

A Capstone Project

entitled

Use of the Leisure Satisfaction Measure with Community-Dwelling Urban Older Adults

By

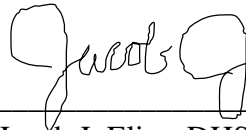
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Abstract

The primary purpose of this research was to determine if community-dwelling older adult residents of two inner-city neighborhoods perceive that their general needs are being met through leisure activities. Additionally, survey subscales of psychological, education, social, relaxation, physiological, and aesthetics were investigated to determine if there were demographical differences.

Method: This study was formatted in a quasi-experimental, cross-sectional design. A survey with 24 positive statements regarding leisure activity perceptions was distributed at two inner-city senior centers. The data was analyzed using descriptive statistics, *t* - tests, and ANOVA, using the IBM SPSS Statistics Version 24.

Results: Older adults rated their perception of leisure activities by reporting that their general needs were met via leisure activities using the Leisure Satisfaction Measure Survey. There was not a significant difference between the demographics of the two inner-city populations ($>.05$). Descriptively, the subscores of psychological, relaxation, and physiological were all rated at least 4.01, often true (1–5 scale with 5 being the high end as “almost always true”), and the social subscore was 3.98 (somewhat true). There was a significant difference found in the psychological subscore between centers ($p = .059$) and mobile/or not ($p = .036$). There was also a significant difference between relaxation subscores. Women rated their perceptions of experiencing relaxation from leisure activities lower than men ($p = .037$).

Conclusion: Older adults reported that their perceptions of their leisure activities largely met their general needs. To continue to improve positive perceptions, service and health care providers may need to customize programs, expand activity selections, and develop public education campaigns that meet the needs of their community. This research indicated that leisure

activity programming should target psychological issues in general as well as psychological issues related to mobility. Women's perceptions, as they scored lower than men, regarding leisure and relaxation should also be addressed.

Keywords: older adults, Leisure Satisfaction Measure survey, perceptions of wellness

Dedication

I dedicate this to my husband Jesse and daughters Elyse and Rachel.

Acknowledgment

I wish to thank Dr. Allison-Jones for her guidance and support throughout each step of my research. She shared her expertise unselfishly and I will always appreciate her generosity. I would also like to thank Dr. Everhart and Dr. Elias for their kind help, insight, and support. I would like to extend a special thank you to Dr. Dane for providing me with the assistance to complete the statistical analyses of my research. The senior center directors, Ms. Susak and Ms. Langford, were always accommodating and did not hesitate to change their schedules for me. Finally, I want to thank Karla Reese, who is my friend and colleague. Her positive attitude, caring personality, and sense of humor are priceless.

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Use of the Leisure Satisfaction Measure with Community-Dwelling Urban Older Adults

Participation in leisure activities is believed to promote physical and mental wellness in older adults, as well as increase socialization, and reduce stress, isolation, and loneliness (Chang, Wray, & Lin, 2015). Leisure activities are interests that individuals pursue in their free time and can include exercising, book clubs, making arts and crafts, and engaging with digital devices like computers and mobile phones (Paggi, Jopp, & Hertzog, 2016). Older adults become increasingly at risk for declining functionality, but these declines may be ameliorated by establishing, developing, or extending leisure participation.

The increase in longevity in the United States (U.S.) has resulted in a greater population proportion of older adults. It is estimated that there are over 50 million individuals in this segment, and it is continuously growing (Ortman, Velkoff, & Hogan, 2014). The health of older adults is of paramount concern for public and private entities because it will have both an economic and social impact on current and future generations. Slaughter et al. (2018) reported that older adults are more likely to experience chronic health conditions that can negatively affect physical, mental, and cognitive functioning. This rise of the older adult population has also contributed to the number of individuals living with disabilities who require a variety of health and social services (Heo, Kim, Kim, & Heo, 2014; Matsunaga et al., 2016).

The U.S. Department of Health and Human Services (2017) reported that only 28-34% of individuals between 65–74 years are physically active, and for those over 75 years, it is somewhat better with 35-44%. In part, decreased activity has contributed to obesity that now includes 41% of older adults (Greaney, Cohen, Christie, Ward-Ritacco, & Riebe, 2019). Older adults living in the community are also more likely to experience social isolation, live alone, have a chronic illness, low income, and loss of function. These factors can increase the risk of

both mental and physical health issues like depression, falls, heavy alcohol consumption, high blood pressure, and mortality (Smallfield & Molitor, 2018).

Two models, successful aging and social support theories, have been selected to guide this research. Successful aging theory was selected because it counters beliefs about aging and that mental and physical decline will eventually lead to frailty and dependence (Calasanti & King, 2017). Complementing successful aging theory is a social support theory, which addresses the social relationships of older adults as an integral component in maintaining and advancing health and well-being (Birditt & Newton, 2016). Both theories will be discussed at length later in this paper.

Statement of the Problem

The National Institute of Health (2016) reported that globally older adults are living longer but not necessarily healthier. Reduced levels of physical activity with insufficient consumption of fruits and vegetables along with smoking and alcohol use has placed a greater risk for reduced functionality and chronic disease. The U.S. is included in this global concern and noncommunicable, lifestyle driven diseases have significantly contributed to a decrease in health and quality of life for older individuals.

The health and well-being of older Americans are of concern since 44.9% of those 65 years and older are not up to date on clinical preventative services that include engagement in leisure activities. The percentage of older adults who engage in any type of leisure activity that involves physical movement was 37.6% (Center for Disease Control and Prevention [CDC], 2017a). In the U.S., 50.8% of adults aged 65–74 met neither aerobic-activity nor muscle-strengthening guidelines. Older adults over 75 did poorer with 65% not meeting either of the guidelines. Although this age group is generally more active than the 65–74-year age group, they

continue to fall short of the U.S. guidelines for aerobic and muscle strength. The Midwest did somewhat better with 42% of older adults meeting these standards (CDC, 2017b).

Mental illnesses also impact wellness and functionality of older adults. The World Health Organization (WHO, 2017) reported that over 20% of persons aged 60 and over have a mental or neurological disorder and are most frequently diagnosed with depression, dementia, and anxiety. In the U.S., one in four older adults experiences a mental illness, and of this population, 66% do not receive any treatment (National Council on Aging, 2018). Nationally, older adults report that they rarely receive the emotional and social support they need (CDC, 2008).

This research investigated older adults living in Cleveland, Ohio. Ohio reflects what is happening nationally, and overall, Ohioans 65 years and older do not meet aerobic or muscle strength guidelines with men at 47.6% and women at 43%. Additionally, as of 2015, older Ohioans reported two or more chronic health conditions and obesity rates over 30% (CDC, 2016a). Regarding mental health, older Ohioans report that between 7.88-9.41% rarely receive needed emotional or social support, and 9.83-14.45% report frequent mental distress (CDC, 2008).

Cleveland is in Cuyahoga County, which is divided into wards and then into neighborhoods. Reports regarding the general physical activity of Clevelanders show that 58.1% of the population is below national recommendations as compared to the national average of 32.6%. Although general physical activity is lacking, Cuyahoga County exceeds national recommendations by providing physical activity opportunities that include a park within a half-mile of all residents and a recreational center within a mile (Cuyahoga County Board of Health, 2018). Although neighborhoods have community centers for exercise, socialization, and cognitive stimulation, a recent survey showed that they are underutilized by neighborhood older

adults. They report that they do not use community recreational centers and parks because they are overrun with children, feel unsafe walking in neighborhoods, and public transportation is either poor or lacking (Cuyahoga County Board of Health, 2018). Regarding mental wellness in Cuyahoga County, a research project funded by federal, state, and county resources found that almost 31,000 residents 65 years and older have a mental illness, but only about 4% were treated from 2007-2010 (Ahern, Lenahan, Garrity, & Williams, 2011).

This research was conducted in two Cleveland neighborhood senior community centers. These centers differ from community recreational centers as they focus on the needs and interests of older residents by offering information and services along with recreational and leisure activities. A self-reported leisure contentment survey was distributed to adults 65 years and older at the centers. The intent of the survey is to measure the degree to which an individual perceives his/her general needs are being met through leisure activities.

The goal of this research was to facilitate an increased understanding of how older community-dwelling residents view how their leisure activity involvement contributes to their health and well-being. Older adults may not realize the positive contributions leisure activities may have on physical and mental health (Lorek et al., 2017). The activities they currently choose may not meet their needs, but with information, they might be able to make better-informed choices regarding how to use their leisure time. At the time of this research, the inner-city senior centers participating in this study have not assessed their users' perceptions regarding health and leisure.

Significance of the Problem

The two Cleveland neighborhoods studied in this research have more than 12,400 residents who are 65 years or older and represent 25.9% of the population (Statistical Atlas,

2018). The evidence demonstrates that the physical and psychosocial needs of some older adults, especially community-dwelling, may not be met (Ahern et al., 2011; CDC, 2008; Cuyahoga County Board of Health, 2018; Lorek et al., 2017). Lorek et al. (2017) reported that older adults acknowledge the need for additional information and education regarding leisure activities and specify topics that include healthy living, social supports and connections, and self-development. Leisure programs that focus on community health problems may have a positive effect on health behaviors and outcomes of older adults. For example, more than 35% of the population in Ohio over the age of 55 smoke, and for those 65 and over, 30.1% have had a fall (Ohio Department of Health, 2019). Leisure programs offered at senior community centers in Cleveland neighborhoods often focus on current community problems, feature speakers who address health and wellness topics, and offer therapeutic activities (Senior Citizen Resource Center, Inc., 2019).

Purpose and Significance of the Research

The primary purpose of this research was to determine if community-dwelling older adult residents of two inner-city neighborhoods perceived that their general needs are being met through leisure activities. Since this population could possibly span 40 years, this research investigated relationships between age and leisure perception. Additionally, survey questions were analyzed to draw inferences about older adults using demographic information and the subscales in the survey that included psychological, education, social, relaxation, physiological, and aesthetics. Leisure Satisfaction Measure authors (Beard & Ragheb, 1980) suggested the survey be analyzed by subscores and that the analysis of single questions contributes little to meaningful understanding. Along with age, mobility, gender, marital status, lives alone or not, and place of residence were also considered.

This research adds to the knowledge base at the neighborhood level in Cleveland. The survey results will be shared with the neighborhood senior community centers that participated in the research. The program directors at the senior centers may want to modify the current leisure programs that are offered so that older adults can make choices that align with their needs.

Research Questions and Hypotheses

The overarching question this research attempted to answer was: Do older adults residing in two urban neighborhoods in Cleveland, Ohio perceive that their general needs are being met through their leisure activities? Demographic questions were added that included center location, age, gender, habitation (lives alone or not), marital status, and mobility status (independent or not). Subjects were asked to respond to all questions on the survey.

The Leisure Satisfaction Measure Survey (Appendix A) contains 24 statements that subjects use to rank how true the statement is and assign a “1,” meaning almost never true, to “5,” meaning the statement is almost always true. The 24 statements are divided into six separate subscores that include psychological, educational, social, relaxation, physiological, and aesthetic. The questions below form the foundation for this research with the focus centered on the subscores of psychological, social, relaxation, and physiological.

RQ1: Do participants perceive that their general needs are being met through leisure activities?

RQ2: My leisure activities meet my psychological needs.

RQ3: My leisure activities meet my social needs.

RQ4: My leisure activities meet my relaxation needs.

RQ5: My leisure activities meet my physiological needs.

The next question and the corresponding hypotheses guided this research:

RQH6: Do demographic factors of location, age, gender, marital status, habitation status, and independent mobility, when comparing means, demonstrate a significant difference or not a significant difference when comparing leisure contentment in subscales of psychological, social, relaxation, and physiological?

H6.1 o: When controlling for demographic variables of location, can inferences be made that the general needs of the older population are being met through leisure activities?

H6.1a: When controlling for demographic variables of location, can inferences be made that the general needs of the older population are not being met through leisure activities?

H6.2 o: When controlling for demographic variables of age, can inferences be made that the general needs of the older population are being met through leisure activities?

H6.2 a: When controlling for demographic variables of age, can inferences be made that the general needs of the older population are not being met through leisure activities?

H6.3 o: When controlling for demographic variables of gender, can inferences be made that the general needs of the older population are being met through leisure activities?

H6.3 a: When controlling for demographic variables of gender, can inferences be made that the general needs of the older population are not being met through leisure activities?

H6.4 o: When controlling for demographic variables of marital status, can inferences be made that the general needs of the older population are being met through leisure activities?

H6.4 a: When controlling for demographic variables of marital status, can inferences be made that the general needs of the older population are not being met through leisure activities?

H6.5 o: When controlling for demographic variables of habitation, can inferences be made that the general needs of the older population are being met through leisure activities?

H6.5 a: When controlling for demographic variables of habitation, can inferences be made that the general needs of the older population are not being met through leisure activities?

H6.6 o: When controlling for demographic variables of mobility, can inferences be made that the general needs of the older population are being met through leisure activities?

H6.6 a: When controlling for demographic variables of mobility, can inferences be made that the general needs of the older population are not being met through leisure activities?

Review of the Literature

Globally, the population is getting older (Reynolds, Pietzak, El-Gabalawy, Mackenzie, & Sareen, 2015). An older population has introduced new challenges for governments, health care providers, community-driven services, families, and older adults. Older adults are living longer, but not necessarily healthier (WHO, 2019). Many of the current noncommunicable diseases and disabilities, like heart disease and diabetes, are in part created by lifestyle.

The research supports that engagement in leisure activities promotes health and well-being and can reduce or postpone the onset of frailty and loss of function (Chang et al., 2015). By controlling the effects or delaying the onset of noncommunicable diseases that include some forms of cancer and pulmonary diseases, older adults can experience better health outcomes and well-being (Stav, Hallenen, Lane, & Arbesman, 2012). Generally, older adults have more free time, and this time can be used by participating in leisure activities that are enjoyable and affordable, as well as healthful (Ku, Fox, & Chen, 2015).

