

RESIDENTIAL SATISFACTION OF THE ELDERLY: DOES PERCEIVED
NEIGHBORHOOD SAFETY MATTER?

By

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(Under the Direction of Swarn Chatterjee)

ABSTRACT

This study sought to determine the association between perceived neighborhood safety and residential satisfaction in the elderly, and was conducted using data collected in the 2009 American Housing Survey (AHS). While residential satisfaction had been directly linked to neighborhood satisfaction and quality of life in previous studies, this study extended the literature by providing insight for housing professionals, policy makers, and consumers by empirically examining the linkage between perceived neighborhood safety and residential satisfaction in elderly individuals. The model used for the empirical analysis of this study controlled for a number of demographic and socioeconomic control variables and examined the relationship between residential satisfaction of the elderly and perceived neighborhood safety. Ordered Logit Models were run to analyze questions posed. Results and conclusions showed that perceived neighborhood safety variables and other demographic and socioeconomic variables were significant predictors of residential satisfaction for elderly United States respondents.

INDEX WORDS: Residential Satisfaction, Perceived Neighborhood Safety, Elderly
Population of United States, American Housing Survey

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CHAPTER 1

INTRODUCTION

America's population is aging. The 2000 United States Census stated the U.S. population over 65 years of age was approximately 12.4% compared to the 13% in the 2010 Census. This number will continue to rise at an increasingly fast pace as the baby boom generation ages. The U.S. Census projected that by the year 2030 the population over 65 will be approaching 20 percent and will surpass 20 percent by the year 2050; everything this large cohort does is of huge significance. Housing is considered a necessity and finding out how individuals feel, especially individuals who make up such a large part of our population, is needed. The problems or preferences of this large group, if any are found, should be recognized from a policy standpoint so that these individuals may be marketed to correctly. Previous studies mentioned in the review of literature that follows have looked at the linkage between safety and neighborhood satisfaction but have not directed their studies directly at the elderly population nor have they examined the linkage between perceived neighborhood safety and residential satisfaction. Policy makers faced political pressure in earlier decades to increase neighborhood satisfaction by making neighborhoods "more livable" (Lee & Guest, 1983; p. 287) in part by reducing crime. Since this study found that perceived neighborhood safety and residential satisfaction are linked, political pressure in this direction could resurface. The current study focused specifically on the elderly, looking at perceived rather than actual statistical safety, and residential satisfaction as opposed to neighborhood satisfaction.

Many studies found that safety and neighborhood satisfaction were related (Galster, 1987; Hunt, Merrill, & Gilker, 1995; Jirovec, Jirovec, & Bosse, 1985; Parks, Kearns, & Atkinson, 2002; Bjorklund & Klingborg, 2005; McCrea, Stimson, & Western, 2005; Basolo & Strong, 2002). Very few studies considered the direct relationship between perceived safety and residential satisfaction (Fransson, Rosenqvist, & Turner, 2001). Residential satisfaction is the residents' feeling of contentment with their physical living arrangement (American Housing Survey, 2009). Neighborhood satisfaction is the residents' perceived evaluation of their neighborhood environment (Hur, Nassar, & Chun, 2010). This research studied the direct relationship between residential satisfaction and perceived neighborhood safety among elderly respondents after controlling for a number of socioeconomic and demographic factors.

Overview

According to Basolo and Strong (2002), "safety may be measured as perceived safety, fear or perception of crime, or level of reported crime" (p.88-89). A definition of safety from an online dictionary states that safety is "freedom from danger or risk of injury" (William Collins Sons & Co, 2003). For the purposes of this study, the two were combined and perceived neighborhood safety was defined as an individual's perceived freedom from crime, danger, or risk of injury within his or her neighborhood. Residential satisfaction was defined as a resident's feeling of contentment with his or her physical living arrangement.

