health.

**Use of SOC strategy in the context of eustress.** Whether older adults realized it or not, eustress was evident during the process of self-regulation and their use of SOC. SOC itself has a direct connection to eustress, because older adults must deal with certain challenges or difficulties they face and those who use SOC seem to successfully find alternatives to be compensated. Therefore, it seems that SOC and eustress go hand in hand. Most of these older adults did not seem consciously aware of SOC or eustress, rather what they were aware of of a desire to overcome the challenge and the attitude needed to do that which leas to the reward (i.e., negotiating the challenge). Both their personalities and dispositions and their strong desire to engage in leisure activities may facilitate this process of both SOC and viewing stressors as eustress. They shared that finding alternatives is not always easy, because some older adults had to step out of their comfort zone by starting new activities in later life. Even before that process, they had to first accept the fact that they could no longer do such activities or maintain a particular lifestyle which was not an easy process. When she moved out of town in with her son, due to the death of her spouse, Lisa had to step out of her comfort zone in order to continue her leisure activities. She said,

I can be shy, you know being around people that I don’t know well. I don’t always know like what to say or what to do, and nobody believes that about me, but I have to push myself in different situations just like coming here to the Champaign Park
District, I had to push myself to do that. That was a big step for me, but it is the best thing I have ever did.

She had to face some challenges which was being shy and meeting new people, but she was willing to push herself to do it in order to find alternative leisure that she desires. Ron was another good example of the relationship between eustress and SOC. He said,

Well I used to drive and so, I was more I had more freedom and I would go to walk on Meadowbrook, I would go to Hazel Park, I go to Allerton Park. I like nature. And not I am limited by not being able to drive anymore. So now, I walk around the facility every day and watch flowers in the gardens and stuff. If I can’t walk outside because the weather, I walk inside the building.

This was just one example but it represents how he overcame so many other challenges and even how these older adults were able to overcome so many difficulties by accepting them as positive challenges with the use of SOC strategies. They were all able to move step by step with alternative leisure activities toward the life that they desired.
CHAPTER 5: DISCUSSION

The findings outlined in this study offered important insights into eustress/distress and its relationship with SOC in the context of leisure for older adults with ongoing health conditions. Findings indicated these people were actively engaged in different forms of leisure activities and during the process, insights into the connection between SOC and eustress/distress were found. These older adults greatly value leisure as an important aspect of their quality of life and actively used SOC strategies to reach desired goals to experience the benefits of leisure. Many participants viewed stress as a positive challenge, which may also facilitate SOC. This study also explored the meaning of healthy aging among older adults with chronic health conditions and participants described various meanings that emphasized keeping one’s mind active and maintaining social contact. The major themes that surfaced in this research are: (a) changes in leisure and SOC strategies (b) benefits and meaning of leisure (c) healthy aging and the value of leisure (d) stress and leisure (e) eustress and distress (f) SOC and eustress/distress.

Change in Leisure and SOC Strategies

Change in leisure activities showed similar patterns among these older adults. First, leisure such as playing sports, gardening, traveling, outdoor activities or any other physically demanding activities were not reported as much due to physical limitations. Instead, they participated in different forms of leisure within a similar context that were less physically demanding. For instance, playing sports changed into watching sports or playing card games, gardening changed into growing indoor flowers and plants, long distance travel changed into day trips, and outdoor activities changed into indoor exercises. This was not surprising because over 85 percent of older adults report at least one chronic disease (Hoffman, Rice &
Sung, 1996) and these individuals have a higher risk for inactivity. There is also some evidence of a decrease in leisure engagement in later life. For example, The Nottingham Longitudinal Study of Aging (Armstrong & Morgan, 1998) found that with age activity levels progressively decline, with outdoor activities indicating the highest level of decline. While they were not engaged in as many activities as before retirement, they seemed to make a fairly smooth transition and were willing to substitute and adopt new alternative activities. They embraced the fact that everyone gets old and their physical function will not remain the same.

Second, lack of resources seemed to facilitate a change in their leisure behaviors. This suggests these older adults faced some structural and interpersonal constraints as they attempted to use SOC strategies (Mannell & Zuzanek, 1991; Janke, Davey & Kleiber, 2006; Son, Mowen & Kerstetter, 2008; White, 2008). Examples of structural and interpersonal constraints include not being able to drive, not enough freedom due to fixed meal schedules, lack of access to leisure programs, and no people with whom to participate. However it was found that if these constraints persisted, it affected their leisure satisfaction and quality of life. Therefore, they stressed the importance of finding ways to negotiate these constraints.

The relationship between SOC strategy and leisure has been explored by numerous scholars and this study found similar findings. Son, Kerstetter, Mowen & Payne (2009) defined healthy aging according to the SOC framework as minimizing negative (undesired) outcomes while maximizing positive (desired) outcomes. These older adults also actively used SOC in the context of leisure to better enhance positive outcomes and reduce negative outcomes. In this study, SOC strategies were also commonly used by these older adults in other contexts such as household activities and activities of daily living (ADLs). Of all the examples they gave of SOC, it was evident that SOC strategy was most effectively used to
help them maintain their valued leisure activities. As Janssen (2004) and Jopp & Smith (2006) agreed, leisure and SOC strategy goes hand in hand, helping older adults with ongoing health conditions to remain actively engaged in leisure activities that best fits their interest and physical abilities.

**Benefits and Meaning of Leisure**

Although physical limitations had the most impact on changes in participants’ leisure activities, health was the least recognized as a benefit of leisure activities by these older adults. Some of the deterrents of physical benefits are lack of interest, joint pain, lack of energy, perceived lack of fitness, and shortness of breath (Crombie et al., 2004). These older adults with ongoing health conditions emphasized the cognitive and social benefits accrued through their leisure activities because they want to focus on what is more available to them. Since most of the participants had chronic conditions that involve pain and limited mobility, their repertoires reflected their situation, which could also shape how they talked about benefits of leisure (Payne, Mowen & Montoro-Rodriguez, 2006).