Aging Global Population

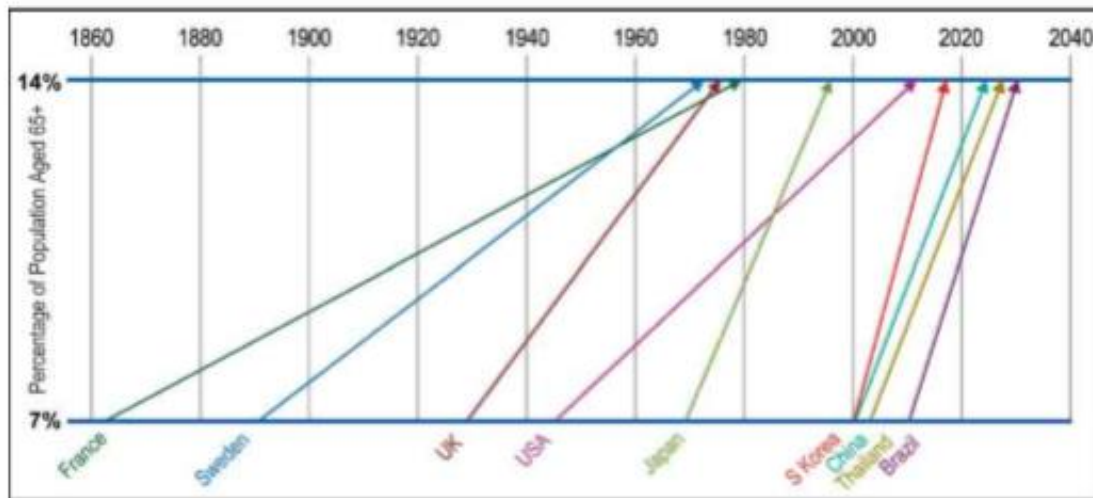
The aging population trend is a global occurrence and the first time the human species has undergone this type of evolution. This trend is fueled by improvements in longevity and declines in fertility (Reynolds et al., 2015). Current projections for life expectancy are that it will rise to 76.2 years in 2050 from the current 68.6 years. Globally, populations of those over 80 years are expected to triple by expanding from 126.5 million to 446.6 million by 2050 (WHO, 2016).

The WHO (2019) reported that as people continue to live longer, especially in high-income countries, there will be a greater proportion of the population with chronic illnesses, disabilities, and diminished well-being. Globally, there are 841 million people age 60 and older, and by 2050, it is estimated that there will be more than two billion with most of the population living in low-income and middle-income countries (WHO, 2019). In 2015, *The Lancet* reported on the aging of global populations and remarked that for the first time in human history, there will be more people over the age of 65 than persons younger than 5 years. Not only is the population aging, but it is aging quickly and is expected to accelerate (see Figure 1.).

One hundred years ago, human longevity was threatened by infections and parasitic diseases. Today, in developed and developing countries, the rise of chronic noncommunicable diseases threatens the health of older populations. Diseases such as heart disease, cancer, and diabetes are now the leading causes of death and loss of functionality. These diseases, in part, are related to lifestyle and diet, as well as aging (WHO, 2011). An older person living with chronic conditions can be an economic as well as a social liability to families, communities, and governments. To decrease this burden, countries may find it beneficial to develop progressive

policies for older adults that promote a healthy lifestyle, mobility, and independence, despite physical limitation or chronic disease.

Time required or expected for percentage of population aged 65 and over to rise from 7 percent to 14 percent



Source: Kinsella K, He W. *An Aging World: 2008*. Washington, DC: National Institute on Aging and U.S. Census Bureau, 2009.

Figure 1. The Speed of Population Aging.

The increase in life expectancy is spreading around the world at different rates. Japan leads the world at 83 years, and in most modern societies, individuals live to middleage or well beyond with little evidence that life expectancy rates will level off (WHO, 2011). Included in this growth at unprecedented rates is the U.S. found in Figure 2.

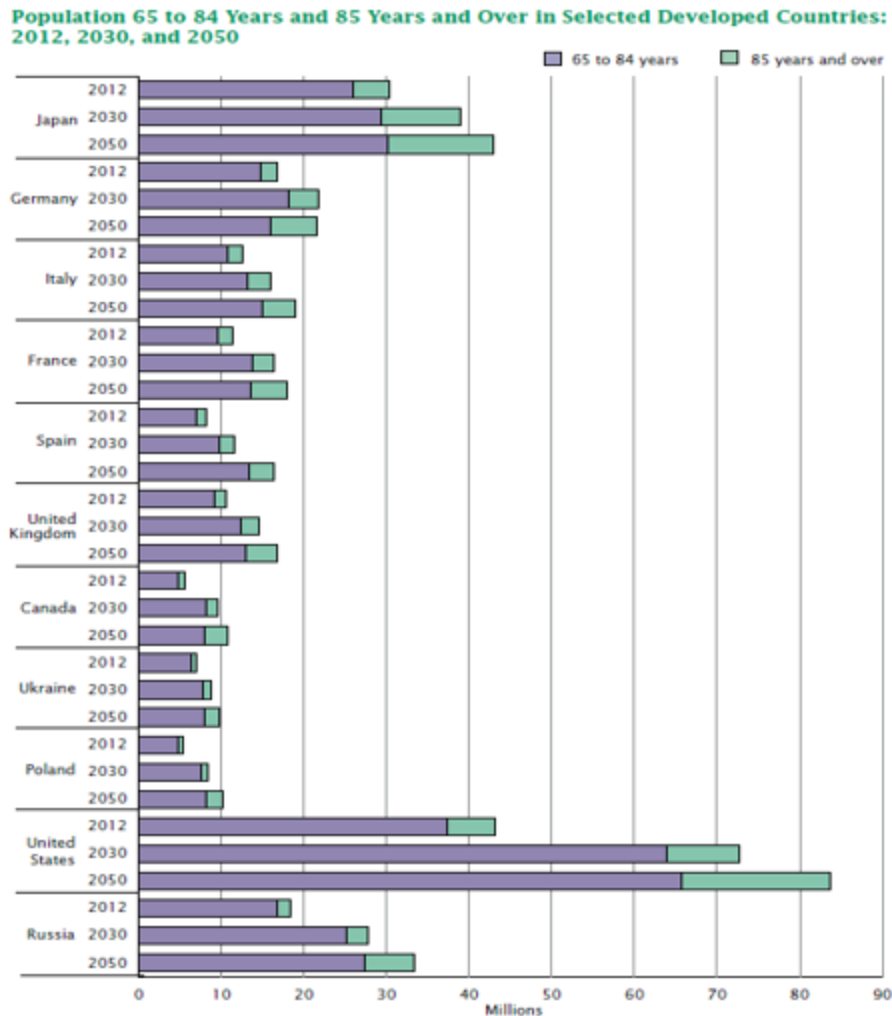


Figure 2. Population of Selected Developed Countries.

Note. Ortman et al., 2014.

Aging Population of the U.S.

As demographics shift worldwide, the U.S. leads the trend to an older population. By 2060, it is estimated that 24% of the U.S. population will be in the 65 year and older group (Mather, 2016). In the U.S., the drivers of increased mortality are medical advancements, public health campaigns, and behavioral changes. As reported by Ortman et al. (2014), a trend related to mortality is the nationwide reduction in smoking. Smoking included 45% of the population aged 25–44 in 1970, as of 2012, this was reduced to 22.1%. These reductions improved old age

survival. Another trend is obesity, which has increased the risk of hypertension, adverse lipid concentration, and type 2 diabetes. Although obesity continues to be a nationwide health concern as of 2008, it looks as though increases are leveling off for older adults (Ortman et al., 2014).

The U.S., as of 2012, had the largest population of adults 85 years and older with 5.9 million in this group. The U.S. will continue to see population surges that are driven by baby boomers who are advancing into old age and older age (Ortman et al., 2014). The first surge of baby boomers turned 65 years in 2011 and will be followed by many more to come (Caplan, 2014).

Aging Population of Ohio and Cuyahoga County

Ohio's population of older adults is growing 20 times faster than the overall population of Ohio and is expected to increase by more than 30% to 3.37 million in 2030 (Table 1). It has the nation's seventh largest older adult population; only California, Florida, Texas, New York, Pennsylvania, and Illinois have more (Statista, 2019). Ohio's older adult population is identified as 13% minority with 23% living in rural areas. As of 2016, nearly 8% of those 65 and older live in poverty (Ohio Department of Aging, 2018).

Cuyahoga County, the selected location of this research, has an estimated population of about 1,243,857 persons (U.S. Census Bureau, 2018a). Approximately 18% are 65 years and older as compared to the U.S. population at 16%. Currently, Cuyahoga County has the fastest growing number of older adults (over 60 years) and has expanded from 273,378 in 2000 to about 308,545 in 2017 (U.S. Census Bureau, 2018b).

Table 1

Ohio's Cuyahoga County Growing Older Adult Population 60 Years and Older

Year	Population Percentage of Older Adults	Population Percentage of Older Adults Estimate
2010	21.3%	
2020		27.1%
2030		31%

Note. Adapted from Ohio Department of Aging, 2018.

Aging Population of Cleveland

Cleveland, Ohio, as of 2016, had more than 69,000 residents aged 60 and over and about 25% of the residents of Cuyahoga County live in Cleveland (Center for Community Solutions, 2015). Clevelanders over the age of 65 are racially diverse with 50.6% Black, 45.8% White, 1.3% Asian, and 4% Hispanic. The highest concentration of Black seniors lives in the eastern wards and White seniors in the western wards. The wards of concern for this research are in the western wards (wards 11, 17). Approximately 40% of older Clevelanders live alone and about 5% live in care facilities like nursing homes or group homes. Cleveland's poverty level for people over 60 years is 21.7% and an additional 17.3% live near poverty thresholds (Center for Community Solutions, 2015).

Aging Population of Cleveland Neighborhoods

This research was completed in two inner-city Cleveland, Ohio neighborhoods in Cuyahoga County: Old Brooklyn and Puritas (Table 2). These neighborhoods have a combined population of over 47,000 with 25.9% of the population 65 years of age or older (Statistical Atlas, 2018). The Statistical Atlas (2018) highlighted demographics showing that Old Brooklyn has more than twice the population of Puritas, but percentages of those 65 years and older are comparable with Puritas at 12.7% (2,014 residents) and Old Brooklyn at 13.2% (4,224 residents).

The greatest difference between the neighborhoods is the racial composition, with Puritas being 29.8% Black and Old Brooklyn 9.6%. Median household incomes also differ, with Puritas at \$31,000 and Old Brooklyn at \$39,500.

Table 2

Neighborhood Comparisons Between Puritas and Old Brooklyn

Locations	Puritas	Old Brooklyn
Population	15.86 k	32 k
Population \geq 65 years	12.7%	13.2%
Black	29.8%	9.6%
White	49.3%	69.4%
Hispanic	14.5%	16.7%
55 years \geq Black	6.1%	1.3%
White	17.3%	23.5%
Hispanic	0.89%	1.12%
Married Females 60-80 years	35.1%	33.8%
Married Males 60-80 years	42.8%	56.7%
Median Household Income	31.0 k	39.5 k
Food Stamps \geq 60 years	25.2%	23%

Note. Census data adapted from Statistical Atlas, 2018.

Health of Aging Populations

Global health trends. Worldwide population aging continues to expand, and most people can expect to live 60 years and beyond (WHO, 2018). The number of older people with severe disabilities has declined in the last 30 years, but there are no indicators that people with mild to moderate disabilities and chronic conditions have decreased. Later in life, older individuals may develop complex health states, collectively known as geriatric syndrome(s), which are not classified into a particular disease. The many factors that accompany geriatric syndrome are frailty, urinary incontinence, pressure ulcers, delirium, and falls. The presentation of geriatric syndrome appears to be a better indicator of death than the presence of one or more diseases (WHO, 2018).

In part, the survival of the oldest age groups is due to public health programs of the 20th century that were successful in controlling deaths from infectious and parasitic diseases, as well as immunizations against some diseases like smallpox and polio (WHO, 2011). The age group 85 years and older is also growing with an 8% increase globally, 12% in more developed countries, and 6% in less developed countries. The odds of surviving to be 100 in countries like Japan and Sweden are 1 in 50 for females (WHO, 2011).

As people live longer, new disease patterns are emerging. Replacing causes of death from infectious and parasitic diseases are noncommunicable diseases such as heart disease, cancer, and diabetes. The WHO (2011) reported that noncommunicable diseases in the 60-year-old and older group account for 87% of disease in low-, middle-, and high-income countries.

In addition to physical diseases, dementia is also a global concern. It is estimated that 47 million people were living with dementia as of 2015, and it is projected that by 2050, the numbers will top 115 million. The global cost of caring for those with dementia has exceeded \$818 billion with most of the funding going to family and social supports (Livingston et al., 2018). The financial challenge of caring for older persons with cognitive, physical, or social needs will test policymakers to develop strategies that can ease the financial burdens on individuals, families, and governments (Hanratty et al., 2012). The reduction and management of noncommunicable disease and disability are the keys to controlling health and social costs. If older people can remain in their homes, be mobile, and attend to their personal care, the financial savings will benefit individuals as well as society (Livingston et al., 2017; WHO, 2011).

U.S. health trends. Older adults are also experiencing noncommunicable and other chronic conditions that are impacting quality of life. According to the National Council on Aging (2016), 80% of those over 65 have one chronic condition and 70% of Medicare beneficiaries

have two or more. The federal Medicare health program covers 56.8 million enrollees at a cost of \$678.7 billion (Nation Center for Health Statistics, 2017). The leading causes of death (Figure 3) are heart disease, cancer, chronic lower respiratory diseases, stroke, Alzheimer's disease, and diabetes.

Chronic conditions may lead to limits in functioning. The functional domains include seeing, hearing, mobility, communication, cognition, and self-care. Physical or mental conditions may lead to deficiencies in any of these areas. In 2016, more than 40% of older adults 65 years and older reported difficulties in functioning. Almost 20% reported a lot of difficulty in these areas or an inability to perform some or all of these tasks (National Center for Health Statistics, 2017).

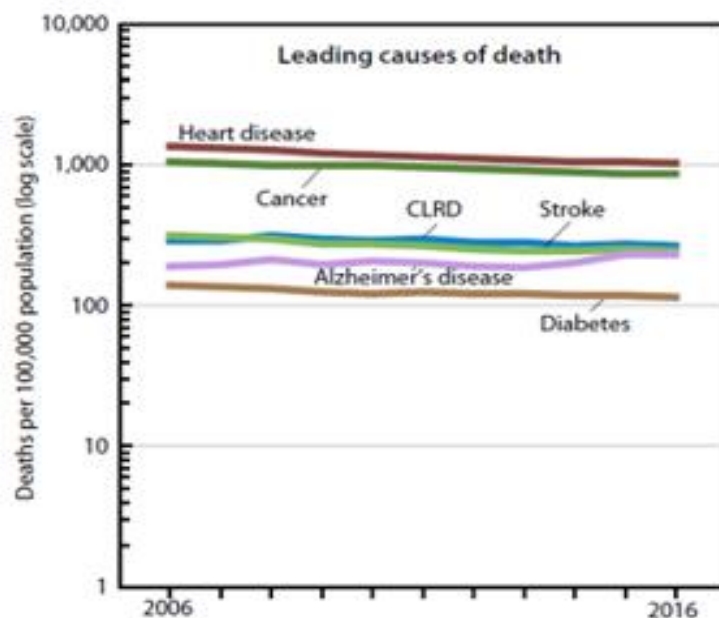


Figure 3. Death rates among persons aged 65 and over, U.S., 2006-2016. *Note.* National Center for Health Statistics. Health, United States, 2016: With chartbook on long-term trends in health.