Previous research has shown that residential satisfaction and quality of life were related to one another. Quality of life has also been shown to be an indicator of an individual's longevity. For a further look into quality of life issues refer to McCrea,

Stimson and Western (2005). If perceived neighborhood safety is adversely affecting residential satisfaction in the elderly population, their quality of life will be diminished. Knowing that residential satisfaction and quality of life are related made it all the more important to test the linkage between residential satisfaction and perceived neighborhood safety because perceived neighborhood safety could also be linked to quality of life and longevity.

Prior to this research, there were no known studies that examined the direct relationship between residential satisfaction and perceived neighborhood safety in the elderly population of the United States. If residential satisfaction is affected by the perception of neighborhood safety in the elderly, individuals in the housing industry, local policy makers, and consumers should all care about the affect the perception of safety is having on individuals 65 and older because, as this cohort grows, they will demand action. Since perceived safety and residential satisfaction were found to be linked: 1) professionals in the housing market could start to incorporate safety into their advertising and marketing campaigns, 2) local policy makers could be forced to utilize scarce resources to address the problem of perceived neighborhood safety, 3) consumers under the age of 65 could start to base housing location choices on the population of elderly residents living in an area. Consumers under the age of 65 might see more street lights, courtesy officers, gates, and security systems as opposed to gyms, business centers, pools, and tennis courts. If younger consumers wanted to live in a residence/neighborhood that did not cater to the need for perceived neighborhood safety in the form of noise ordinances, police protection, gates, etc... they would need to move to an area with a low percentage of elderly residents. Lovejoy et al. (2010) made a

compelling argument when they said, “ understanding preferences for neighborhood characteristics is important because these preferences influence residential location choice, and residential location choice may have significant environmental, economic, and social implications” (p. 44).

Purpose

According to the 2010 Census, approximately 13 percent of the U.S. population are over the age of 65 and their satisfaction should be of concern to policymakers, people in the housing industry, and citizens who are concerned about the social welfare of the elderly population. This issue needs to be addressed on the political level because of the linkage between residential satisfaction, quality of life, and longevity. A linkage was found between residential satisfaction and perceived neighborhood safety. Previous studies on quality of life showed a relationship between residential satisfaction and longevity. After analyzing the results of this research and combining the findings with previous research, it is reasonable to expect that the duration of an individual’s life could depend on his or her perceived neighborhood safety. In their research, Dassopoulos et al. (2012) stated the following: “faced with scarce resources, policy makers struggle with how to best maintain residents’ quality of life, often weighing whether to focus on the physical aspects of neighborhoods over the social ones” (p. 25). Given the growing elderly population, there was an increased need to examine the current relationship between residential satisfaction and perceived neighborhood safety for individuals 65 and older. Policy makers are inevitably forced to make decisions about how to spend scarce resources; this study determined that perceived neighborhood safety was a significant factor in determining the residential satisfaction of elderly United States respondents. The

findings of this study could give policy makers an idea about how to spend some of their resources to help provide “safe” neighborhood environments for the ever-growing elderly population. With the baby boom generation aging, there will be more demand for housing in the elderly population than the United States has seen in the past. Much of the previous literature in this subject area did not include a theoretical framework. Major housing theories such as the housing adjustment theory and the theories of new urbanism and smart growth were not applicable to this research. The most appropriate theory for this research was the Person-Environment Fit theory which was first applied to the area of housing by Kahana, Lovegreen, Kahana, and Kahana (2003). In order to create the best theoretical framework to answer the research questions posited, this research also included the ecological model of aging.

With the aging of America, local governments have to consider the needs and concerns of the aging population in planning and implementing new policies for cities and communities. Housing developers also have to give attention to the special needs of the elderly in order to implement appropriate designs that will increase their residential satisfaction. The private sector could address the marketing issues associated with a possible linkage between perceived neighborhood safety and residential satisfaction. Since a linkage was found between residential satisfaction and perceived neighborhood safety, developers should “heed the special housing needs of older people with appropriate designs to increase their satisfaction level” (Li & Chen, 2011). If this study had yielded results showing no linkage between residential satisfaction and perceived neighborhood safety, the housing industry would have had the information necessary to make informed decisions on better areas to spend money.