These older adults greatly valued leisure as central to meaning in their lives. Therefore, they seemed more aware of the benefits of leisure (e.g., social, cognitive) and how important leisure is to their overall quality of life. In a study by Glass, Leon, Marottoli & Berkamn (1999), researchers examined how three activities (social, fitness, and productive) were associated with survival among older adults. Although, all three types of activities were associated with survival, older adults who were more socially active had longer survival compared with those who were less socially active (Glass, Leon, Marottoli & Berkamn, 1999). In addition, productive activities (which are highly cognitive) were associated with reduced risk of mortality. Cognitive vitality was essential to quality of life and survival in old
age and it was associated with various lifestyle factors. Most of these factors are potentially modifiable or manageable with leisure participation which provides lifelong learning opportunities, cognitive stimulation and physical exercise, continuing social engagement and stress reduction (Fillit et al., 2002). From the current study, cognitive benefits among older adults was mentioned by all as the main reason for their leisure participation. Lampinen, Heikkinen, Kauppinen & Heikkinen (2006) conducted an eight-year longitudinal study that examined the roles of leisure activity as predictors of mental well-being among older adults. In this study, variables such as mobility status, chronic illnesses, and physical activity all had affected individuals’ mental well-being, however leisure activity was the strongest predictor of mental well-being.

While ample research demonstrates the value of physically active leisure, the mental, cognitive, and social benefits they seek seemed to connect with how they perceived the meaning of leisure. Because these older adults have passed the point where their physical conditions are the biggest concerns of their life (due to normal and pathological aging), they seem to now want to focus on activities and experiences that are most satisfying, based on their abilities (Arbab-Zadeh et al., 2004). They have dealt with different physical challenges and I felt most of them are in the process of accepting their limitations. This does not mean they are giving up, but rather they care more about other things which were their emotional, cognitive and social health. In addition, another value of leisure to these older adults is that they actively use leisure as a positive distraction to get their minds off their negatives aspects of their lives (e.g., pain, boredom, family issues). This finding is supported by other researchers (e.g., Hutichinson, Loy, Kleiber & Dattilo, 2003; Son, Kerestetter, Yarnal & Baker, 2007).
Healthy Aging and the Value of Leisure to Quality of Life

According to Hansen-Kyle (2005), three antecedents and two consequences of the healthy aging process have been proposed in the literature. The antecedents are adaptation, compensation, and resilience which facilitate successful or healthy aging; Moreover, independence and autonomy are viewed as the consequences of healthy aging. The findings from this study support this theory because these older adults actively engage in SOC specifically with their leisure behavior. The SOC framework is a general framework for understanding developmental change and resilience across the life span (Baltes, 1997). Therefore older adults’ use of SOC strategy seems consistent with the healthy aging process. This demonstrates the importance of SOC strategies among older adults’ to promote healthy aging. Since SOC strategy and leisure go hand in hand, it is evident that leisure and SOC strategies are crucial to achieve healthy aging.

Avoiding boredom. Five themes of healthy aging emerged from this study: avoiding boredom, keeping the mind and brain active, meaningful social connections, a sense of purpose, enjoyment and satisfaction. Avoiding boredom was very important among these older adults. Continual feelings of boredom caused many negatives that were threatening their health and sense of well-being. Treas & Mazumdar (2002) found that boredom facilitates social isolation causing their level of resistance to decrease (e.g., willingness to overcome difficulties, sense of hopelessness). Consequently, this decreased resistance among older adults put them at higher risk of mortality than people who had higher level of resistance (Uchino, 2006). Therefore, older adults who have experienced prolonged boredom are at an increased risk for more health issues. As mentioned previously, leisure, particularly social and productive activities are important predictors of survival for by reducing risk of mortality (Glass et al., 1999; Fillit et al., 2002). In addition to the risk of mortality caused by
social isolation among older adults, it also affects perceptions of loneliness (Hawkley, Thisted, Masi & Cacioppo, 2010). Loneliness is a prevalent and serious social and public health problem among older adults (Cacioppo & Patrick, 2008). In this study, interviewees mentioned by doing leisure activities they gained meaningful social connections which helped them avoid boredom and feeling of loneliness. This finding is consistent with Toepoel (2013)’s theory in which he claims social connectedness is mainly achieved leisure engagement (e.g., voluntary work, reading books, hobbies and shopping) as an important way to prevent older adults’ feeling of loneliness.

Other scholars assert that if the older individual perceives aging as an isolated existence, the individual will isolate oneself and begin to fail whereas if an older individual is perceived to be an integral part of the social structure, he/she will more likely thrive (Hansen-Kyle, 2005). Although the statement matched with the findings of this study, further research is important to better understand this phenomenon. The boredom described by these older adults entailed more than concerns about social contact and social support. Boredom was a deeply embedded fear among these older adults that shaped their feelings of uselessness, giving up and being without purpose. It was not just the social structures that caused boredom, but it seemed to be a combination of things (e.g., social, emotional and cognitive factors).

**Keeping mind and brain active.** Maintaining older adults’ mind and brain was important to their definition of healthy aging. Researchers have shown that mental activity keeps the individual alert and healthy as well as helping to maintain cognitive abilities (e.g., through community classes or social interactions) (Vaillant, 2002; Hansen-Kyle, 2005). Past research suggests that personal development (e.g., informal learning from cultural visits, reading, evening classes) is important their cognitive health (Singh-Manoux et al., 2003).
Interviewees also mentioned avoiding depression as something they consider important to maintain their mental/emotional health. Fullafar (2008) studied the link between leisure and depression, and from her study she found that leisure played a pivotal role in their recovery as their choices, pursuits, and experiences enabled them to let go of their negative self-evaluations and enhanced their emotional health.