Individuals aged 75–84 are five times more likely to die from Alzheimer's disease as this condition increases significantly with age. The death rate from Alzheimer's disease continues to be escalating, with an increase of 21% from 2006-2016 that represents 192.8 deaths per 100,000

to 233.3 (National Center for Health Statistics, 2017). In addition to cognitive conditions like Alzheimer's disease, one in four older adults is diagnosed with a behavioral health problem such as depression or anxiety. It is estimated that in the U.S., 66% of older adults do not seek help for emotional or behavioral problems (National Council on Aging, 2018). This is of national concern as 16% of older adults are diagnosed with depression and 7.9% report frequent mental distress (CDC, 2017a). In the U.S., age is often paired with decline, but preventative measures and strategic planning aimed at subverting declines in functionality could have a positive impact on economics and the lives of the older population.

Ohio and Cuyahoga County health trends. Ohio has a rapidly growing older population and experiences many of the same national and global health care challenges. Approximately 35% of the population over 65 years have a disability, 76% have at least one chronic condition, and 43% have more than two (Ohio Department of Aging, 2018). As of 2018, 54.8% of older adults reported that they are managing an arthritic condition. In total, 34.8% reported that they do not engage in physical activity, with women less active than men at 43% (United Health Foundation, 2018). In state rankings, Ohio ranks near the bottom at 40th for early deaths for adults aged 65 –74 at more than two per 100,000. In 2017, Ohioans reported that they experience more than 5 days a year of limited activity due to a health condition and 9.1% reported a fall that had sustained an injury (CDC, 2017a).

Mental health problems, such as mental distress, can lead to poor physical health outcomes as well as loss of functionality. Mental distress is defined as 14 or more days (per year) of self-reported poor mental health, and in Ohio (2018), 6% reported these episodes (United Health Foundation, 2018). Social isolation can lead to mental health problems and 35% of older Ohioans live alone, which may exacerbate mental illnesses (Ohio Department of Aging, 2018).

In Cuyahoga County, 36.1% of residents 65 years and over report their health as fair or poor. Thirty percent are obese, 15% eat less than five fruits and vegetables a day, and 18% smoke. Many older adults (67.8%) live in food deserts, meaning that they are at least one-half mile from a supermarket or grocery store. Cuyahoga County has a higher mortality rate per 100,000 at 199.8 for cardiovascular disease when compared to Ohio (185.1) and the nation (165.5) (Cuyahoga County Board of Health, 2018).

Mental illnesses for those 65 and older in Cuyahoga County are estimated at 30,669 and are classified as moderate or serious. The most commonly diagnosed mental illness is major affective disorder followed by schizophrenia, other psychosis, organic psychosis, non-psychotic, and anxiety disorders (Center for Community Solutions, 2011). Suicide accounts for 16.6% of older adult deaths and is above the national benchmark of 10.2% (Cuyahoga County Board of Health, 2018). Of those with mental illnesses, 10,497 are considered in the low-income range (Center for Community Solutions, 2011).

In Ohio, opioid-related prescription overdose deaths accounted for 523 of Ohio's deaths of 4,854. The average age from overdoses was 28.5 years. Ohio older adults do not experience many deaths from opioid overdoses, and in 2017, there were no deaths in the 85 years and older category and less than 40 deaths in the 65–84 age group (Ohio Department of Health, 2018).

Cleveland and neighborhood health trends. In Cleveland, the older population reports difficulties in functional domains that include seeing, hearing, mobility, communication, cognition, and self-care. In Figure 4, the addition of ambulatory difficulties that include walking or stair climbing was added along with difficulty doing errands alone. By including these domains, the total is 47% of the older population reporting a functional difficulty with ambulation being the most common (Center for Community Solutions, 2016).

The most common modes of death for Clevelanders 60 years and older are ranked as diseases of the circulatory system, such as heart failure and hypertension, followed by falls, cancer, and diseases of the respiratory system (Cuyahoga County Medical Examiner, 2015). Most older adults live in housing they own (63.8%), some pay rent (36.2%), and 2,006 individuals live in nursing facilities. The three most requested services using 2-1-1 help were tax preparation assistance, food pantries, and payment assistance for gas (Center for Community Solutions, 2016).

	65 to 74 years old	75 years and older	Total senior population (65+)
Ambulatory—serious difficulty walking or climbing stairs	28.7%	40.6%	34.4%
Independent living—difficulty doing errands alone	14.7%	31.8%	22.8%
Self-care—difficulty bathing or dressing	8.9%	16.4%	12.5%
Hearing	9%	19.4%	13.9%
Vision	7.5%	13.9%	10.5%
Cognitive	9.1%	17.4%	13.1%
Any disability	37.9%	57.2%	47.1%

Figure 4. Disability Prevalence – City of Cleveland. Note. U.S. Census Bureau: 2009–2013 American Community Survey.

In a survey conducted by the Center for Community Solutions (2016), it was found that most older adults found city sidewalks to be in poor condition, especially during ice and snow months. Also reported was that vacant and abandoned homes, as well as crime in neighborhoods, make walking risky in many communities. Slightly more than 14% use public transportation with most older adults (67.5%) reporting they drive themselves or drive with family or friends (28.1%). When accessing health care, 32% of the respondents reported that they could not get an appointment with a doctor when needed, and 64% said they could get an appointment sometimes. The survey also showed that 80% of the respondents intend to stay in their current community and age in place. Social participation can be a factor in wellness and health and includes cultural, social, and spiritual gatherings as well as leisure activities. As reported in the

survey, more than 40% of older adults rarely or never socially participate in their community, but 49% socialize daily with family and friends, and 40% do so weekly.

The city of Cleveland is divided into wards. The wards, or neighborhoods, that will be used in this survey encompass wards 13 (Old Brooklyn) and 17 (Puritas). Puritas is ranked as the most diverse neighborhood in Cleveland and Old Brooklyn is ranked number 12 of 36 in diversity. Old Brooklyn is ranked fifth as having the lowest cost of living in Cleveland neighborhoods and Puritas is 12th. Thirty percent of Old Brooklyn residents have some college as compared to 25% of Puritas residents (Niche, 2019). In Puritas, 29.5% of income comes from Social Security incomes, and in Old Brooklyn, it is 26.9% (Centers for Community Solutions, 2015). Domain disabilities (Table 3) are found at different levels in the two neighborhoods. Old Brooklyn reported more difficulties in all areas, especially ambulatory difficulties, at more than 5 percentage points. The overall difference in disability by ward is Old Brooklyn rates 1.63% higher than Puritas.

Table 3

Percentage of Older Adults in Cleveland (Ages 65+) with a Disability, by Ward

Ward#	Hearing Difficulty	Vision Difficulty	Cognitive Difficulty	Ambulatory Difficulty	Self-Care Difficulty
Old Brooklyn (13)	17.1	11.0	12.3	30.9	11.8
Puritas (17)	14.2	7.2	11.6	25.8	8.4

Note. Adapted from the U.S. Census Bureau, American Community Survey, 2009-2013 (2013).

Application of Framework Theories to Examine the Problem

Successful aging theory. Some of the health challenges facing older adults are noncommunicable, largely preventable diseases that contribute to disability in the domains of seeing, hearing, mobility, communication, cognition, and self-care (National Center for Health Statistics, 2017). In part, this research will be guided by successful aging theory, which includes

the model of prevention and corrective proactivity (Martin et al., 2015). Successful aging includes more than the absence of disease or disability, but defines states of healthfulness that include physical, mental, and social well-being (Randall, Martin, Johnson, & Poon, 2012). Successful aging theory counters beliefs about aging and that mental and physical decline will eventually lead to frailty and dependence (Calasanti & King, 2017). Older adults' perspectives are moving away from a future of inevitable pathology to a future of well-being. Many seek developing new skills that can make adaptation possible in response to changing physical and psychological abilities (Bowling & Liffé, 2011).

Successful aging theory suggests that individuals have the ability to lower the risk of disease and disease-related disabilities through engagement in certain activities (Zolnikov, 2015). Most older adults will likely encounter multiple stressors like chronic illness and social losses, but through learning new skill sets, the possible negative outcomes of these events may be reduced. Activities that meet biomechanical as well as meaningful psychosocial transactions may result in continued active engagement in life as well as higher levels of independence (Martin et al., 2015).

The established definitions of successful aging have common themes with an emphasis on mental and physical functioning along with social engagement and life satisfaction. Continuous activity engagement with high levels of social participation can assist with the challenges of aging as well as facilitate coping skills (Bowling & Liffé, 2011). Gilmour (2012) reported that a cross sectional Canadian study ($n = 16,369$; aged 65+) found older adults who attend at least one social activity a week (significantly different from reference group [$p < 0.05$]) frequently rate their health and life satisfaction higher than those who do not participate. For the purposes of this research, the engagement in leisure activities fits well with successful aging

theory as it supports opportunities for socialization, learning to help build coping skills and strategies, and the provision of resources for learning and adapting to changing abilities.

Social support theory. The social relationships of older adults can be an integral component in maintaining and advancing health and well-being. This research will also be guided by this theory by considering the effects of social support and participation. The many positive aspects of social support include companionship, affection, sick care, advice, and social control. Older couples have reported that shared leisure time activities have enhanced their personal relationships with each other according to a study by Birditt, Hackey, and Antonucci (2009). The 13-year longitudinal study ($n = 840$) demonstrated the strength of these relationships ($B = 0.30$, $t = 3.86$, $p < .01$) with continued relationship growth. Social protection of health is usually accomplished via marriage and other intimate relationships, but these social networks may decrease in size and effectiveness due to illness, death, and environmental conditions.

One strategy to rebuild social networks is through shared, enjoyable activities with peers. Family and extended family can also be included in social support, but conflicting role obligations may not always make this possible (Quallis, 2014). Social control regarding couples and social networks can influence health behaviors. For example, an individual may exercise or eat healthier with coaxing and support from a family member or close partner, or attend a club or outing with encouragement from an extrinsic peer network.

Lourel, Hartmann, Closon, Mouda, and Petric-Tatu (2013) reported that social support can generate general feelings of well-being that are independent of stress levels. Lourel et al. (2013) agreed that support systems can influence healthy behaviors and increase engagement in self-care routines. Additionally, social support may contribute to a sense of belonging, facilitate meaningful roles, and foster emotional closeness. Many communities offer older adults leisure

activities that promote opportunities for socialization, bonding, and being needed. These feelings, in turn, may increase self-esteem and lessen feelings of emotional loneliness and depression (Lyyra & Heikkinen, 2006).

Authors Smith, Banting, Eime, O’Sullivan, and van Uffelen (2017) reported in a systematic review of 27 different papers that older women who engage in physical activities participate at greater frequencies when they receive social support from both family and friends. Effective social support relationships offer emotional and practical support as well as a distraction from stressors. “Buddy” style systems, where participants have an activity partner or friend, have been found to be more effective than partnering with a family member. Studies suggest that older adults report higher levels of enjoyment and self-esteem when they interact socially with friends and acquaintances rather than family members (Li, Ji, & Chen, 2014).

The principles of social support theory suggest that older adults may engage more in leisure activities when they have a reliable and trusted support system. These systems frequently change due to aging partners, health, and altering family dynamics and environments. Senior community centers can offer opportunities for participants to build and expand social connections, acquaintances, and friendships that go beyond the family (Dattilo et al., 2015).

Leisure and Older Adult Health

The ever-increasing human life span does not necessarily mean that these years will be meaningful, worthwhile, or satisfying. Successful aging theory posits that although older adults may have chronic health conditions, these do not have to limit function or the capacity to adapt. The general well-being and contentment of older people can flourish in different contexts with adequate support. The challenge to service providers like health care and social workers,

recreational therapists, occupational therapy practitioners, and community planners is to offer a variety of services that can meet the needs of older adults.

Generally, older adults have more leisure time than other adults and this time can be used to reduce premature death and promote physical, mental, and social well-being (Ku et al., 2015). Well crafted, goal-directed, and outcome-based leisure activities can help to facilitate prolonged health and wellness. Interestingly, the most common reason adults give for participating in leisure activities is enjoyment and social interaction (Smith et al., 2017). Physical and cognitive health and well-being were not common factors that influenced participation.

Two systematic reviews in the *American Journal of Occupational Therapy* regarding health outcomes for older community-dwelling adults were published in 2012 and 2018. The results of the review conducted by Stav et al. (2012) confirmed that leisure and social activities have a positive impact on health outcomes for community-dwelling older adults. Health benefits were realized when occupation-based interventions met the needs of the individual, community, and population. The systematic review by Smallfield and Molitor (2018) also support the evidence that leisure programming, especially provided for those who are socially isolated, reduced loneliness and promoted well-being.

Life satisfaction. A variety of leisure activities can contribute to life satisfaction in older adults of various abilities and social contexts (Simone & Haas, 2013). Life satisfaction refers to well-being, happiness with life, and that life is generally viewed as rewarding with more positive emotions than negative. For older adults, life satisfaction also includes actions and feelings that adaptation is possible when faced with physical or psychosocial challenges (Lee & Kim, 2019; Paggi et al, 2016).

Ryu, Yong, Kim, Kim, and Heo (2018) reported that engagement in leisure activities can be an effective predictor for life satisfaction in retired men and women. Researchers Cruz-Ferreira, Marmeleira, Formigo, Gomes, and Fernandes (2015) found that women report greater life satisfaction when components of exercise are included in leisure activities, like creative dance. They conducted a randomized study with women > 65 years of age ($n = 57$) with 32 women in the experimental group and 25 in the control group. For all analyses p -values of $< .05$ were considered significant. The scale used was the Satisfaction Life Scale with a Cronbach's α reliability coefficient of .769 and data results of p -value = .002.