This study determined that a relationship existed between residential satisfaction and perceived neighborhood safety in the elderly population of the United States. The United States population is rapidly aging, and the elderly population is growing quickly. For the purposes of this study, analysis was done on individuals aged 65 and older and later broken down into categories specifically looking at individuals in certain age groups among the 65 and older population of the United States.

CHAPTER 2

REVIEW OF LITERATURE

Previous studies have found residential satisfaction to be linked with a number of demographic and socioeconomic factors including: age, neighborhood satisfaction, gender, marital status, race, income, and tenure to name a few. However, very little body of knowledge exists on the relationship between neighborhood safety and residential satisfaction of respondents. This research studied the effects of perceived neighborhood safety on residential satisfaction of the elderly. A detailed review of the existing literature in this area have been presented in the paragraphs that follow.

Residential Satisfaction

Residential satisfaction was defined in this study as a resident's feeling of contentment with his or her physical living arrangement or how a resident rated his or her unit as a place to live (American Housing Survey, 2009). According to a study performed in the Detroit Metropolitan area, the neighborhood one lives in could make one dissatisfied with his or her home regardless of the quality of the actual living quarters (Adams, 1992). Using United States Annual Housing Surveys, Lee and Guest (1983) tested levels of satisfaction across multiple metropolitan areas, and their findings indicated that there was a link between residential satisfaction and neighborhood satisfaction. Using a sample of over 950 households in Wooster, Ohio, Galster (1987) posited that dissatisfaction with an individual's neighborhood was also associated with dissatisfaction with his or her dwelling. He found that individuals who reported high

levels of dwelling satisfaction were not inclined to seek neighborhood improvement, and, that regardless of their dwelling satisfaction, their lowest priority was improving public services. Additionally, in another Wooster, Ohio sample of over 750 households, Galster and Hesser (1981) found that the neighborhood in which one resides was a predictor of the individual's residential satisfaction. Findings from other studies looking at both naturally occurring retirement communities and environmental conditions among urban elderly men, indicated that neighborhood environmental factors were a stronger predictor of an individual's residential satisfaction than the actual housing features of their residence (Hunt, Merrill, & Gilker, 1994; Jirovec, Jirovec, & Bosse, 1985). In a study with a sample of nearly 700 households conducted in China, Li and Chen (2011) found that community facilities were of greater significance in predicting residential satisfaction than were facilities inside the home. James (2008) found that the residential satisfaction of the elderly was highly correlated with the perception of their neighborhood characteristics. Kaplan (1985) examined the relationship between residential satisfaction and neighborhood characteristics. In her study of 268 residents living in multi-family housing units, the researcher found that environmental factors played a greater role in the residential satisfaction of individuals than the availability of various residential amenities. Pastalan (1990) found that the most important predictor in residential satisfaction was the attachment an individual has formed to a particular home. The aforementioned study did not find neighborhood factors to be important predictors of residential satisfaction. In another related study, Schwirian and Schwirian (1993) found that in the presence of personal resources, such as health and money, external factors such as neighborhood or environment did not have a significant association with residential satisfaction. The

authors used a primary dataset of 254 elderly urban respondents to show that environmental factors such as neighborhood related characteristics had weak association with residential satisfaction, but this association became insignificant once the personal financial and human capital related resources were introduced in the model.

Fried (1982), in a study considering residential attachment and including over 2600 respondents, found that housing tenure of the residents was positively associated with their residential satisfaction across time. In the same study, Fried (1982) also found that social class and race were not significant in predicting residential satisfaction. Baldassare (1982) found tenure and homeownership to be important predictors of residential satisfaction. He also suggested that tenured respondents as well as homeowners were more satisfied with their homes because they had more control over their environment than do recent movers and renters. Baldassare also found that lower income individuals and renters were likely to have a lower residential satisfaction than others. Adriaanse (2007) found that marital status, gender, perceptions of crime, and similarity of neighbors were significant in predicting residential satisfaction. Bonaiuto et al. (1999) found tenure and income level to be the most significant predictors of residential satisfaction. Temelova and Dvorakova (2011) found that elderly individuals were more rooted to their neighborhoods because of their tenure and, therefore, did not wish to relocate. Findings from other studies looking at residential mobility and community attachment in large societies also suggested that housing tenure was associated with residential satisfaction of individuals (Kasarda & Janowitz, 1974; Speare 1974). Interestingly, Lu (1999) found that housing tenure and educational attainment of respondents were not significant indicators of residential satisfaction.