**Meaningful social connection.** Maintaining meaningful social connections is a central characteristic of healthy aging. According to Hansen-Kyle (2005), social support and social interaction are important factors of healthy aging. Also, external support structures (e.g., environment, family and community) are considered as important aspects in healthy aging (Ebersole & Hess, 1994; Lieberman, 2001) which is consistent with the findings of this study. These older adults considered their living environment and family to be very important, and especially their sense of community. Their community were mostly the friends and people from the facilities or programs in which they engage and they are a big part of their social connections. Poor social connections and social networks are also determinants of cognitive decline among older adults (Zunzunegui, Alvarado, Del Ser & Otero, 2003). Therefore these two themes were important aspects of healthy aging and leisure played role as a facilitator.

**Older adults focus less on physical benefits.** Older adults in this study maintained active involvement in their leisure activities to benefit emotional, cognitive and social health. However, they focused less on the physical benefits of healthy aging especially their functional ability. Normansell et al., (2016) came up with three main reasons for older adults’ decreased participation in physically active leisure: internal (e.g., too active, medical problems, no wish to increase, not interesting), external (e.g., other commitment, travel, being a care-giver), and trial-related (e.g., program length, equipment issues, being randomized).
According to Normansell et al., (2016)’s findings, internal reasons were the most relevant factor for less interest by older adults’ in physical activities. One explanation is that these older adults frequently mentioned their chronic disease symptoms (e.g., pain, fatigue, limited mobility) to be one reason they engage in fewer physical activities. In addition, Crombie et al., (2004) mentioned fear of falling, perceived current weight, lack of energy, and painful joints as factors that negatively affect older adults’ engagement in physically active leisure. As Kleiber (1985) mentioned it is often recognized that older adults respond to different contingencies in life, therefore they desire to define one’s incentives (e.g., physical functioning, cognitive development, meaningful socialization) more personally. For this study, these older adults spoke more emotional, cognitive and social benefits than benefits of physical activity and this was also reflected in the ways they described healthy aging.

**Sense of purpose.** Sense of purpose and having control of their lives was also a critical factor of healthy aging among these older adults. Interviewees mentioned that having control of their lives equaled to being self-determined and having sense of autonomy (Ryan & Deci, 2000; Thompson & Prottas, 2006). As, self-determination is strongly linked with having control of the choices that people make (Chang, 2012), implicit in leisure are opportunities to be self-determined (Trenberth, 2005) that allow older adults to gain a sense of autonomy, competence, and relatedness (Orsega-Smith et al., 2007; Dattilo et al., 2015). Therefore leisure activities guide older adults to be more self-determined, which is one of the consequences of healthy aging process (Hansen-Kyle, 2005). Being self-determined with their leisure activities connected to their sense of purpose as well. Hutchinson, Loy, Kleiber, and Dattilo (2003) found that people’s sense of purpose was renewed when they were given a choice to be more self-determined with their leisure behaviors. So, self-determination and sense of autonomy in the context of leisure seems to contribute to purpose, meaning and healthy aging.
**Subjective well-being.** In addition, healthy aging is usually understood within objective (e.g., chronic diseases, disability, and functional ability) and subjective (e.g., level of satisfaction, well-being) factors (Fernandez-Ballesteros, 2011), but in this study, it was mostly the subjective factors these older adults emphasized. Leisure activities played a very important role in their subjective well-being because it provided opportunities to meet their desired goals and maintain their values (Brajša-Zganec, Merkas & Sverko, 2011). Also, researchers found a positive relationship between participating in physical leisure activities (Keung & Lee, 2005) and social activities (Lloyd & Auld, 2002) in regards to subjective well-being and healthy aging (Wendel-Vos et al, 2004). Although the literature supports the findings of this study on subjective well-being and healthy aging, cognitively stimulating leisure activities were also found to be very significant to their subjective well-being. They all mentioned the importance of keeping their mind and brain active as a motivator and outcome of their participation. The participants emphasized these two elements far more than physical leisure activities. Therefore, the value of their leisure activities mainly social and cognitive were associated with their perceptions of subjective well-being and healthy aging.

As it was mentioned by Der Ananian & Janke (2010), older adults have the most choice and freedom to pursue what they want to do during their free or non-obligated time after their retirement. Therefore, leisure paved the way to engage in healthy behaviors which demonstrates the important role of leisure in maintaining and optimizing health (Menec & Chipperfield, 1997). People who have ongoing health conditions may face more constraints than those without, however use of SOC strategies helped them to alter their leisure participation. Therefore, they were able to continue to experience various benefits from leisure activities, even with their physical limitations.
Stress and Leisure

Although older adults experience differential stress in various settings and environment, participants in this study mostly described that they experienced daily stress. Retirement was a turning point for a majority of these older adults because their main stressors in the past were work and family related situations. They seemed to spend much more time with friends than family and it was comparatively less stressful for them. Larson, Mannell & Zuzanek (1986) stated that although family members are the major source of physical and emotional support for older adults, friendships have stronger bearing on subjective well-being because interactions with friends can be less stress than interactions with family. Although leisure participation with their friends mitigated the stress level among older adults, they still had stresses in their life and a majority of it came from daily activities (McHugh & Lawlor, 2013).

Overall, older adults in this study seemed to be coping with their stressors pretty well. Participants in this study demonstrated regular use of SOC strategies, reported they have social support, engage in meaningful leisure activities and they showed signs of having wisdom from their life experiences, which seemed to help them manage their daily stress. Researchers have begun to focus on the construct of wisdom “as an expert knowledge system concerning the fundamental pragmatics of life” (Baltes & Staudinger, 2000, p. 122). Wisdom is viewed to help older adults adapt and cope with stress because it contributes to the development of emotional stability, personal maturity and responsibility (Hansson, Robson & Limas, 2001). In this study, leisure participation seems to help these older adults’ stress coping process. Iwasaki (2010) stated that leisure can provide a unique opportunity to engage in a relatively freely chosen enjoyable activity that can help older adults gain valued meanings of life. As a result of involvement in such enjoyable and meaningful leisure activity
by choice, one of the key outcomes often includes stress reduction (Iwasaki, 2010). Leisure also facilitates social support among older adults, which can contribute to their stress coping process (Iwasaki & Mannell, 2000). Therefore, wisdom and leisure participation seems important to stress coping among older adults.