Researchers Simone and Haas (2013) discussed that both physical and mental leisure activities produced mood elevation with the distal benefit of increased life satisfaction. In a longitudinal study ($N = 585$), conducted in two waves 3 years apart, Kahana, Bhatta, Lovegreen, Kahana, and Midlarsky (2013) found older adults who participate regularly in generalized socialization that included informal helping and volunteering yielded higher well-being scores. The researchers measured life satisfaction with the Life Scale that yielded a strong factor analysis fit that indicated a single construct at both waves with $\alpha = 0.78$ at first wave and $\alpha = 0.80$ at wave two. The p -value for volunteering and informal helping were respectively .021 and .045.

Those who receive high levels of social support, from a variety of sources, generally met recommended physical activity guidelines. When older adults rate themselves as lonely, their physical activity rates are lower (Smith et al., 2017). In a study ($n = 95$) by Simone and Haas (2013), older adults who participated in any type of leisure engagement either social, solitary, active, or passive reported greater levels of happiness than those who did not. Researchers used the Satisfaction With Life Scale with test-retest reliabilities good for short intervals ($\alpha = .87$) and

internal consistency using the current sample ($\alpha = .86$) with the overall model testing at $p = .00$.

The Bureau of Labor Statistics (Figure 5) shows that most individuals 55 years and older spend most of their leisure time watching television and the least amount participating in sports, exercise, and recreation (Bureau of Labor Statistics, 2014).

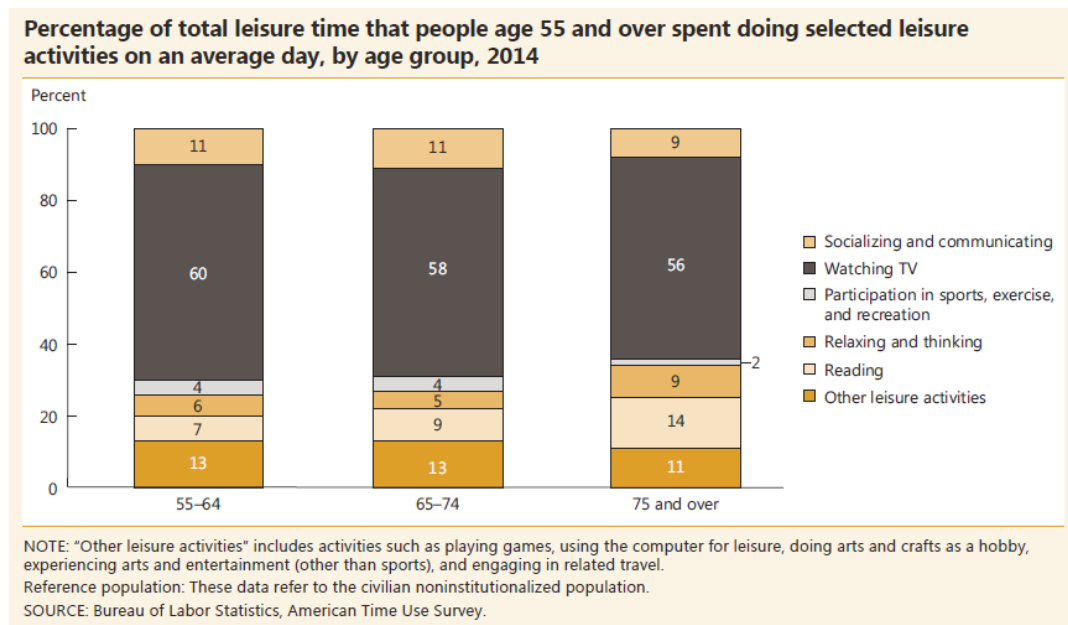


Figure 5. Selected Leisure Activities by Age Group, 2014.
Note. Bureau of Labor Statistics, 2014.

Types of leisure activities.

Physical activities. Leisure activities can be categorized into two basic groups: physical and sedentary activities. Researchers Ku et al. (2015) reported physical leisure pursuits can improve physical and emotional fitness, cognitive function, and facilitate social relationships. In a Taiwanese study conducted by Yen and Lin (2018), it was found that older adults reported higher levels of freedom and autonomy when they engaged more in physical leisure pursuits. They also noted that self-perception of health was greater, social and physical functioning were less limited, and there was an overall decrease in reported body pains. The purposive sample ($N = 163$) was conducted using the Short Form Health Survey (Taiwan version) with item-scale

coefficients between 0.64 and 0.99. The internal consistency of subscales was at an acceptable level of $\alpha > 0.7$, and for test items and comparability among groups with $p = < 0.05$ (Yen & Lin, 2018).

Older adults who participate in physical activities but do them alone rate much lower on well-being self-assessment surveys (Ku et al., 2015). The outcome of this may be explained by using social support theory as individuals find emotional closeness and bonding when participating in groups or have a “buddy” who has the same interest. Additionally, physical activities like household chores or obligatory work do not improve well-being scores as does physical activity created by leisure (Chen, Stevenson, Ku, Chang, & Chu, 2012; Ku et al., 2015).

Sedentary activities. Sedentary activities include passive activities like watching television, movies, and listening to music. Older adults who spend much of their leisure time doing sedentary activities report that they do nothing, sit throughout the day, or lie in bed (Krol-Zielinska, Kusy, Zielinski, & Osinski, 2011; Yen & Lin, 2018). Yen and Lin (2018) reported the leisure activities that older adults selected were more than likely the same activities they engaged in when younger; this suggests that modifying leisure activity choices could be challenging for both participants and activity providers. When older adults participate in sedentary group activities with little social interaction, such as chess, cards, and watching movies, the well-being outcomes are rated by participants as if it was a solitary event. Without interactions like social chatting, sharing new information, or getting to know one another, the leisure activity does not add to perceptions of well-being (Ku et al., 2015).

Functional status and leisure activities. Older adults who are facing declines in health, either in the physical or psychosocial domains, may experience declining abilities managing their personal self-management. The application of successful aging theory argues that functionality

may be altered by diseases, but well-being and life engagement does not always decline if older adults can adapt to changing situations (Lourel et al., 2013). For example, declining vision may limit an individual's driving ability, but adaptation by using public transportation or ridesharing with a friend might be an acceptable alternative.

Altered or declining functionality can be viewed as frailty or the onset of frailty and is often looked at as deficits in personal self-care, walking and mobility, cognition, vision and hearing, and psychosocial issues like feeling abandoned, sad, nervous, or anxious. In a study conducted by Simone and Haas (2013), older adults who were frail or approaching frailty reported much higher levels of well-being if they regularly participated in leisure activities with strong social components. Frequent exposure to social situations is related to positive emotions and mood that in turn can produce a sense of belongingness and personal accomplishment.

Impairments that are most likely to negatively affect leisure engagement are stroke, chronic health problems, and severe mobility issues (Paggi et al., 2016). Among chronic health problems, arthritis is the leading cause of disability and is attributable to activity limitations in 8.3% of the U.S. population, but physical activity has also shown that functional limitations can be prevented or delayed (CDC, 2006). Additionally, older adults are at greater risk for sustaining falls that are often associated with a sedentary lifestyle. Falls are the leading cause of injury for adults over the age of 65 and the leading cause of death from injury. One in four adults will fall each year in the U.S. (Leland, Elliott, O'Malley, & Murphy, 2012). Physical activities of all types reduce falls, and activities that target function, balance, and lower extremity strength greatly minimize the risk. Tai chi exercise programs have also been associated with reductions in falls (Arnold, Sran, & Harrison, 2008; Milanovic, et al., 2013; U.S. Department of Health and Human Services, 2018; Leland et al., 2012).

Functional fitness is the ability to carry out normal daily activities without experiencing overwhelming fatigue. When older adults do not include physical activities in their lifestyle, they can risk the possible loss of muscle mass and joint motion by as much as 40%. Muscle strength decreases at approximately 12-14% per decade after the age of 50, but can be reversed with activities and exercises that offer resistance like water-based games and sports and weightlifting (Milanovic et al., 2013). Milanovic et al. (2013) also noted that the cardiorespiratory system loses capacity starting about age 40 and by age 65 has lost about 30% of capacity, but physical activity can also reverse or decrease these changes.

In a meta-analysis and systematic review of randomized controlled trials, Keysor (2003) found that adults who walk at least a mile a week had slower functional declines over a 6-year period. Older adults who were classified as moderately fit were less likely to report at least one functional limitation after 5.5 years than persons rated as having poor fitness. In a 12-year prospective cohort study ($N = 2,888$), men who participated in leisure time physical activity (18 metabolic equivalent hours a week) had a 52% lower risk of developing dementia or requiring personal care (Matsunaga et al., 2016). In the same study (hazard ratio 0.48; 95% confidence interval, 0.25-0.94; p for trend = .03), there were no significant associations between health and physical leisure activities for women. This may be in part that the women averaged only 4 hours a week of physical leisure activities and the other physical activities were categorized as household chores. As referenced earlier, obligatory activities usually do not produce the same benefits as non-obligatory leisure activities (Chen et al., 2012; Ku et al., 2015).

The U.S. Department of Health and Human Services (2018) has specific time-based recommendations of physical activity participation to reap the health benefits. Older adults, when possible, should engage in 150-300 minutes a week of moderate-intensity activity, like yoga,

water aerobics, or bicycle riding. The recommendation for vigorously intensive activity is 75 minutes a week and may include hand weights or weight machines and some forms of yoga and Tai chi. It is also recommended that 2 days a week include muscle-strengthening exercises that involve all muscle groups. The same activity levels are recommended for older adults with chronic health conditions and disabilities, although alterations may be indicated to match abilities and safety considerations.

Mental health. The rates of psychological symptoms decline with aging, but new stressors arise that can include adapting to chronic physical pain and discomfort and decreased physical and mental abilities (Yang & Conroy, 2019). Stress can contribute to a variety of health problems that include headache, depression, and anxiety (Chang, 2014). In a systematic mental health review for people aged 65 and older (Hitch, Wright, & Pepin, 2015), it was found that many leisure activities provided a protective influence for mental illness. The general categories of leisure that positively affected depression are social engagement and physical activity. Some of the specific activities noted were reading, exercise, handcraft, and computing. Even light-intensity physical activity, like slow leisure walking for 1 hour a week, was beneficial to well-being as compared to peers who did not walk (Yang & Conroy, 2019). In a study by Black et al. (2015), a cohort aged 60–64 years (men, $n = 930$, and women, $n = 1,046$) found, using the Warwick-Edinburgh Mental Well-being Scale, subjects had mean scores higher than those who did not walk once a week (95% CI - = 0.60, 2.34; mean differences in wellness scores with no walking $p = 1.02$ and walking $p = 0.001$).

Authors Lee et al. (2014) reported that the most common stressor was difficulties with interpersonal relationships. In response to this, the authors recommended the promotion of social support that included befriending initiatives in community centers, senior apartment buildings,

and other places where older adults may gather. Chun, Lee, Kim, and Heo (2012) reported that leisure activities can distract participants from immediate stress and produce more optimistic views about life. When regarded as enjoyable with social components and opportunities to develop new friendships, activities may add to coping skills and contribute to growth-oriented adjustment.

Leisure activities can be viewed in various contexts and systems. Mental health support can be found via family and extended family. The inclusion of older adults, like grandparents, in family leisure activities can lead to not only social support, but stronger family cohesiveness (Hebblethwaite, 2017). Changing age demographics make it possible for multiple generations to share and develop leisure skills and activities that go beyond the nuclear family.

Electronic leisure. More older adults are using technology as a means of engaging in leisure. Perrin and Duggan (2015) reported that 58% of older adults use the Internet for leisure activities like games and hobbies, research, and keeping in touch with friends and family. In their 15-year study (2000-2015) that included analysis of 97 surveys and 229,000 interviews, they combined surveys allowing for comparisons of trends and demographics and used appropriate weighting to adjust for disproportional sampling and nonresponses. The margin of error for the 15-year time span ranged from +/-0.5% to +/-2.0%. The analysis showed that technological devices like cell phones, laptops, and desktop computers are the most commonly used by older populations.

The use of technology coupled with leisure can offer many benefits to older adults that include increased social support, reduction of stress, improved mood, and decreased loneliness (Allaire et al., 2013). Genoe et al. (2018) reported that some video games can support physical and cognitive health, as well as increase balance and reduce depression. Research shows that

electronic leisure is the least common type of leisure activity that older adults use, but it offers the greatest influence on psychological well-being (Lifschitz, Nimrod, & Bachner, 2016).

Researchers Lifschitz et al. (2016) collected data from 306 Internet users over the age of 50.

They combined the Subjective Well-being survey (Cronbach's alpha 0.86) and the Satisfaction with Life Scale (Cronbach's alpha 0.91) to determine Internet use and well-being. The

relationship revealed a greater intensity of Internet use yielded lower depression levels (for the entire model $R^2 = .224$, $F(9, 296) = 9.467$, $p < .01$). Some possible reasons that older adults do not engage in technology-based leisure pursuits are lack of Internet access and limited familiarity with electronic devices.

In sum, fewer functional limitations are one of the health outcomes when older adults engage in either physically active or sedentary leisure time activities. Research has shown that any type of physical activity is better than inactivity and that older adults should be encouraged to engage in selected activities that are meaningful and fun (Chen, Chiang, Chen, Tu, & Yu, 2016; Janke, Payne, & Van Puymbroeck, 2008; Milanovic et al., 2013).

Gaps in the Literature

A systematic review conducted by Smith et al. (2017) noted that older adults were frequently placed in very generic research categories. The older adult category can span up to 40 years and include individuals from 60–100 years of age. Also, researchers might identify groups as everyone over 60 or 65 years of age or eliminate those over 85 years from studies. There are critical changes, especially fitness related to mobility and leisure engagement, in the 70–80-year age group (Hitch et al., 2015; Krol-Zielinska, Kusy, Zielinski, & Osinski, 2011; Yen & Lin, 2018). This age group represents a critical period of life and may benefit from stratification when

studied. For purposes of this research, there will be an attempt to stratify by age when analyzing survey results.

This research also attempts to add to the body of knowledge regarding leisure information at the neighborhood level in Cleveland, Ohio. Adam Cisler, the Administrative Manager for the Cleveland Department of Aging, an Aging and Disability Resource Center (personal communication, May 23, 2019), reported that data is not collected regarding the perceived satisfaction levels of leisure activities. Additionally, the Center for Community Solutions, an agency that collects data for the Cleveland Department of Aging, does not keep data regarding the effectiveness of leisure activity programs for older adults in Cuyahoga County (Center for Community Solutions, 2019). Since these centers provide a variety of leisure activities, a survey that measures contentment regarding personal leisure pursuits may be useful information when shared with center directors. This research will address this gap in data and add to the understanding of older adults and their perceptions of how their leisure activities impact them.