It is important to look at residential satisfaction in the elderly because the presence or lack of satisfaction can lead to other life-changing effects such as overall life satisfaction issues and psychological well-being. Residential satisfaction among the elderly has been shown to be positively associated with their perceived quality of life (Campbell, Converse, & Rodgers, 1976; Amerigo & Arogones, 1997). In a Midwestern study using a random sample of 400 individuals aged 60 and older, Golant (1982) also found that residential satisfaction among the elderly was positively associated with their life satisfaction and happiness. In the same study Golant found a positive relationship between residential satisfaction and homeownership, residential satisfaction and length of time in residence, and residential satisfaction and financial security. In their California study, using a sample of 88 females, Christensen and Carp (1987) found that satisfaction with one's environment was linked with psychological well-being among elderly women. In their study, Li and Chen (2011) show that health and residential satisfaction were positively correlated among elderly individuals. The aforementioned authors also found affordability, homeownership, public services, income, and gender to be significant predictors of residential satisfaction in their elderly respondents. Rojo-Perez et al. (2001) found residential satisfaction to increase with income and found residential satisfaction to be higher among women than men. In an Australian study, McCrea et al. (2004) found housing satisfaction and region to be important in predicting overall life satisfaction. Using Chicago survey data of over 1100 urban residents aged 65 and older, Oh (2003) found some residents had to move from their homes when they needed services related to their health and that "residential satisfaction appears to play a critical role in reducing their mobility intentions out of their current places of residence" (P.143). Using the

American Housing Survey and Ordered Logit Models, Lu (1999) reported that residential satisfaction was a major issue because it was an important predictor of the quality of life for an individual. Lu also found the following variables to be significant in predicting residential satisfaction: homeownership status, gender, income and race. In the same study, Lu found that respondents residing in the West were less likely to be satisfied with their homes than those in the Northeast, Midwest, and South. Using a random sample of over 1,300, McCrea et al. (2005) found housing satisfaction and regional satisfaction to be important predictors of overall life satisfaction. In their study researching individuals between the ages of 65 and 84, Rojo-Perez et al. (2001) found that a residential environment that was not well suited for the elderly individuals could lead them to seek institutional care sooner than the elderly individuals who were satisfied with their environment. Christensen et al. (1992) found that the quality of perceived neighborhood environment of elderly individuals was positively associated with their ability to be independent and self-reliant at an old age. McCrea et al. (2005) found that residential satisfaction and region were better predictors of overall life satisfaction than was neighborhood satisfaction.

Residential Satisfaction and Age

Since this study focused on residential satisfaction of the elderly population of the United States it was important to study previous research that included age as a variable when studying residential satisfaction. In this study we focused on individuals aged 65 and older and, further into the research, broke responses from those aged 65 and older into age categories in an attempt to determine if perceived neighborhood safety variables would affect residential satisfaction differently within the progressively aging categories.

The following paragraphs in this section discuss how age and residential satisfaction were linked in previous research.

A number of previous studies have found residential satisfaction to increase with age (Oh, 2003; Rojo-Perez et al., 2001; Speare, 1974). Researchers Li & Chen (2011), who conducted a study in China, found that age was not an important predictor in residential satisfaction. Lawton and Yaffe (1980) and Normoyle (1987) found that older tenants felt safer and were more satisfied when they lived in close proximity to other elderly individuals and when a large proportion of the other residents were elderly. In their study, Potter et al. (2001) found a significant relationship between residential satisfaction and age. In a study conducted in the Netherlands, using a sample of over 75,000 respondents, Adriaanse (2007) found that young residents consistently reported lower levels of satisfaction with any housing environment than their older counterparts. In his study using the American Housing Survey, Lu (1999) found that, after controlling for other factors, residential satisfaction was higher among the older residents than it was among the younger residents. Golant (1982) found that the level of an individual's residential satisfaction increased with age and found that individuals over the age of 75 reported higher levels of residential satisfaction than their younger elderly counterparts.