Researchers (Davis, Zautra & Reich, 2001; Cairney & Krause, 2008) have also emphasized how older adults are particularly vulnerable to the effects of stress. Although these older adults deal with significant co-morbid chronic health conditions (e.g., congestive heart failure, cancer, COPD), which increases their risk of mortality, they were pretty resilient and seemed to be effectively managing the negative effects of stress. In fact, they are more likely to react more strongly to some of the bigger stressors such as death or severe health issues. This can be explained with the model called role shock which has been proposed by (Minkler & Biller, 1979). According to Minkler & Biller (1979), the shock from stress is experienced differently due to the anticipated nature of an unfamiliar role and the actual substance of the role encountered. Therefore, individuals who are clear of their role unfamiliar roles may have different reactions to stress.

**Eustress and SOC Strategy**

*Facilitators of eustress.* Five factors emerged from this study that provide insight into these older adults experience of eustress: leisure satisfaction, sense of control, perseverance, positive attitude and spiritual beliefs. Leisure satisfaction and sense of control are factors associated with participants’ leisure engagement (Ragheb & Griffith, 1982; Menec & Chipperfield, 1997), whereas perseverance and positive attitude seemed to be more of a dispositional factors connected with their personality (Hills & Argyle, 1998). Spiritual beliefs
are likely embedded in their value system which is demonstrated from a complex combination of sense of meaning and purpose to awareness of existence. However it is also linked to their personality as well (Francis, 1992; Hawks, 1994). It is necessary to explore each factors closely to its relationship with eustress.

**Leisure satisfaction.** Research indicates leisure satisfaction has a positive relationship with older adults’ leisure participation and leisure attitude (Ragheb, 1980). Therefore, satisfaction with their current leisure activities seem to have provided more opportunities to engage in SOC process, because the demonstrated a strong desire to continue their leisure activities. As the process of eustress can be recognized by individual’s ability to view challenging or difficult situations (stressor) as something positive instead of a threat (Spector, 1998). Leisure satisfaction and increased use of SOC strategy seemed to be a facilitator of eustress. In addition, a positive relationship between leisure satisfaction and psychological health was found (Pearson, 1998). In this research, psychological health was understood through the lens of their stress level, therefore leisure satisfaction seems to be positively connected with stress (Pearson, 1998). Lastly, participants who were satisfied with their leisure activities tended to use leisure as a positive distraction in stressful situations. According to Colenutt & McCarville (2000), leisure was used as a positive distraction which provided opportunities to maintain or improve their physical and psychological health and it had positive relationship with leisure satisfaction level as well. Therefore, leisure satisfaction helped older adults to better use leisure as a positive distraction in stressful situations, so that they can better experience eustress instead of distress.

**Sense of control.** Having a sense of control was another characteristic associated with eustress. First, participants from this study said their sense of control has dramatically increased due to retirement. Various researchers have looked into this and asserted that
retirement allowed older adults to increase their leisure activities (Evenson, Rosamond, Cai & Diex-Roux, 2002; Berger, Der, Mutrie & Hannah, 2005). Consequently, these older adults seemed to have a strong sense of control (Kim & Moenm 2001; Drentea, 2002). Calvo, Haverstick & Sass (2009) explored the relationship between retirement and retirees’ happiness, and it was found that sense of control was major positive outcome of retirement. Therefore, sense of control which was obtained from older adults’ retirement allowed them to remain more active with their leisure activities (Menec & Chipperfield, 1997). From the interviews it was found that older adults who had high levels of sense of control were more actively using SOC in order to engage in their leisure activities.

In addition, locus of control (internally) is connected to positive psychological health (Lefcourt, 2014). According to Kleiber (1985), a two-process model of perceived control exists in terms of motivational reorientation of older adults’ leisure. With the first process, primary control, a person tries to bring the environment into line with his/her wishes; but with the second process, secondary control, one brings oneself into line with the existing environment. A perception of primary control is what is normally established as an internal locus of control. Internal locus of control is central to an orientation to achieve reorientation of their leisure activities (Kleiber, 1985). This shows how locus of control is positively connected to older adults’ SOC and may help facilitate the process of eustress versus distress.

**Perseverance.** Older adults who had very demanding careers were more likely to view stress as a challenge to negotiate than a threat. This was related to having a high levels of perseverance among older adults. Among participants of this study, older adults who had maintained high levels of perseverance from demanding careers, tended to be more engaged in serious leisure than the casual leisure. Perseverance is something that individuals learn to develop in demanding jobs (Rothmann & Joubert, 2007), but it is also an important quality of
serious leisure that separates it from casual leisure (Brown, McGuire & Voelkl, 2008). Some of the benefits that individuals accrued while doing serious leisure activities are feelings of accomplishment, self-actualization, and self-enrichment (Gillespie, Leffler & Lerner, 2002). Several of the participants in this study reported engaging in serious leisure activities (e.g., cards, physical activity, coaching/umpiring). It also seemed that those who had demanding careers and those who engaged in serious leisure had a sense of perseverance that helped them see stress as a challenge versus a threat. Also, perseverance can be connected to a newly defined personality trait called “grit” which has been attracting the interest of scholars in the context of stress coping (Silvia, Eddington, Beaty, Nusbaum & Kwapisl, 2013; Suzuki, Tamesue, Asahi & Ishikawa, 2015). Therefore, individual’s perseverance is also in connection with his/her personality.