Methodology

Study Design

This study used a survey in a quasi-experimental, cross-sectional design format. The survey questionnaire was the Leisure Satisfaction Measure (Appendix A). Additional demographic questions were included to contribute to the testing of selected hypotheses (Appendix B). All aspects of this study were approved by the Radford University Institutional Review Board (Appendix C).

Target Population

The target population for this study was adults 65 years and older who use inner-city senior centers in Cleveland, Ohio.

Sampling Methods

The older adult population (≥ 65 years) living in inner-city neighborhoods in this study were residents of Old Brooklyn with a population of about 32,000 and Puritas with 15,860 (Statistical Atlas, 2018). Senior Citizen Resources, Inc. is in Old Brooklyn and has been serving older adults for more than 50 years. The center offers services to thousands of older adults each year by helping them meet their basic needs with transportation, nutrition, activities, social services, and volunteering. They deliver hot meals to home-bound older adults, provide health and wellness screenings, and host forums for lifelong learning (Senior Citizen Resource Center, 2019).

The second research site, the Rose Center for Aging Well, Gunning Park, is found in the Puritas neighborhood. This center is operated by the Benjamin Rose Institute on Aging, one of seven Rose Centers found throughout Greater Cleveland, and is not a part of the Old Brooklyn center (Benjamin Rose Institute on Aging, 2019). Basically, the Puritas neighborhood center offers the same services as the Old Brooklyn center. They served over 200,000 congregate hot meals at the center in 2018, deliver meals to home-bound older adults, and provide social and educational activities. This center also features volleyball, a variety of exercises classes, tai chi, and crafts (Benjamin Rose Institute on Aging, 2018).

Inclusion. The participants of this survey are residents of Cleveland, Ohio, either the Old Brooklyn or Puritas neighborhoods. Selected participants were at least 65 years of age or older.

Exclusion. Residents who do not live in one of the identified neighborhoods or meet the age of 65 years or older were excluded from this study.

Sample Size. The sampling technique of convenience sampling (older adults who visit the centers) was used to meet the minimum sample size needed for this study. The use of inquiry software, nQuery, Version 8.4 Statistical Solutions, and the estimate of standard deviation from a study by Seaton and Brown (2018), estimated that 20 participants would be required (power of .80) to find .5 difference between men and women when looking at differences in psychological or physiological subscales. Sixty-five subjects participated in the study. Seven were eliminated due to not meeting the age requirement and one subject did not complete the demographic section, resulting in 57 surveys used in this research ($N = 57$), which met the power recommendation.

Instrumentation. The Leisure Satisfaction Measure (Beard & Ragheb, 1991) contains 24 questions that describe perceptions gained from leisure engagement. The survey can be divided into six subscales that include psychological, physiological, educational, social, relaxation, and aesthetic rating measures. The subscales with the higher scores indicate the most satisfying aspects of the respondent's leisure perceptions (Table 4). Demographic data was also requested (Appendix B) and included neighborhood, age, gender, habitats/co-habitats, marital status, and independent or not with mobility (Table 5).

This instrument supports the guiding theories of this research, which are successful aging and social support. The successful aging theory asserts that aging does not eventually lead to frailty and dependence, but can facilitate adaptation through the development of new skills that lead to physical, mental, and social well-being (Randall et al., 2012). For example, the following statements found in the survey are indicators that successful aging theory is applicable: "I use

many different skills and abilities in my leisure activities,” “My leisure activities increase my knowledge about things around me,” and “My leisure activities provide opportunities to try new things” (Beard & Ragheb, 1991). These statements are found in the psychological subscore and can be linked to successful aging theory as they demonstrate adaptation, skill development, cognitive exploration, and growth.

The next theory that guides this research is social support. This theory claims the social relationships of older adults help to maintain health and feelings of well-being (Lourel et al., 2013). The statements that support this theory include “I have social interactions with others around me,” “My leisure activities have helped me to develop close relationships,” and “I associate with people in my free time who enjoy doing leisure activities a great deal” (Beard & Ragheb, 1991). These statements are part of the social subscale and support the components of social support that include social participation, relationship building, shared social experiences, and enjoyment through peer relationships and camaraderie.

Table 4

Subscores Steps for Determining Values

Subscores	Numerical Values	Score Configurations
A. Psychological	Add the numerical value of the answers given to the first four statements to achieve a total and divide by four.	Scores from: $(1+2+3+4) / 4 =$ Satisfaction with the psychological aspect of his/her leisure lifestyle
B. Educational	Add the numerical value of statements 5-8 to achieve a total and divide by four.	Scores from: $(5+6+7+8) / 4 =$ Satisfaction with the educational aspect of his/her leisure lifestyle.
C. Social	Add the numerical value of the answers given to statement 9-12 to achieve a total and divide by 4.	Scores from: $(9+10+11+12) / 4 =$ Satisfaction with the

		social aspect of his/her leisure lifestyle.
D. Relaxation	Add the numerical value of statements 13-16 to achieve a total and divide by 4.	Scores from: $(13+14+15+16) / 4 =$ Satisfaction with the relaxation aspect of his/her leisure lifestyle.
E. Physiological	Add the numerical value of the answers given to statement 17-20 to achieve a total and divide by 4.	Scores from: $(17+18+19+20) / 4 =$ Satisfaction with physiological aspect of his/her lifestyle.
F. Aesthetic	Add the numerical value of the answers given to statements 21-24 to achieve a total and divide by 4.	Scores from: $(21+22+23+24) / 4 =$ Satisfaction with the aesthetic aspect of his/her leisure lifestyle.

Face and Content Validity of the Instrument. The Leisure Satisfaction Measure was developed in 1980 and revised in 1991 by Beard and Ragheb and measures current contentment with leisure activities (Balliett, 2014). The instrument was reviewed favorably by Pearson (1998) and was used to measure leisure satisfaction in men over 38 years of age who were currently employed. Pearson also noted that 160 experts in the field reviewed its content validity favorably. Pearson (2008) again used the survey with an employed female population aged 23-63 years that produced a Cronbach's alpha of 0.97 for the sample. The alpha is a measure of internal consistency of a test or scale with acceptable rates over 0.70 (Tavakol & Dennick, 2011). The survey was also used as an assessment tool in stroke rehabilitation for older adults (Korner-Bitensky, Desrosiers, & Rochette, 2008). Chun et al. (2012) reported using the Leisure Satisfaction Measure with college students in their study and demonstrated high scale reliability. More recently, Seaton and Brown (2018) used this survey to measure leisure satisfaction in community-dwelling older adults, aged 65–92, in Australia. For purposes of this research, the

Leisure Satisfaction Measure was selected for reliability, generalization across populations, and 24 Likert scale items with each item rated on a 5-point scale.

The questionnaire has a reliability coefficient (α) for a total score of 0.96 and ranged from 0.85 to 0.92 for the six components. To determine validity, factor analysis was used in a sample of 950 participants, and conventional item and test analysis techniques fell within the acceptable range. Correlation among subscales in a sample of 347 yielded intercorrelations ranging from 0.38 to 0.66 with a median of 0.52 (Balliett, 2014).

Measures and Variables. The independent and dependent variables for this study have been determined. The independent variables include age, gender, place of residence, habitation or cohabitation, marital status, and independence with mobility or not (Table 5). The dependent variables are the questions found within each subscale and include contentment in the leisure areas of psychological, educational, social, relaxation, physiological, and aesthetic.

Table 5

Instrument Variables and Coding

Variable	Question on Instrument	Item	Variable Type	Data Analysis
Demographic	Q1 (Location)	Pre-selected for subject 1 = Old Brooklyn 2 = Puritas	Independent, Categorical, nominal	Descriptive: Frequency Distributions and Percentile Ranks
	Q2 (Age) 1 item	9999 = not selected 1: 65–69 (all in years) 2: 70–79 3: 80–89 4: 90–100	Independent, Continuous	Measure of Central Tendency and Measures of Dispersion
	Q3 (Gender) 3 items	9999 = not selected 1 = selected; male 2 = selected; female	Independent, Categorical nominal	Descriptive: Frequency Distributions and Percentile Ranks
	Q4 (Married) 2 items	9999 = not selected 1 = yes 2 = No	Independent, Categorical nominal	

	Q5 (Lives alone) 2 items	9999 = not selected 1 = yes 2 = no	Independent, Categorical, nominal	
	Q6 (Independent with mobility) 2 items	9999 = not selected 1 = yes 2 = no	Independent, Categorical, nominal	
Leisure Satisfaction Measure	Q1-24 Likert Scale	9999 = not selected 1 = almost never true 2 = seldom true 3 = somewhat true 4 = often true 5 = almost always true	Dependent, Continuous	Descriptive and Inferential Statistics

Terrell (2016) reported that with more advanced designs in survey research, it may be appropriate for the application of inferential statistics such as *t*-tests, ANOVAs, and regression analysis. For purposes of this study, the *t*-test and ANOVA were used. Statistical calculations and analysis were conducted using IBM SPSS Statistics for Windows Version 24.

Data Collection. The data for this research was collected at the Old Brooklyn and Puritas senior centers. The student investigator received written permission from the center directors (Appendix C) to distribute the surveys prior to a scheduled activity that included about 50 individuals (K. Susak & A. Langford, personal communication, June 17, 2019). The survey is a paper and pencil format so pencils were provided to the subjects. Surveys were purchased from Idyll Arbor, Incorporated, of Enumclaw, Washington (Appendix D). All surveys were printed in a large font. Occupational therapy assisting students were trained by the student investigator to assist in the distribution and collection of surveys. When necessary, the survey was read to subjects or physical assistance was provided when marking the form. The occupational therapy students were directed to have all questions from subjects directed to the student investigator, who was present. The surveys were numbered for identification purposes without requiring the name of the individual or any other identifying information.

Each survey included a cover letter that contained an informed consent (Appendix E) that stated the purpose of the study as well as an assurance of confidentiality of the collected data, and that no other obligations were required of the subjects after the forms were completed. As subjects completed the surveys, they were collected and maintained in a sealed envelope.

Data Analysis. This quantitative study included basic demographic, author-created questions that were gathered as descriptive statistics. This data included age, gender, neighborhood, habitation/cohabitation status, marital status, and independent or not with mobility. The information was used to establish the mean, median, and mode of the age category. Age was a free-response item and categories were created after the data was gathered because of the potential for a sizeable age span. The actual age span was from 65–96 years (age range 31 years). The other demographic questions are yes/no, or no response, and were coded as such. Frequencies were recorded in Excel spreadsheets and then transferred to a table that is represented as a percentage distribution of characteristics.

The Leisure Satisfaction Measure contains 24 multiple-choice, single response items that are measured using a 5-point Likert scale. All responses were categorized and recorded, and then separated into subscale groups (Table 4) to assist with category identification. The six subscales are psychological, educational, social, relaxation, physiological, and aesthetic. The scores for all subscales are added together, which yields a total score for contentment with leisure. As with the demographic frequencies, this data was recorded on Excel spreadsheets and transferred to IBM's Statistical Package for Social Sciences (SPSS, 24) software platform, where calculations were carried out.

The Leisure Satisfaction Measure survey results were documented in part using descriptive and distribution tables. The questions found in Table 6 ask if the six demographic

not a significant difference when comparing leisure contentment in subscales of psychological, social, relaxation, and physiological?						
	Hypotheses	IV(s)	IV (s) Data	DV(s)	DV Data	Statistical Test
H6.1	Location	Neighborhood of Residence: Old Brooklyn, Puritas	Categorical	Level of contentment with leisure	Continuous	<i>t</i> - test
H6.2	Age group	Age group: 65–69, 70–79, 80–89, and 90–100	Continuous	Level of contentment with leisure	Continuous	ANOVA
H6.3	Gender	Gender: Male/Female	Categorical	Level of contentment with leisure	Continuous	<i>t</i> - test
H6.4	Marital	Marital status: Married or not married	Categorical	Level of contentment with leisure	Continuous	<i>t</i> - test
H6.5	Habitation	Lives alone or not	Categorical	Level of contentment with leisure	Continuous	<i>t</i> - test
H6.6	Independent with mobility	Mobility status: Independent or not	Categorical	Level of contentment with leisure	Continuous	<i>t</i> - test

When subjects failed to answer questions or marked more than one response, the student investigator deleted the question, but not the entire survey. Surveys were omitted when the age demographic was omitted or did not meet the guideline of at least 65 years of age.

Institutional Review Board

The Institutional Review Board of Radford University approved the proposal before this study was initiated.

Limitations

The sampling technique used in this study is convenience sampling. The subjects were found at neighborhood community centers, which might indicate certain interests and willingness to engage in some forms of leisure, although subjects might visit the center out of the necessity of receiving a low-cost meal and not leisure pursuits. Results may not generalize to other

neighborhoods in Cleveland or other urban communities because of the small sample size and specific geographic location. The demographics in both neighborhoods were similar (except for total population), therefore a more diverse community sample may generate different results. Additionally, the Leisure Satisfaction Scale is self-reported, not performance-based, so reporting inaccuracies might exist although this survey is widely used in research (Seaton & Brown, 2018).

Delimitations

This study was conducted in specific urban communities in Cleveland, Ohio. The choice of using older adults who are residents of these neighborhoods and of certain ages allows this researcher to focus more specifically on health and well-being issues of the neighborhood population. Additionally, the Puritas neighborhood is the most integrated into Cleveland. The data produced in this research might be able to be generalized and used in other Cleveland neighborhoods. Cleveland is currently home to 19 senior centers located throughout the city (Seniors Citizen's Guide to Cleveland, 2019). It may be indicated that older adults would benefit from different services based on their perceived leisure satisfaction. The results will be shared with center directors and distributed throughout the Cleveland senior center network.

The results of this research may also be useful for future activity planning for the occupational therapy assisting students who use some of these centers as training sites. The data generated by this study may redirect students to provide activities that best meet the interests and the physiological, social, and psychological needs of older community-dwelling adults. By using a consumer-center agenda, students can learn to develop strong programming that could possibly attract more individuals to centers.

Results

The question that guided this research was if demographic factors of location, age, gender, habitation status, marital status, and independent mobility allow, via statistical procedures, the ability to draw inferences about older adults based on samples of these populations. This question was investigated by the analysis of the Leisure Satisfaction Measure survey. The subjects' responses were sorted into the following categories of psychological, social, relaxation, and physiological, and then analyzed using the demographic factors.