In their study conducted in Madrid, Spain, Rojo-Perez et al. (2001) found residential satisfaction to increase with age. Bonaiuto et al. (1999) found a positive association between age and perceived urban quality. Fine-Davis and Davis (1982) found in their European study that older individuals reported greater perceived residential satisfaction than younger individuals. James (2008) found that residential satisfaction was greater among older tenants than it was among the younger tenants. The association

between residential satisfaction and neighborhood characteristics was stronger for elderly individuals than it was for younger individuals because the mobility of many elderly individuals was restricted to areas surrounding and nearer to their residences (Temelova & Dvorakova, 2011; Fobker & Grotz, 2006).

Kahana et al. (2003), in their study considering person-environment fit as it influences the residential satisfaction of elders, found that age and neighborhood safety factors are associated with residential satisfaction of an elderly individual. James (2008) found that tenants, overall, reported lower levels of satisfaction than homeowners but that the gap in these levels of satisfaction was largely dependent upon the age of the respondent. After analyzing data from over 41,000 households in the United States, James (2008) found that “after middle age, the residential satisfaction of apartment housing tenants increased dramatically – eventually exceeding that of both single-family housing tenants and homeowners” (p. 421). James (2008) speculated that the decrease in homeowner residential satisfaction and the increase in renter residential satisfaction that accompany age may be related to an increased difficulty in maintaining a home and the ever-increasing importance of nearby services often accessible to renters. In his Rhode Island study, Speare (1974) found positive relationships between age and residential satisfaction and homeownership and residential satisfaction.

Age Categories

Since previous researchers found age to be an important predictor of residential satisfaction, it was important to discuss how age has been broken down and categorized in the past. It was also important to discuss how those breakdowns would affect the research done here. The following paragraph in the section shows the various ways age

was broken down in previous research, which gives reason as to why age was broken down as it was in this study.

Many researchers who have studied age in the past have broken the elderly population down into age categories without any one breakdown being more prevalent than another. In their study, focusing on housing for older adults, Folts and Muir (2010) broke elderly individuals down into the following age categories: 65 – 74, 75 – 84, and 85+. Another study, researching what determines the life satisfaction of the elderly, broke down elderly individuals into the following age categories: 65+ and 75+ (Ho et al. 2003). In their study, Li and Chen (2011), who researched residential condition and satisfaction, broke down elderly individuals into the following age categories: 60 – 69, 70 – 79, 80+. Oswald and Wahl (2004), who looked at housing and health in later life, broke down elderly individuals into the following age categories: 60 – 79 and 80+. In their study, Phillips et al. (2004), who studied factors influencing older persons' residential satisfaction, broke down elderly individuals into the following age categories: 60 -64, 65 – 69, 70 -74, 75 -79, and 80+. In their study, looking at residential satisfaction of older adults in age-segregated facilities, Reynolds and Beamish (2003) broke down elderly individuals into the following age categories: 55 – 74 and 75 – 80. In their study, researching aging in place, Rojo-Perez et al. (2001) broke down elderly individuals into the following age categories: 65 – 74 and 75 – 84.

Neighborhood Satisfaction

The current research studied the relationship between residential satisfaction and perceived neighborhood safety to the exclusion of neighborhood satisfaction. Prior research suggested a relationship between neighborhood safety and neighborhood

satisfaction and also a relationship between neighborhood satisfaction and residential satisfaction. It was important to study previous research on neighborhood satisfaction because it provided the linkage between neighborhood safety and residential satisfaction in the past.