**Positive Attitude.** Positive attitude seemed to both be a reason and a result of older adults’ leisure behavior and propensity to view stress positively. The level of positive attitude obtained from leisure activities varied by these older adults, but it was evident that being able to engage in leisure activities contributed to a positive attitude and helped them cope with daily stress. Although leisure connected with positive attitude for this study’s participants, one’s personality also has strong relationship with positive attitude. Some of the personality observed from the participants who had positive attitude towards their stressor were being resilient and strong. Leisure played an important role as a facilitator of person’s resilience to proactively cope with or counteract stress, therefore helping older adults to better overcome challenges and difficulties they face (Iwasaki, Mactavish & MacKay, 2005). Another construct of personality that was found in this study was hardiness which helped older adults to better cope in challenging situations and avoid seeing stressors as threat. According to Kobasa, Maddi & Kahn (1982), it was clear that hardiness functions as a resistance resource in buffering the effects of stressful events. Also, hardiness was more significant when a
person is experiencing intensely stressful life event (Kobasa, Maddi & Kahn, 1982). Although there has been upsurge of interest in how personality affects the stress process (Vollrath, 2001), its relationship with eustress has yet been researched. From this research, elements of personality such as positive attitude, resilience, and hardiness played as important factors of person’s experience of eustress. Therefore, further research on the relationship between eustress and personality will light up the process of eustress among older adults.

_Spiritual Belief._ Lastly, spiritual beliefs were as a facilitator of eustress for some of these older adults. It did not apply for everyone but several of them clearly articulated how their spiritual beliefs were important to how they negotiated the challenges of daily stress. Although older adults’ spiritual beliefs did not appear to shape their leisure activity participation, it seemed to be related with their sense of perceived control. Heintzman (2002) acknowledged the importance of perceived control in his model of leisure and spiritual well-being. Participants from this research mentioned the importance of God having control of their lives. Therefore, the baseline of perceiving stressors was different from others who did not openly share their spiritual beliefs. They viewed challenges or stressors as they occurred for a reason or purpose, so they were able to have a more positive mindset about it.

In addition, a theme called spiritual surrender that was acknowledged by Hartwick & Kang (2013) was observed among participants. Spiritual surrender is a strategy of “letting go and letting God” (Hartwick & Kang, 2013, p. 180) in stressful situation. Because they can employ a strategy of surrendering or transferring the ultimate responsibility of resolving challenges to the supreme being of their faith, dealing with negative challenges was easier. Although some participants showed a strong connection between their spiritual beliefs and experience of eustress, further research on this relationship is needed to better understand how it contributes to older adults’ healthy aging process.
Experience of Eustress as a “Process” and “Product”. In this sample of older adults, eustress or so called “good stress” was so much more than just the absence of distress. For older adults in this study, it was a positive state that shaped attitudes and emotions such as positive attitude, meaningfulness, and satisfaction (Zohar, Tzischinski & Epstein, 2003; Parker & Ragsdale, 2015). How they described the experienced of eustress seemed to be shaped by their reactions to the challenges they encountered. Their experience of eustress can be viewed through the lens of the ‘process’ of dealing with challenges and as a ‘product’ of the challenges. Gmelch (1983) offered an example of little league baseball players to illustrate process and product. A player who perceived eustress as a ‘process’ of facing challenges took the challenging situation as something that he/she could overcome in a positive way, whereas a player who experienced eustress as a ‘product’ of a certain situation did not necessarily perceive that process as something positive, but their performance was better under a certain level of stress (Gmelch, 1983). An important key word for the ‘process’ of eustress is challenge and the ‘product’ of eustress is accomplishment (O’Sullivan, 2011). The second case of experiencing eustress from the ‘product’ of such challenges was not applicable to all the older adults in this study, but several of these older adults experiences of eustress fit into this process and product framing of eustress.

Eustress and SOC. The findings of this research are consistent with previous research on how SOC strategies facilitate healthy aging and improve their quality of life (Baltes & Baltes, 1990; Baltes & Carstensen, 2003). Also, relationships between the five facilitators and eustress have been mentioned above. However, the relationship between SOC and eustress in the context of leisure has not been studied. The outcomes of this research suggest a relationship between eustress and SOC and how it may promote older adults’ healthy aging process. Based upon these findings I have presented a model (Figure three) that describes the role of eustress and SOC in facilitating healthy aging. Among the five
facilitators of eustress, four (i.e., leisure satisfaction, sense of control, perseverance, and positive attitude) have direct relationships with leisure related eustress, whereas spiritual belief seems to facilitate eustress in general and is not unique to the context of leisure.

First, it is important to note how older adults’ use of SOC relates to their experiencing of eustress. The SOC framework describes how older adults self-regulate to promote healthy aging (Freund & Baltes, 1998). Selection can be voluntary or involuntary and in these case most of the older adults reported involuntary selection (Burnett-Wolle & Godbey, 2007). In this study, most of the older adults used SOC strategies in the context of leisure because they can no longer participate in their previous leisure activities mainly due to physical limitations or lack of resources (e.g., not being able to drive, lack of programs). This means that older adults who successfully utilized SOC strategy have overcome challenges they faced and were able to alter their leisure activities (Lang, Rieckmann & Baltes, 2002). In fact, these older adults mentioned how they were able to approach those challenges positively instead of seeing them as a threat, which is an important aspect of eustress (Le Fevre, Matheny & Kolt, 2003). Therefore, these older adults who have made good use of SOC with their leisure activities seemed to be more inclined to experience leisure oriented eustress.
Figure 3

*The Process of Experiencing Eustress with Successful use of SOC Strategy*
Practical Implications

Leisure and recreation practitioners who work with older adults should be consciously aware of the fact that more than 90 percent of older adults have at least one chronic condition and 70 percent have at least two chronic conditions (Anderson, 2010), and emphasize the desired meaning and benefits of leisure in order to provide satisfying programs for older adults. Almost all of the participants in this study had experience going to several different facilities to engage in leisure activities and the main reason they stopped attending those facilities was lack of programs or activities. For older adults, leisure participation is one of the most important things to do during their daily lives. Therefore, places like assisted living or retired homes should be more aware of older adults’ leisure needs help them facilitate SOC strategies to maintain participation and the benefits of the activity.