Additionally, an overall level of satisfaction with leisure activities (research question RQH.6.1) was considered and reported. This was the overarching research question and was addressed in research question number one. This question was broken down into questions 2 through 5, answered using descriptive statistics, and represented in Table 9. Research question number six is analyzed using inferential statistics and looks at demographics and the influence these have on the survey subscores. This section is labeled H.6.1 through H.6.6.

The use of inquiry software, nQuery, Version 8.4 Statistical Solutions, and the estimate of standard deviation from a study by Seaton and Brown (2018) estimated that 20 participants would be required (power of .80) to find .5 difference between men and women when looking at differences in psychological or physiological subscales. After the data was collected, a power analysis was calculated again using the same significance level (.5) and reference groups (gender, psychological, physiological). It was found that group 1 (psychological) has a 28.8% power and group 2 (physiological) has a 32.7% power to detect the differences in means. Due to the small sample size ($N = 57$), the power goal of .80 was not possible. Although power was lost, the effect size was in the 0.4 range, which represents a medium effect size (McLeod, 2019). For

this research, the effect size demonstrated a relationship between variables by the comparison of means.

General Characteristics of Older Adults at Two Senior Centers

At the senior centers, 65 Leisure Satisfaction Measure surveys were distributed and 57 completed ($N = 57$). Seven of the surveys were discarded because the subjects did not meet the age requirement and one was discarded because the demographic section was incomplete. The aggregated age data for the two senior centers (Table 7) was 65–96 years (age range), the mean age 76.2 ($SD = 7.55$), and median age was 75 years. Aggregated age groups (Table 8) were sorted and placed into the following groups: 65–69: $N = 12$ (21%), 70–79: $N = 31$ (54.3%), 80–89: $N = 10$ (17.5%), and 90–100: $N = 4$ (7%). In Old Brooklyn, the mean age was 77 ($SD = 7.75$), median 76.5, with an age range of 31 years (65–96). In Puritas, the mean age was 74.4 ($SD = 6.9$), median 75, with an age range of 24 years (65–89).

Other aggregated data include the most frequent gender being reported was women at 39 (68.4%). In living arrangement, 33 (57%) reported living alone and 41 (71.9%) reported not being married. Mobility status was reported to be independent by 50 (87.7%) of the subjects.

Table 7

Age Comparisons between Old Brooklyn and Puritas

Centers (N)	Mean (SD)	Median (M)	Range (Years)
Old Brooklyn and Puritas Combined (57)	76.2(7.55)	75.0	31 (65–96)
Old Brooklyn (40)	77.0(7.75)	76.5	31 (65–96)
Puritas (17)	74.4(6.9)	75.0	24 (65–89)

Table 8

Characteristics of Older Adults (N = 57)

Variables	Categories	N (%)
Age	65–69	12(21)
	70–79	31(54.3)
	80–89	10(17.5)
	90–100	4(7)
Gender	Male	18(31.5)
	Female	39(68.4)
Marital Status	Yes	16(28)
	No	41(71.9)
Lives Alone	Yes	33(57)
	No	24(42.1)
Mobility	Independent	50(87.7)
	Not Independent	7(12.2)

When comparing the demographic categories (Table 9), the following was found: The greatest number of subjects placed into the 70–79 age group for both locations (Old Brooklyn 60% and Puritas 41%) and most of the subjects were women (Old Brooklyn 72.5% and Puritas 58.8%). Both sites reported higher percentages of not married with Old Brooklyn at 77.5% and Puritas at 58.8%. At the time of this survey, 60% of the subjects in Old Brooklyn lived alone and 52.9% at the Puritas location. Old Brooklyn subjects reported 34 (85%) independent with mobility and Puritas reported 16 (94.1%). A chi-square test of independence was calculated comparing the results found in Table 9. No significant differences were found between locations as follows: age ($X^2(3) = 5.30, p = .151$), gender ($X^2(1) = 1.03, p = .310$), marital status ($X^2(1) = 2.06, p = .151$), habitation ($X^2(1) = 2.06, p = .151$), or mobility ($X^2(1) = .921, p = .342$).

Table 9

Characteristics of Older Adults: Comparison Old Brooklyn (N = 40) and Puritas (N = 17)

Variables	Categories	Old Brooklyn N(%)	Puritas N(%)	Chi - Square (p)
Total	Participants	N = 40	N = 17	
Age	65–69	6(15)	6(35.2)	5.30(.151)
	70–79	24(60)	7(41.1)	
	80–89	6(15)	4(23.5)	
	90–100	4(10)	0	
Gender	Male	11(27.5)	7(41.1)	1.03(.310)
	Female	29(72.5)	10(58.8)	
Marital Status	Yes	9(22.5)	7(41.1)	2.06(.151)
	No	31(77.5)	10(58.8)	
Lives Alone	Yes	24(60)	9(52.9)	.244(.621)
	No	16(40)	8(47)	
Mobility	Independent	34(85)	16(94.1)	.921(.342)
	Not Independent	6(15)	1(5.8)	

Research questions RQ.1-5**General needs.**

The Leisure Satisfaction Measure survey contains 24 statements that were scored by the subjects using a 1–5 Likert scale: 1 almost never true, 2 seldom true, 3 somewhat true, 4 often true, and 5 almost always true. The statements are scored by separating the items into six separate subscores (Table 10), which fall into the categories of psychological, educational, social, relaxation, physiological, and aesthetic. Old Brooklyn and Puritas scores were all above the 3.80 mark with an aggregated score of 4.14 (often true) for the categories of interest that include psychological, social, relaxation, and physiological. Old Brooklyn scored lowest in the aesthetics (3.89, somewhat true) and highest in physiological (4.72, often true). All the Puritas scores were in the “somewhat true” category and ranged from 3.57 (aesthetic) to 3.96 (relaxation).

Table 10

Mean Scores for Subscores: Psychological, Educational, Social, Relaxation, Physiological, Aesthetic, and Comparison of Subscores between Old Brooklyn and Puritas

Subscores: A - F	Old Brooklyn & Puritas (N)	Old Brooklyn (N)	Puritas (N)	t - test (p)
A: Psychological	4.02(57)	4.16(40)	3.67(17)	1.93(.059)
B. Social	3.98(55)	4.03(39)	3.85(16)	.661(.511)
C. Relaxation	4.18(55)	4.25(39)	3.96(16)	1.99(.236)
D. Physiological	4.40(55)	4.75(39)	3.62(16)	.654(.516)
B: Educational	4.08(57)	4.50(40)	3.75(17)	
F: Aesthetic	3.80(55)	3.89(39)	3.57(16)	

Note. The Leisure Satisfaction Measure survey measures each item on a 1–5 scale: 1 almost never true, 2 seldom true, 3 somewhat true, 4 often true, and 5 almost always true.

This research question asked if participants perceive that their general needs are being met through leisure activities (RQ1). This general needs question was answered by aggregating all the subscores from RQ1 through RQ 5. The hypothesis was the participant's general needs are being met through leisure activities as the means scores reported in Table 10. This aggregation of scores that represents RQ1 general need, RQ2 psychological need, RQ3 social needs, RQ4 relaxation needs, and RQ5 physiological needs is approved by the survey authors when looking for a general degree of satisfaction (Beard & Ragheb, 1991). The null hypothesis was that participants perceive that leisure activities did not meet their general needs (represented in RQ1-5). The results gathered from the survey supported the hypothesis that this studied population of older adults perceives their general needs (represented in RQ1-5) are being met by leisure activities. This conclusion is supported by an aggregated score of 4.14, placing the responses in the "often true" Likert rating. Therefore, the null is rejected, and the hypothesis is accepted.

Location

The Leisure Satisfaction Measure subscores were analyzed by using an independent *t*-test with a significance level of <.05. The psychological subscore regarding locations (Table 10) was

found to have a significant difference between means ($t(55) = 1.93, p = .059$). The mean of the Puritas group was significantly lower ($M = 3.67, SD = 1.17$) than that of Old Brooklyn ($M = 4.16, SD = .72$). The calculated scores for subscores for social, relaxation, and physiological were discovered not to have a significant difference as follows: No significant difference was found in the social subscore ($t(53) = .661, p = .511$) with the following mean scores, Old Brooklyn ($M = 4.03, SD = .821$) and Puritas ($M = 3.85, SD = 1.01$), relaxation subscore ($t(53) = 1.99, p = .236$) with the means of Old Brooklyn ($M = 4.26, SD = .71$) and Puritas ($M = 3.96, SD = 1.11$). The subscore of physiological ($t(53) = .654, p = .516$) with an Old Brooklyn means score ($M = 3.69, SD = .98$) and Puritas ($M = 3.62, SD = 1.13$).

Research question RQH6.1

This research question asked if there is a difference between location and subscores on the Leisure Satisfaction Measure (psychosocial, social, relaxation, physiological). The hypothesis was there would be a difference between locations regarding participant perception about their general needs being met through leisure activities. The null hypothesis was that the location did not influence if general needs were being met through leisure activities. The results gathered from the survey support the hypothesis that older adults' general needs are affected by location in the psychological subscale. This conclusion is supported by a score that shows that the Puritas location was significantly less satisfied with the psychological aspects of their leisure activities than the Old Brooklyn location ($p = .059$). Therefore, the null hypothesis is rejected, and the hypothesis is accepted.

Age Group

The psychological subscore measure from the four age groups (65–69, 70–79, 80–89, 90–100) were compared using a one-way ANOVA (Table 11). No significant difference was found

($F(3,53) = .729, p = .539$). The participants from the four different age groups did not differ significantly. Age groups 65–69 had a mean score of 3.75 ($SD = .85$), 70–79 had a mean score of 4.09 ($SD = .76$), 80–89 had a mean score of 3.95 ($SD = 1.42$), and 90–100 had a mean score of 4.43 ($SD = .901$).

Table 11

ANOVA Compare Means between Age and Psychological Subscore

Age Group	<i>M(N)</i>	<i>SD</i>
65–69	3.74(12)	.85
70–79	4.09(31)	.76
80–89	3.95(10)	1.42
90–100	4.43(4)	.12

The social subscores for the four age groups were compared using a one-way ANOVA (Table 12). No significant difference was found ($F(3,51) = .87, p = .460$). The participants from the four different age groups did not differ significantly. Age group 65–69 had a mean score of 4.08 ($SD = .61$), group 70–79 had a mean score of 3.93 ($SD = .90$), group 80–89 had a mean score of 3.75 ($SD = 1.15$) and group 90–100 had a mean score of 4.56 ($SD = .42$).

Table 12

ANOVA Compare Means between Age and Social Subscore

Age Group	<i>M(N)</i>	<i>SD</i>
65–69	4.08(N = 12)	.61
70–79	3.93(N = 30)	.90
80–89	3.75 (N = 1.15)	1.15
90–100	4.56(N = .42)	.42

The relaxation subscores (Table 13) for the four age groups were compared using a one-way ANOVA. No significant difference was found ($F(3,51) = .40, p = .74$). The participants from the four different age groups did not differ significantly. Age group 65–69 had a mean score of

4.08 ($SD = .63$), group 70–79 had a mean score of 4.25 ($SD = .79$), group 80–89 had a mean score of 3.97 ($SD = 1.35$), and group 90–100 had a mean score of 4.43 ($SD = .84$).

Table 13

ANOVA Compare Means between Age and Relaxation Subscore

Age Group	M(N)	SD
65–69	4.08(N =12)	.63
70–79	4.25(N =30)	.79
80–89	3.97(N = 9)	1.35
90–100	4.43(N = 4)	.84

The physiological subscores (Table 14) for the four age groups were compared using a one-way ANOVA. No significant difference was found ($F(3,51) = .54$, $p = .65$). The participants from the four different age groups did not differ significantly. Age group 65–69 had a mean score of 3.77 ($SD = .71$), group 70–79 had a mean score of 3.75 ($SD = 1.03$), group 80–89 had a mean score of 3.27 ($SD = 3.27$), and group 90–100 had a mean score of 3.68 ($SD = 1.24$).

Table 14

ANOVA Compare Means between Age and Physiological Subscore

Age Group	M(N)	SD
65–69	3.77(N = 12)	.71
70–79	3.75(N = 30)	1.03
80–89	3.27(N = 9)	1.26
90–100	3.68(N = 4)	1.24

Research Question RQH.6.2

This research question asked if there is a relationship between age and the Leisure Satisfaction Measure subscores (psychosocial, social, relaxation, physiological). The hypothesis was that scores would be influenced by age and if the participants' general needs are being met through leisure activities. The null hypothesis was that age did not influence if general needs are being met through leisure activities. The results gathered from the survey did not support the

hypothesis that older adults perceive their general needs are affected by age. This conclusion is supported by an aggregated score that failed to show significance ($p = >.05$). Therefore, the null hypothesis is not rejected.

Gender

The relaxation subscore (Table 15) was found to have a significant difference between means regarding male/female ($t(53) = -2.13, p = .037$). The means of the female group ($M = 3.81, SD = 1.03$) was significantly lower than those of the male ($M = 4.33, SD = .721$). The other subscores, psychological, social, and physiological, were not found to be significant with the following scores: psychological ($t(55) = -1.56, p = .12$) with mean scores of male ($M = 3.75, SD = 1.20$) and female ($M = 4.14, SD = .71$); social ($t(53) = -1.62, p = .11$) with mean scores of male ($M = 3.68, SD = 1.10$) and female ($M = 4.10, SD = .74$); physiological ($t(53) = -.61, p = .54$) with mean scores for male ($M = 3.54, SD = 1.35$) and female ($M = 3.73, SD = .86$).

Research Question RQH6.3

This research question asked if there is a relationship between gender and the Leisure Satisfaction Measure subscores (psychosocial, social, relaxation, physiological). The hypothesis was there would be a difference between male and female participants regarding their perception about their general needs being met through leisure activities. The null hypothesis was that gender did not their influence if general needs were being met through leisure activities. The results gathered from the survey support the hypothesis that older adults' general needs are affected by gender. This conclusion is supported by an aggregated score that shows that women scored significantly lower on the relaxation subscore ($p = .037$). Therefore, the null hypothesis is rejected, and the hypothesis is accepted.

Table 15

Differences in Gender (Male/Female) According to Subscore with Mean (M) Values

Subscores: A - F	Male (M)	Female (M)	t - test	df	p
A: Psychological	3.75(N = 18)	4.14(N = 39)	-1.56	55	.123
C: Social	3.68(N = 16)	4.10(N = 39)	-1.62	53	.111
D: Relaxation	3.81(N = 16)	4.33(N = 39)	-2.13	53	.037
E: Physiological	3.75(N = 16)	4.14(N = 39)	-.61	53	.548

Marital Status

When comparing the means of the marital status (married or not), there was no significant difference found in any of the subscores (Table 16). The subscore results are psychological, married status ($t(55) = .210, p = .838$) with means not significantly different with married ($M = 4.06, SD = .937$) and not married ($M = 4.00, SD = .898$); social ($t(53) = .008, p = .994$), married ($M = 3.98, SD = .64$) and not married ($M = 3.98, SD = .954$); relaxation ($t(53) = -.08, p = .936$) with means not significantly different with married ($M = 4.16, SD = .624$) and not married ($M = 4.18, SD = .924$); physiological ($t(53) = .322, p = .749$) with means not significantly different with married ($M = 3.75, SD = .81$) and not married ($M = 3.65, SD = 1.09$).

Research Question RQH.6.4

This research question asked if there is a relationship between marital status and the Leisure Satisfaction Measure subscores (psychosocial, social, relaxation, physiological). The hypothesis was that there would be an association between marital status and the perception that the participants' general needs are being met through leisure activities. The null hypothesis was that participants perceive that marital status did not influence their general needs being met through leisure activities. The results gathered from the survey did not support the hypothesis that older adults perceive their general needs are affected by marital status. This conclusion is

supported by an aggregated score that failed to show significance ($p = >.05$) on the psychological subscores. Therefore, the null hypothesis is not rejected.

Table 16

Differences in Marital Status (Married/Unmarried) According to Subscore with Mean (M)Values

Subscores: A - F	Married (M)	Unmarried (M)	<i>t</i> - test	df	<i>p</i>
A: Psychological	4.06(N = 16)	4.0(N = 41)	.210	55	.838
C: Social	3.98(N = 15)	3.98(N = 40)	.008	53	.994
D: Relaxation	4.16(N = 15)	4.18(N = 40)	-.08	53	.936
E: Physiological	3.75(N = 15)	3.65(N = 40)	.322	53	.749

Lives Alone

When comparing the means of habitation (lives alone or not), there was no significant difference found in any of the subscores (Table 17). The subscore results for habitation are psychological, lives alone or does not, there is no significant difference between means ($t(55) = 1.05$, $p = .298$) with mean scores for lives alone ($M = 4.12$, $SD = .76$) and not alone ($M = 3.87$, $SD = 1.05$); social ($t(53) = .872$, $p = .387$) with means for lives alone ($M = 4.07$, $SD = .91$) and does not live alone ($M = 3.86$, $SD = .82$); relaxation ($t(53) = 1.58$, $p = .120$) with mean scores for lives alone ($M = 4.33$, $SD = .76$) and does not live alone ($M = 3.97$, $SD = .920$); physiological, habitation status ($t(53) = 1.20$, $p = .232$) with means for lives alone ($M = 3.82$, $SD = 1.01$) and does not live alone ($M = 3.48$, $SD = 1.01$).

Research question RQH.6.5

This research question asked if there is a relationship between living alone or not and the Leisure Satisfaction Measure subscores (psychosocial, social, relaxation, physiological). The hypothesis was that scores would be influenced by living alone or not regarding the perception that the participants' general needs are being met through leisure activities. The null hypothesis was that participants perceive that living alone or not did not influence their general needs

being met through leisure activities. The results gathered from the survey did not support the hypothesis that older adults perceive their general needs are affected by living arrangement. This conclusion is supported by an aggregated score that failed to show significance ($p = >.05$).

Therefore, the null hypothesis is not rejected.

Table 17

Differences in Habitation (Lives Alone or Not) According to Subscore with Mean (M) Values

Subscores: A - F	Lives Alone (M)	Does Not Live Alone (M)	t - test	df	p
A: Psychological	4.12(N = 33)	3.87(N = 24)	1.05	55	.298
C: Social	4.07(N = 31)	3.86(N = 24)	.872	53	.387
D: Relaxation	4.33(N = 31)	3.97(N = 24)	1.58	53	1.20
E: Physiological	3.82(N = 31)	3.48(N = 24)	1.2	49.4	.233

Mobility

An independent-samples t - test was calculated comparing the mean scores of participants who identified themselves as independent or not with mobility with subscores psychological, social, relaxation, and physiological (Table 18). The psychological subscore was found to have a significant difference between means regarding independent or not with mobility ($t(55) = 2.14$, $p = .036$). The mean of the independent groups was significantly higher ($M = 4.11$, $SD = .87$) than that of the group that was not independent ($M = 3.35$, $SD = .89$).

There was not a significant difference found in the subscores of social, relaxation, and physiological with results as follows: social ($t(53) = 1.186$, $p = .241$), the means for independent with mobility group ($M = 4.03$, $SD = .85$) was not significantly different than the independent group ($M = 3.58$, $SD = .98$); relaxation ($t(53) = 1.46$, $p = .149$), the means for the mobility group did not differ significantly with means for independent with mobility ($M = 4.23$, $SD = .852$) and

not independent ($M = 3.7$, $SD = .69$); physiological ($t(53) = 1.64$, $p = 1.06$), the means for the mobility group did not differ significantly with means for independent with mobility ($M = 3.75$, $SD = 1.00$) and not independent ($M = 3.04$, $SD = .927$).

Research Question RQH.6.6

This research question asked if there is a relationship between mobility and the Leisure Satisfaction Measure subscores (psychosocial, social, relaxation, physiological). The hypothesis was that there would be an association between mobility status and the perception that the participants' general needs are being met through leisure activities. The null hypothesis was that participants perceive that mobility status did not influence their general needs being met through leisure activities. The results gathered from the survey support the hypothesis that older adults do perceive their general needs are affected by mobility. This conclusion is supported by an aggregated score that shows that participants scored significantly lower ($p = .036$) on the psychological subscore when they identified as not being independent with mobility on the Leisure Satisfaction Measure. Therefore, the null hypothesis is rejected, and the hypothesis is accepted.

Table 18

Differences in Mobility (Independent/not Independent) According to Subscores with Mean

(M) Values

Subscores: A - F	Independent with Mobility (M)	Not Independent with Mobility (M)	t - test	df	p
A: Psychological	4.11(N = 50)	3.35(N = 7)	2.14	55	.036
C: Social	4.03(N = 49)	3.58(N = 8)	1.18	53	.241
D: Relaxation	4.23(N = 49)	3.70(N = 8)	1.46	53	.149
E: Physiological	3.75(N = 49)	3.04(N = 8)	1.64	53	.106

Summary

This research surveyed two different populations of older adults. There was not a significant difference between the groups (age, gender, marital status, living arrangement, mobility). Most of the data was aggregated, unless noted otherwise, then statically analyzed. The Leisure Satisfaction survey results showed that overall participants perceived that their general needs were being met through leisure activities (4.14/5), which placed positive perceptions in the “often true” category. When looking at individual subscores, Puritas scored lower (3.67) than Old Brooklyn (4.16) in the psychological category, which was considered significant ($p = .059$).

This research did not find a relationship between age and the subscores of psychological, social, relaxation, and physiological. There was a significant difference between gender and the relaxation subscore with females scoring lower than males in this category ($p = .037$). Marital status and living arrangement (lives alone or not) did not demonstrate significant relationships between subscores with all values $>.05$.

There was a significant relationship between mobility and the psychological subscore ($p = .036$). Subjects that identified as not being independent with mobility scored lower in the psychological subscore when compared with those who rated themselves independent with mobility.

Discussion

The focus of this research was to better understand the perception of older adults regarding how they perceive their general needs are being met through leisure activities. Demographic data (location, age, gender, marital status, lives alone or not, mobility independent or not) was described and summarized using descriptive statistics. The use of the t - test and

ANOVA was used to draw inferences based on the demographic survey as well as the data collected from subjects who completed the Leisure Satisfaction Measure survey.

This study focuses on four subscales (psychological, social, relaxation, physiological) of the Leisure Satisfaction Measure. The subscales were selected because they emphasize physical and mental health, which is the core of this research. Authors of the Leisure Satisfaction Measure (Beard & Ragheb, 1980) recommended that instead of looking at individual statement scores on the survey, satisfaction of one's leisure should be assessed using the subscore categories.

Demographic Characteristics

The respondents live in one of two Cleveland, Ohio inner-city neighborhoods and use the neighborhood senior center where the surveys were conducted. The surveys were distributed prior to a congregate meal on one designed day. The aggregated data for both centers showed the age range was between 65–96 years with a mean age of 76.2. The most frequently reported gender was female, most subjects were not married, lived alone, and did not have difficulties with mobility. When comparing the demographics between the subjects from both senior centers, it was found via a chi-square test of independence that there was not a significant difference between the groups.

Analysis of Leisure Satisfaction Subscores

The Leisure Satisfaction Measure survey is made up of a series of positive statements about leisure time activities. The subject rates these statements from 1–5 (1: almost never true, 2: seldom true, 3: sometimes true, 4: often true, 5: almost always true). The subscores categories (psychological, social, relaxation, physiological) were aggregated and the score range was between 3.98–4.40, showing the groups rated the positive leisure statements mostly in the “often true” category. The subscores between groups were analyzed using an independent t - test that

showed there was not a significant difference between groups for the physiological, social, and relaxation subscores. There was a significant difference between groups in the psychological category with Puritas scoring lower in the psychological satisfaction subscore than Old Brooklyn. The Puritas location's psychological subscore did not indicate that a certain demographic was responsible for lowering the subscore; it was lower overall. This may indicate that this population has fewer satisfying leisure activities that lead to psychological well-being. It has been reported that psychological satisfaction is rated lower when passive activities like watching television, movies, and listening to music or a lecture dominate activity engagement. Active engagement that includes activities like bowling, cooking groups, or being a part of a choir results in better psychological well-being scores (Brown, Ford, Burton, Marshall, & Dobson, 2005; Gagliardi, Spazzafumo, Papa, & Marcellini, 2012). The program director at the Puritas center may want to include more active pursuits for their population, which may improve psychological well-being.

The psychological subscore was significantly lower for persons who identified themselves as not being independent with mobility ($p = .036$). The lower scores might be related to lower levels of active participation and higher levels of passive participation. As indicated in research by Brown et al. (2005), active participation might be the key to greater leisure activity satisfaction. Active participation and the person's perceived competence to successfully engage in an active leisure activity may influence psychological satisfaction. Leisure activities that have components of past work experiences may yield better rates of engagement and psychological satisfaction (Schweitzer, Mann, Nochajski, & Tomita, 1999). The just-right challenge considers the skills of the person and can bring a balance between ability and the desire to participate

(Wagenfeld, 2016). Providers of leisure activities may need to assess the person's level of physical and mental competence before directing him/her to a leisure activity.

There was no significant difference between the mean subscores when comparing the married or not group. When reviewing the mean scores for relaxation, it was found that there is a significant difference between men and women with mean scores considerably lower for women ($p = .037$), indicating that women may find their leisure choices less relaxing than men. Author Miriam E. Nelson (2006) suggested that emotional tension and stress may limit the body's ability to relax. Suggested leisure activities that might facilitate relaxation are meditation, yoga, community involvement, massage, and tai chi. In a study conducted by Astuti, Rekawati, and Wati (2019), it was found, by blood pressure analysis, that both older men and women ($N = 100$, decreased systolic blood pressure, $p = <0.001$) experienced greater levels of relaxation when music therapy was added to progressive muscle relaxation. It may be indicated that these types of activities may be added or increased at the senior centers and be featured as specialized groups for women. Centers may also want to consider education programs that focus on relaxation and the benefits of certain leisure activities.

When analyzing the mean score of habitation (lives alone or not) with the subscores, a significant difference was not found in any of the subscores. The age groups were compared using a one-way ANOVA, and the mean scores did not find any significant differences when compared to subscores. In this study, it appears that age did not influence responses to the subgroups of psychological, social, relaxation, or physiological.

A Netherlands study ($N = 5,910$) found as adults aged, they socially disengaged at more than 12% per age group (55–64, 65–74, and 75+ years). This was noted by a decrease in participation in holiday and cultural activities, watching sports, voluntary work, and shopping

(Toepoel, 2013). Although this study indicated less socialization and more loneliness, the subjects rated greater satisfaction with the leisure activities they selected. Other studies support the association between levels of activity and advanced age. A Canadian study found a significant decrease in leisure and physical activity in men as they aged ($n = 3,276$) with the 80–89 age group ($n = 198$) being the most significant (Seaton & Brown, 2018). Decreased participation was attributed to reports of decreased body function (chronic health problems) and bodily structures.

The quality, not the number, of leisure activities seems to be more important to older adults as they age, even if reduced involvement resulted in less social contact and connectedness. This may be why age was not a factor in the Puritas/Old Brooklyn study because subjects were asked about the quality of their leisure activities, not quantity. It would be reasonable to conclude that as populations age, leisure activities might be limited by health and mobility; therefore, older adults may become more selective in their choices due to these functional restrictions.

These findings are in keeping with the successful aging and social support theories. Subjects rated the survey's positive statements regarding topics related to successful aging (found in the psychological subscore) as often true (4.02/5) to indicate that perspectives are moving away from a future of sickness and loss to one of well-being and engagement. The social support theory posits that social relationships are an integral part of maintaining older adult wellness. The survey indicated, by using the subscore of social contentment (3.98/5.00, somewhat true), that adults are looking for and appreciating social ties and networking as a contributor to the engagement and enjoyment of their leisure activities.

Limitations of the Study

A limitation of this study is that the analysis only covered two neighborhoods in the same inner city. Selecting two unlike communities might have contributed to additional insights, for example, using sites with a significant difference in racial or socioeconomic makeup. The inclusion of suburbs or other urban settings might have added more depth and understanding regarding perceptions about leisure activities.

Another limitation was the small sample size, which resulted in the loss of statistical power. A factor analysis, the manipulation of data into smaller data sets, was not possible due to the small sample size (less than 20 in variable groups). In addition, subjects per variable (as low as <5) did not allow for statistical regression (prediction) analysis (Austin & Steyerberg, 2015). The application of *t* - tests and ANOVAs used in this research are considered robust and adaptable (Cronk, 2014). A larger sample may also have added a stronger representation for each age group, especially those over 85 years.

The subjects who participated in this research may have a greater level of leisure activity engagement and/or interest because they attend activities at a local senior center as this survey was only conducted at senior centers. Additionally, subjects with limited mobility may be underrepresented as some individuals may not be able to access the centers. Although participants were asked to rate their perceptions regarding if their general needs are being met through their leisure activities, there may have been a tendency to rate the leisure activities offered at the senior center. Perhaps recruiting subjects who live in senior living complexes or receive health care from geriatric health care centers would have eliminated the possibility of rating specific community centers. Additionally, including an additional survey(s) like the

Modified Interest Checklist (University of Illinois at Chicago, 2020) may have contributed to a deeper understanding of the subject's leisure activity perceptions and preferences.