The meaning of healthy aging for this group of people had comparatively less emphasis on the physical aspect than mental, cognitive and social benefits. Therefore, practitioners should focus on providing leisure programs that meet these criteria. In addition, providing them with organized schedules of different leisure activities is important. This means knowing who is going to show up ahead of time, so older adults don’t have to worry about having enough people or even too many people. This seemed to be problematic for older adults because lots of places just provided place and equipment.

Providing different levels of leisure activities might encourage their participation and have more benefits for different individuals. Older adults who like to be engaged in more serious leisure than casual leisure could have different expectations and experiences and vice versa. For instance, several of these older adults talked about conflicts they had while playing card games because some of them were there to play serious games of cards, and others were mainly interested in the social aspects.
Lastly, leisure and recreation practitioners can help provide guidelines for older adults who are in need of ideas to help stay involved in leisure despite changes in their health and functional ability. In this study, these older adults actively used SOC strategies to adapt and substitute their leisure, but this may be unique to this sample of older adults.

**Limitations**

There were a few limitations of this study that need to be addressed. Although the proportion of male and female participants was pretty even, it is important to note the sample consisted of only White/Caucasian older adults. Therefore, it would be worthwhile to conduct this study with a more diverse population to better understand the experiences of people from different ethnic and racial backgrounds. Interviews were the primary means of collecting data and although I noted my bias, there was still potential that I biased their responses during our conversations. Because I am a younger Asian male and not a part of their group, they could have responded to my interview questions differently than if someone else was asking the questions.

This study took place within the selected places at only three locations in central Illinois, the results may not be transferable to other older adults with ongoing health conditions across the country. The facilities where I recruited interviewees are a primary location where they engage in leisure, therefore different settings in different parts of the country may also affect the findings. However, it is important to note that most of the participants reside in retirement communities or assisted living, which are expensive. It’s possible that people with a lower socioeconomic status have had different experiences regarding leisure and different views.

**Future Research Recommendations**
Despite many years of study in different disciplines (e.g., geriatrics, psychology, sociology and gerontology), no consensual definition for healthy aging exists (Hung, Kempen & De Vries). This research contributed to the understanding of how older adults with chronic conditions define healthy aging. Many of the findings are consistent with previous literature, but the concept of boredom among older adults needs more attention. Avoiding boredom was not only important to their meaning of healthy aging, it had a strong connection with stress and leisure. Further research on the topic of boredom and its relationship with leisure and stress among older adults will offer important insights into the healthy aging process.

The concept of eustress has yet to receive enough attention among scholars. Eustress had been studied in its relationship to occupational settings (Le Fevre, Matheny & Kolt, 2003) and genetic expression (Sanchis-Gomar et al., 2012), but it’s not yet been thoroughly researched with the older adult population. People may assume that eustress is only be applicable to athletes or younger people, however it was evident that older adults with ongoing health conditions experience eustress in their daily lives. Therefore, further study on this topic is necessary. First, it would be interesting to find out how different older adults (e.g., older adults with more or less severe health conditions, different socio-economic status) experience eustress. Next, future research on personality and eustress is necessary to better understand the relationship and process of experiencing eustress among older adults. From this study, personality seems to be connected with eustress, therefore further research on the role of personality is needed. In addition, understanding the relationship between serious leisure and eustress would be interesting. It could be assumed from this research that they may have strong connections, however what elements of serious leisure facilitates eustress and how eustress facilitates involvement in serious leisure are interesting topics.
Lastly, eustress has been considered as both a process and a product. However, little research has been done to capture some of the characteristics of these two sides of eustress. Overall, eustress can be a powerful tool to make people’s lives happier and healthier. At the same time, it is also something that many people are not consciously aware of in their daily lives.

Conclusion

This study sought to provide a description and theoretical analysis of the role of eustress/distress and SOC strategy applies in the context of leisure activities is among older adults with chronic conditions. It was most important that older adults with at least one or more ongoing health conditions experience healthy aging process with the help of SOC strategy, leisure and eustress. In that matter, this research has shown positive result on how those elements proved to increase or maintain older adults’ health and their quality of life.

The major contribution to the literature of this study is that these older adults with ongoing health conditions who participated in some sorts of their valued leisure activities experienced healthy aging process and eustress. SOC strategy was a very important key to connecting their leisure behaviors and healthy aging process and also the process of experiencing eustress as well. Avoiding boredom, mental, cognitive, and social well-being, sense of purpose and satisfaction constructed their definition of healthy aging which were all obtained from the experience of their daily leisure activities and use of SOC strategy.

Eustress was most easily experienced during their leisure activities which provided older adults with sense of control, perseverance, positive attitude and feeling of satisfaction. As shown in this study, older adults with ongoing health conditions valued leisure more than
anything else and it had critical impact on their healthy aging process as well as the experience of eustress.
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Informed Consent Form
March 10, 2016

You are invited to participate in a research project being conducted by Jaesung An and Professor Laura Payne from the Department of Recreation, Sport and Tourism at the University of Illinois at Urbana-Champaign. The purpose of this study is to understand how stress affects one’s engagement in valued leisure activities after the onset of chronic disease among older adults.

In this project, Jaesung An will ask you to participate in an interview of approximately 30-75 minutes. The interviews will be audiotaped and transcribed. Selected portions of the interviews will be shared at conference presentations and used for publication. In order to protect your confidentiality, pseudonyms will be assigned for any identifying information. You will have the right to review the tapes and transcripts and to request that they be erased in whole or in part at any time.

In order to minimize risk, the researcher will attempt to steer away from potentially embarrassing topics. You have the right to refuse to answer any question during the interview at any time without penalty. Participation in the interview is completely voluntary.

The tapes, transcripts, and all other information obtained during this research project will be kept secure in the locked offices on password protected computers of the researchers and will be accessible only to project personnel. The tapes will be transcribed and coded to remove any identifying information. The tapes will be erased after they have been transcribed and the transcripts will be erased after three years.

We do not anticipate any risk to this study greater than normal life and we anticipate that the results will offer insights about the role of stress in shaping older adults engagement in valued leisure activities. In any presentation or articles pseudonyms will be substituted for any identifying information.

Your participation in this project is completely voluntary, and you are free to withdraw at any time and for any reason without penalty. It is your choice to participate and it will not impact your relationship with me, with Dr. Payne, with (Inman Place, Autumn Fields or Champaign Park District) or with the University of Illinois in any way. You have the right to refuse to be taped, to turn off the recording equipment at any time, to review the tapes and transcripts once they have been completed and to request that the tapes and transcripts be erased in part or in whole.

If you have questions about this study, please direct them to:

Laura L. Payne, PhD, 217-244-7038 or lpayne@illinois.edu
Jaesung An, BS, 217-358-3674 or an21@illinois.edu

University of Illinois at Urbana-Champaign
Institutional Review Board
Approved: March 22, 2016
IRB #: 16-744
Costs and Payments: You will not be charged in any way for completing the survey. You will receive a $10 gift card upon completing the interview.

Confidentiality: In general, we will not tell anyone any information about you. When this research is discussed or published, no one will know that you were in the study. However, laws and university rules might require us to disclose information about you. For example, if required by laws or University Policy, study information which identifies you and the consent form signed by you may be seen or copied by the following people or groups: a) The university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for Protection of Research Subjects; and b) University and state auditors, and Departments of the university responsible for oversight of research; and c) Federal government regulatory agencies such as the Office of Human Research Protections in the Department of Health and Human Services or the National Institutes for Health.

Voluntary Consent:
1. I agree to participate in the interview.
2. I understand that my participation is voluntary and that I may withdraw from this research project at any time without it affecting my relationship with the University of Illinois. If you decide to withdraw from the research please notify lpayne@illinois.edu or 217-244-7038.
3. I understand that my responses in the interview are confidential and that I have the right to skip questions that I prefer not to answer.
4. I certify that I am 18 years of age or older.
5. I certify that I have read the preceding, or it has been read to me, and I understand its contents. If you feel you have not been treated according to the descriptions in this form, or if you have any questions about your rights as a research subject, including questions, concerns, complaints, or to offer input, you may call the Office for the Protection of Research Subjects (OPRS) at 217-333-2670 or e-mail OPRS at irb@illinois.edu
6. A copy of this consent will be given to me. My signature below means that I have freely agreed to participate in this project.

Print __________________ Signature __________________ Date ____________

Investigator’s Certification: I certify that I have explained the nature and purpose of this survey to the above-named individual(s), and I have discussed the potential benefits and possible risks of completing the survey. Any questions the individual(s) have about this survey have been answered, and we will always be available to address future questions as they arise.

Printed Name of Person Obtaining Consent __________________ Role in Research Study __________________

Signature of Person Obtaining Consent __________________ Date ____________
Stress and Leisure Activities Study

We are looking for people 60 and over who have one or more ongoing health condition to volunteer for a 30-75 minute interview on daily stress and leisure activities.

Each participant will get a $10 gift card.

For more information and to volunteer, please contact:

Jaesung An
Phone: 217-358-3674
Email: an23@illinois.edu
APPENDIX B:
INSTITUTIONAL REVIEW BOARD

University of Illinois at Urbana-Champaign

Institutional Review Board Office
525 East Green Street, Suite 203, MC-419
Champaign, IL 61890
Tel: 217-333-2870 Fax: 217-333-0405
Email: ih@illinois.edu Web: www.irb.illinois.edu

IRB Application for Exemption

Application for Review of Research Involving Human Subjects

All forms must be completed, signed by the PI, and submitted by FAX, email, or single-sided hard copy.
Please type responses, handwritten forms will not be accepted.

1. RESPONSIBLE PROJECT INVESTIGATOR (RPI) The RPI must be a relevant member of UIUC faculty or staff who will serve as project supervisor at UIUC. For other research team members (including those from other institutions), please complete the Research Team Attachment and provide with the completed application. Include all persons who will be: 1) directly responsible for the project’s design or implementation, 2) recruitment, 3) obtain informed consent, 4) involved in data collection, data analysis, or follow-up.

Last Name: Payne First Name: LB
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City: Champaign
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Phone: 217-244-7038
Fax: 217-244-1935
E-mail: lpayne@illinois.edu

UIUC Status: Graduate member of (Mark One) a Faculty Academic Professional/Staff

Training: CITI Training, Date of Completion, February 15, 2015
Additional training, Date of Completion, June 29, 2015, NIHIRB Training

2. PROJECT TITLE

Exposure to Distress – Understanding the Role of Self-Regulation in the Context of Leisure among Older Adults

3. Please review the six [6] categories of exemption listed below and indicate the category or categories that apply to your research. [Note: Exempts do not apply for prisoners, or for research that specifically targets persons who are cognitively impaired or persons who are economically or educationally disadvantaged.]

☐ 1. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness or the comparison among instructional techniques, curricula, or classroom management methods.

☐ 2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects, and (ii) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.

☐ 3. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office, or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

1 Additional CITI modules may be required depending on subject populations or types of research. These include: (i) research enrolling children; (ii) research enrolling prisoners; (iii) FDA regulated research; (iv) data collected via the internet; (v) research conducted in public elementary/secondary schools; and, (vi) researchers conducted in international sites.
4. Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. [Note: to be eligible for this exemption, all data, documents, records or specimens must exist prior to IRB review and must have been collected for purposes other than the proposed research. To qualify for an exemption in this category, the proposed research must be strictly retrospective.]