Conclusions

As the population of older people continues to grow locally, nationally, and internationally, many new challenges arise as to how to keep this population healthy. National health care costs continue to rise, and Medicare is approaching a fiscal crisis with the Hospital Insurance trust fund becoming insolvent by 2029 (Castro, 2019). Health care providers are challenged to lower costs by implementing evidence-based, cost-effective services to keep older adults healthier longer.

One strategy to meet the challenge of health care for older adults is to sustain good health and functionality so they will not need more costly services. In part, some preventable health problems can be addressed using leisure activities. It has been demonstrated that leisure activities, both active and passive, can promote physical and mental health as well as delay the onset of functional decline. Generally, older adults have more leisure time, so this time can be used by engaging in activities that are not only enjoyable and affordable but contribute to well-being.

This study was conducted to determine the degree to which older adults are content with their leisure activities and if they feel that their general needs are being met through these pursuits. The authors of the Leisure Satisfaction Measure survey divide satisfaction of one's leisure into specific categories. The following were used as they related closely to the focus of this study: psychological, social, relaxation, and physiological. The research was conducted at two inner-city senior centers. The subjects were found to be statistically similar, so the data retrieved at the two centers were aggregated. The aggregated data showed that the subjects'

perceptions regarding their leisure activities were meeting their general needs, and all scores were within the “often true” (> 4.0) Likert scale (1–5 with 5 being the high end), except for the social category that was rated “somewhat true” (>3.0).

Although there was not a statistical difference between the subscores used in this research between Puritas and Old Brooklyn (except for psychological), it was noted that Puritas scored all the subscores on the “somewhat true” Likert scale and Old Brooklyn scored “often true” in all studied subscores. This may indicate that the Puritas center could benefit from conducting a survey that examines its users’ interests. No subscores were at the 5 level (“almost always true”) for either location.

This research showed the need for the distribution of leisure activity information and access to a variety of leisure activities, especially active pursuits. The two senior community centers are open about 40 hours a week with about 10-15 hours devoted to serving and consuming a mid-day meal. A typical month includes two holiday parties, 3-day trips, two health screening days, and four passive listening activities. Research has demonstrated that passive leisure activities and activities that do not promote interactions between people were demonstrated to yield fewer positive perceptions. Perhaps programs to increase engagement among participants can improve leisure participation, like book clubs, foster grandparenting, and various discussion groups that include support groups for illness and loss. The results of this study will be shared with the senior centers as well as the Cleveland Department of Aging.

Recommendations

This study could have benefitted from a larger subject pool to increase the strength of the statistical analysis. Also, an additional survey that included specific leisure interests may potentially assist in the development of future programming and reveal a deeper understanding

of specific leisure activity choices. A demographic question on the survey asked if subjects were independent with mobility or not. It might have been more advantageous to use the same language as the U.S. Census (2013), as it asks about mobility as, “Ambulating, serious difficulty walking or climbing stairs.” The Cleveland area U.S. Census showed that 34.4% reported mobility difficulties as compared to this study in which 12% of the subjects reported they were not independent with mobility. Subjects may have difficulties with mobility, but do not consider themselves to be dependent. Mobility issues may have had a greater impact on perceptions of leisure satisfaction than demonstrated in this study. Additionally, further investigation is recommended regarding the discrepancies between psychological perceptions of the two facilities and the lower rating of psychological satisfaction from leisure activities for those who are not independent with mobility. Also, further investigation is recommended as to why women derive fewer feelings of relaxation from leisure activities.

The community centers in this research serve as information hubs for older adults. The addition of printed materials regarding the benefits of leisure activities could be made available in the form of an infographic flyer or possibly added to the monthly newsletter and center’s webpage. A project for the occupational therapy assisting class could include the introduction of new leisure activities that are not offered at the center. In the future, it may be beneficial to study community profiles and select populations with contrasting localities, socioeconomic status, and racial and cultural constructs.

The guiding theories used in this research, successful aging and social support, are appropriate for directing further investigations. For example, successful aging depends on adaptation to accommodate the loss of physical and/or mental abilities and delay the onset of functional decline. Future studies may prompt researchers to ask which adaptations are most

useful to older adult populations and how these adaptations can be facilitated by caregivers, health care providers, and community-based centers.

Social support theory claims the social relationships of older adults help them to maintain health and feelings of well-being (Lourel et al., 2013). Support systems can facilitate leisure engagement that contributes to functionality by delaying or even removing physical and mental decline. Additional research may be directed at exploring various forms of social support and leisure activities and the effect it has on wellness, participation, and choice of leisure activity. Research questions may include the roles of family, partners, and friends, and how these roles influence leisure selection, participation, and health outcomes.

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live/n/puritas

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Appendix A

Leisure Satisfaction Measure

LEISURE SATISFACTION MEASURE (LSM)

Purpose: The purpose of the Leisure Satisfaction Measure is to determine the degree to which you are currently content with your leisure.

Directions: Listed below are 24 statements. To the left of each statement is a line to indicate how true that statement is. A "1" means that the statement is almost never true, "2" means that it is seldom true, "3" means that it is sometimes true, "4" means that it is often true, and "5" means that it is almost always true. Write down the number that best fits your situation.

Definition: "Leisure Activities" are those things that you do that are not part of your work and are not part of your basic grooming needs.

1	2	3	4	5
ALMOST NEVER TRUE	SELDOM TRUE	SOMEWHAT TRUE	OFTEN TRUE	ALMOST ALWAYS TRUE

- ___ 1. My leisure activities are very interesting to me.
- ___ 2. My leisure activities give me self-confidence.
- ___ 3. My leisure activities give me a sense of accomplishment.
- ___ 4. I use many different skills and abilities in my leisure activities.
- ___ 5. My leisure activities increase my knowledge about things around me.
- ___ 6. My leisure activities provide opportunities to try new things.
- ___ 7. My leisure activities help me to learn about myself.
- ___ 8. My leisure activities help me to learn about other people.
- ___ 9. I have social interaction with others through leisure activities.
- ___ 10. My leisure activities have helped me to develop close relationships with others.
- ___ 11. The people I meet in my leisure activities are friendly.
- ___ 12. I associate with people in my free time who enjoy doing leisure activities a great deal.
- ___ 13. My leisure activities help me to relax.
- ___ 14. My leisure activities help relieve stress.
- ___ 15. My leisure activities contribute to my emotional well being.
- ___ 16. I engage in leisure activities simply because I like doing them.
- ___ 17. My leisure activities are physically challenging.
- ___ 18. I do leisure activities which develop my physical fitness.
- ___ 19. I do leisure activities which restore me physically.
- ___ 20. My leisure activities help me to stay healthy.
- ___ 21. The areas or places where I engage in my leisure activities are fresh and clean.
- ___ 22. The areas or places where I engage in my leisure activities are interesting.
- ___ 23. The areas or places where I engage in my leisure activities are beautiful.
- ___ 24. The areas or places where I engage in my leisure activities are well designed.

Patient's Name	Physician	Admit #	Room/Bed
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Appendix B**Demographic Survey**

Use of the Leisure Satisfaction Measure with Community-Dwelling Urban Older Adults

Please complete the following prior to beginning the Leisure Satisfaction Measure.

Age	
------------	--

Please circle the response that best describes you today.

Gender:	Male	Female	Non-Specific
----------------	------	--------	--------------

Location:	Old Brooklyn	Puritas
------------------	--------------	---------

Live alone:	Yes	No
--------------------	-----	----

Married:	Yes	No
-----------------	-----	----

Independent with Mobility:	Yes	No
-----------------------------------	-----	----

Appendix C

IRB Approval Radford University

Academics - radford.edu | Protocol 2019-284-OCS (IRB)

Home | Find Protocol (Ctrl+Q) | Help | Kathleen's Settings | Sign off

Protocol 2019-284-OCS (IRB)

Actions
 Send EMail
 Start xForm
 xForms (0)

Recent Items
 2019-284-OCS

My Docs & xForms
 14 Attachments
 1 xForms

Protocol

Protocol:	2019-284	Sponsor(s):	
Committee:	IRB	Sponsor Id:	
Category:		Grants:	
Department:	Graduate Studies	CRO:	
Agent Types:	Survey	Year:	2019
Title:	"Use of the Leisure Satisfaction Measure with Community-Dwelling Urban Older Adults"		
Exempt Categories:	Exempt Category 2: Educational tests, surveys, interviews, or observation of public behavior.		
Comments:	The purpose of this study is to determine if community-dwelling older adult residents of two inner-city neighborhoods perceive that their general needs are being met through leisure activities.		

Protocol-Site

Site(s):	OCS - Off-Campus Sites	PI:	Lisa Allison-Jones
Status:	New From PI	Additional:	N
Approval:	December 12, 2019	Expiration:	Exempt until November 21, 2020
Initial Approval:	December 12, 2019	Other Expirations:	
Comments:			

Protocol-Site Contacts (2)

Events (1)

Event	Att	FE	Instance/UDF	Start	Complete	Last Mtg
Initial Submission	14			11/19/2019		01/27/2020

Copyright ©2000-2020 Tech Software. All Rights Reserved.
 Billy Goat (2020.2.4141.0/Release/3e09e2e) | TP-WEB01 | 2020-02-26 15:59:51Z | 3.247s
 Powered By IRBManager

11:00 AM 2/26/2020

Appendix D**Permission Letters from Senior Citizen Resources (Old Brooklyn) and
Rose Centers (Puritas)**

Senior Citizen Resources, Inc. (Old Brooklyn)
3100 Devonshire Road
Cleveland, Ohio 44109

To whom it may concern,

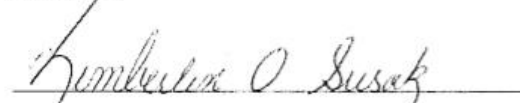
I, Kim Susak, Activities/Volunteer Coordinator, acknowledge that Kathleen Bearfield, student researcher from Radford University, will be distributing and collecting surveys at our center. These will be used in the study entitled the Use of Leisure Satisfaction Measure with Community – Dwelling Urban Older Adults.

The purpose of this study is to determine if community-dwelling older adult residents of two inner-city neighborhoods perceive that their general needs are being met through leisure activities.

I understand the study is voluntary, no subject names are associated with any of the collected data, and subjects are not compensated.

Thank you,

Kim Susak


Coordinator, Senior Citizen Resources, Inc.

12-2-2019
Date



Gunning Park Rose Center for Aging Well (Puritas)
16700 Puritas Ave.
Cleveland, Ohio 44135

To whom it may concern,

I, Ashley Langford, Center Director, acknowledge that Kathleen Bearfield, student researcher from Radford University, will be distributing and collecting surveys at our center. These will be used in the study entitled the Use of Leisure Satisfaction Measure with Community – Dwelling Urban Older Adults.

The purpose of this study is to determine if community-dwelling older adult residents of two inner-city neighborhoods perceive that their general needs are being met through leisure activities.

I understand this study is voluntary, no subject names are associated with any of the collected data, and subjects are not compensated.

Thank you,

Ashely Langford

A handwritten signature in black ink, appearing to read "Ashley Langford", is written over a horizontal line.

Center Director, Gunning Park Rose Center for Aging Well

12/2/19

Date

Appendix E

Permission from Publisher of the Leisure Satisfaction Measure



RightsLink®

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**Title:** Measuring Leisure Satisfaction**Author:** Jacob G. Beard, , Mounir G. Ragheb**Publication:** Journal of Leisure Research**Publisher:** Taylor & Francis**Date:** Jan 1, 1980

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Appendix F

Informed Consent Letter



Informed Consent

Title of Research: Use of the Leisure Satisfaction Measure with Community-Dwelling Urban Older Adults

Researcher(s): Dr. Lisa Allison-Jones (Faculty) and Kathleen Bearfield (Student)

We ask you to be in a research study designed to: determine the degree to which you are currently content with your leisure activities. Prior to starting the survey, I (student researcher) will read aloud and provide the written Informed Consent form to you as a group. You will be able to read along and all questions will be answered. All written materials are in English and available in large print. Your participation is your Informed Consent. It takes about 10 – 30 minutes to complete the survey. I (or student assistants) will bring you the Informed Consent form, survey, and a pencil. If you decide not to participate you may return the pack or stop anytime during the survey. I will be available to answer questions as you complete the survey. The student assistants will direct all questions to me.

The survey has 24 statements. The survey directions and each question will be read aloud to the group. If you wish, you may move ahead prior to the reading of the next question. Next to each statement, you will rate how you feel about it. The rating scale for the statements are located and explained at the top of the survey. After you have completed the survey, a student assistant or I will pick up the forms at your table. You do not put your name on any of the materials given to you.

I will combine the survey answers and by using a password-protected computer, store them digitally. The paper copies will be stored in a locked office that only I have access. I will analyze your responses to see if there are any common trends or responses. Data, either digital or paper, will be stored no longer than three years.

The results from this study may influence leisure activities that are offered in your community or leisure activities you select to do.

Anyone coming into the day area is welcome to do the survey. I expect that between 40-100 individuals will participate.

This study has no more risk than you may find in daily life but some of the questions we will ask you as part of this study may make you feel uncomfortable. You may refuse to answer any of the questions, take a break or stop your participation in this study at any time.

If you experience mental distress by some of the questions please call First Call For Help at 211. First Call For Help is a United Way funded, toll-free hotline that confidentially connects you with a community resources specialist.

You can choose not to be in this study. If you decide to be in this study, you may choose not to answer certain questions.

There are no costs for being in this study There is no compensation for you to be in this research.

The data collected in this study are anonymous and cannot be connected to you. This means that not even the research team can match you to your data.

If you have any questions later, you may talk with: Dr. Lisa Allison-Jones, Professor, Public Health, Radford University, lallisonjones@radford.edu, 1-540-355-2477.

If this study raised some issues that you would like to discuss with a professional, you may contact: Dr. F. Jeannine Everhart, Ph. D. CHES, Program Director, Assistant Professor, Public Health, Radford University, jeverhart1radford.edu, 1-540-985-4046

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Orion Rogers, Interim Dean, College of Graduate Studies and Research, Radford University, jorogers@radford.edu, 1-540-831-5958.

It is your choice whether or not to be in this study. What you choose will not affect any current or future relationship with Radford University

You will be given a copy of this information to keep for your records.

Thank you