5. Research and demonstration projects which are conducted by or subject to the approval of department or agency heads. The program must deliver a public benefit or service (e.g., Social Security Act or Older American Act). Such research or demonstration projects must be conducted pursuant to specific federal statutory authority; there must be no statutory requirement that the project be reviewed by an Institutional Review Board and the project must not involve significant physical invasions or intrusions upon the privacy of participants.

6. Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural, chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration (FDA) or approved by the Environmental Protection Agency (EPA) or the Food Safety and Inspection Service of the U.S. Department of Agriculture (USDA).

If the proposed research does not qualify in any of these categories, please complete the IRB-1 application found at: www.irb.uiuc.edu

4. Research Summary: Please summarize, in lay language, the objectives and significance of the research.

The purpose of this study is to understand the relationship between stress, distress, and self-regulation strategies in the context of leisure activities among community-dwelling older adults and individuals who reside in assisted living communities. The objectives are: 1) Explore to what extent, if at all, do older adults experience distress in the context of leisure; 2) Discover the relationship between distress and adoption of selective optimization with compensation (SOC) strategies in leisure; 3) Examine whether people who view stress as a positive challenge (stressors) are able to better maintain involvement in valued leisure activities; 4) Understand the effect of distress on engagement in valued leisure activities, and 5) Understand the meaning of leisure activities to older adults and if how leisure engagement contributes to healthy aging. This research will provide important insights regarding how older adults view and experience stress and how their view of stress shapes their use of SOC strategies in the context of leisure. Findings may offer important insights for practitioners to help older adults adapt and substitute their leisure activities so they can maintain their participation, despite the onset of chronic disease or other stressful life events.

5. Participants: Describe who will participate in the research and how they will be recruited.

Older adults who are 60 years or older will participate in this research. Recruitment will take place in three different places: Innman Place (independent living community), Autumn Fields (assisted living community), and Champaign Park District Senior Programs. Emails have been sent out to these organizations about the research and I have requested permission to recruit participants for interviews. I have received written permission from both Innman Place and the Champaign Park District (see attached emails). In order to develop rapport with the residents, I will visit each facility and socialize with the older adults either during a meal or a social program. Then at a scheduled time, I will visit each facility during a program time (e.g., meal-time, social hour) and talk about the purpose and goals of my study and invite their participation. During that time I will explain that I wish to conduct in-person interviews that will take approximately 30-75 minutes and that each participant will be compensated with a $10 supermarket gift card for completing the interview. I have attached a brief script that I will use to recruit participants. People who are interested in participating will write their name and phone number on an interest form I send around so their interview can be scheduled. I will also hand out a flyer for people interested in possibly participating.

6. Research Procedure: Specifically describe what the participants will do and where the activities will take place. Outline the approximate dates and durations for specific activities, including the total number of treatments, visits, or meetings required and the total time commitment. Please include a copy of each of your measures as attachments.

Interview: I will conduct about 15-20 interviews of adults 60 and over recruited from three different locations (Innman Place, Champaign Park District, and Autumn Fields). I have been permitted to come to their facilities and work to recruit participants. The interview will take place either at the resident’s house or a meeting room or office located within each of the facilities. The researcher will explain the purpose of the study and describe the interview process to the participants. Each participant will be
7. Data Collection: Please explain how confidentiality will be maintained during and after data collection. If applicable, address confidentiality of data collected via e-mail, web interfaces, computer servers and other networked information.

The interviews will be audio-recorded and I will also take notes. The interview will take place in a private place where I will be the only one hearing our conversation. I will inform the participants that I will not write down or record any identifiable data (e.g., name, address, phone, etc.) during the interview. At the end of the interview, I will stop taking notes and stop the audio recording and will thank the respondents for coming. Each participant will be assigned a pseudonym to maintain confidentiality. After the interview, the audio tapes will be transcribed by myself and the participant’s name will be replaced with a pseudonym. No participant names will be included in transcriptions of the interviews or in reports. Transcripts will be kept separate from the consent forms and the consent forms will be stored safely in a locked file cabinet inside of a locked office.

8. Consent Process: Describe when and where voluntary consent will be obtained, how often, by whom, and from whom. Attach copies of all consent and assent forms.

Before participation in the interviews, the participants will be provided with the written informed consent form. I will review the consent form with the participants and will also answer any questions the respondents may have. In addition, I will remind the participants that their participation is voluntary and that they can skip any questions that they don’t wish to answer. The written consent form clearly explains the procedures, risk, compensation, confidentiality, volunteer status, and contacts. After reading the form and going over it together, the participants will sign one copy and give it to me. The participants will keep one copy of the consent form. All of the signed consent forms will be kept in a locked cabinet.

9. Dissemination of Results: What is (are) the proposed form(s) of dissemination (e.g., journal article, thesis, academic paper, conference presentation, sharing with the industry or profession, etc.)?

Findings from the data will be used for my master’s thesis. In addition, the data will be disseminated via academic conference presentations and or journal articles in the future.

10. Individually identifiable information: Will any individually identifiable information, including images of subjects, be published, shared, or otherwise disseminated?
11. Funding Information:

Is your research funded or is there a pending funding decision?

☐ No.
☐ Yes.

If yes, please indicate the funding agency: ____________________________

Please provide a copy of the funding proposal.

12. Expected Completion Date: May 4, 2016

INVESTIGATOR ASSURANCES:

I certify that the project described above, to the best of my knowledge, qualifies as an exempt study. I agree that any changes to the project will be submitted to the Institutional Review Board for review prior to implementation. I realize that some changes may alter the exempt status of this project. The original signature of the PI is required before this application may be processed (scanned or faxed signatures are acceptable).

Responsible Project Investigator ____________________________ Date ____________

UIUC IRB Protocol No. ____________________________ This section is for IRB Office Use Only:

Exempt under 45 CFR 46.101(b) ☐ (1) ☐ (2) ☐ (3) ☐ (4) ☐ (5) ☐ (6)

Reviewed by: ____________________________