Many studies suggested that safety was an issue when determining satisfaction with one's neighborhood or residence. Goodman and Hankin (1984) found that perceived neighborhood safety of the residents was positively correlated with their perceived neighborhood satisfaction. In a California study, Lovejoy et al. (2010) found perceived safety to be among the most important features for neighborhood satisfaction, second only to attractiveness of the neighborhood. Parkes et al. (2002) found that perception of safety was the most important factor in determining satisfaction with one's neighborhood. They also found that housing satisfaction, perceptions of crime, and age were important predictors of neighborhood dissatisfaction. Lee and Guest (1983) found that negative perceptions of environmental issues and safety lead to lower levels of neighborhood satisfaction. In a Swedish study with over 6000 respondents, Bjorklund and Klingborg (2005) found that the most important quality in a neighborhood was safety and security; pretty buildings with pleasant outdoor activities, lack of noise and traffic, good reputation, and high building standards were also among the top 10 most important qualities in a neighborhood. In their study, McCrea et al. (2005) examined satisfaction with urban living and found neighborhood crime to be second only to neighborhood interaction when predicting neighborhood satisfaction of older individuals. Dassopoulos, et al. (2012) found that individuals had lower levels of neighborhood satisfaction when they perceived the neighborhood to be physically displeasing, high in crime, and

disorderly. The authors speculated that these perceptions decrease neighborhood satisfaction because they “amplify worries about safety” (p. 5). In a study of inner-city housing in New Orleans, La., the researchers found that neighborhood safety was the strongest predictor of neighborhood satisfaction among the respondents (Basolo & Strong, 2002). Basolo and Strong (2002) also found that “housing conditions and safety are important explanations of neighborhood satisfaction and that neighborhood satisfaction is a key predictor of housing satisfaction” (p. 83). Chapman and Lombard (2006) used data from the American Housing Survey that showed that knowledge of crime in the neighborhood was negatively associated with neighborhood satisfaction of the respondents living in fee-based gated as well as non-gated neighborhoods.

Using a case study performed in Hong Kong, Phillips, Sui, Yeh, and Cheng (2004) found that the housing tenure of elderly residents was positively associated with their perceived neighborhood safety. These authors also found that lower income individuals and individuals who rent reported lower levels of satisfaction with their neighborhoods than higher income individuals and homeowners respectively. Lovejoy et al. (2010) found that income and age were significant predictors of neighborhood satisfaction. Lee and Guest (1983) found that individuals, who perceive problems with local conditions, had lower levels of satisfaction with their neighborhoods than individuals who did not perceive problems with local conditions. Lee and Guest (1983) found that, overall, renters, childless households, and blacks tended to report lower levels of neighborhood satisfaction than homeowners, couples with children, and other races respectively. They speculated that the higher levels of dissatisfaction within these groups occurred because they “lack the motivations or resources necessary to purchase desirable

neighborhood settings” (p. 301). These same authors found that housing adequacy is significant in predicting neighborhood satisfaction.

In a New York study using a random sample of over 1,100 respondents aged 60 and older, La Gory et al. (1985) found that neighborhood noise level, volume of traffic, and maintenance costs were negatively associated with perceived neighborhood safety. The aforementioned authors also found that “mental portraits of the neighborhood are the most significant source of neighborhood satisfaction” (p. 405). Chapman and Lombard (2006) also found that as age increased so did reported neighborhood satisfaction; but length of time in neighborhood (neighborhood tenure), race and the community being gated did not affect neighborhood satisfaction.

Rohe and Basolo (1997) found in their study that homeowners were more likely to be satisfied with their neighborhood than renters. Using the Chicago Metropolitan Area Survey and yielding a sample of over 1,800 respondents, Delisi and Regoli (2000) found that homeowners, who were more invested in their neighborhoods as compared to renters, were more likely to have greater satisfaction with their neighborhood than renters and individuals who were looking to move. Delisi and Regoli (2000) found that respondents who were more educated, younger, renters, and non-white perceive their neighborhoods to be less safe than their uneducated, older, homeowner, white counterparts.

In their study, Delisi and Regoli (2000) did not find gender or income to be important predictors of neighborhood satisfaction. Spain (1988) found that women were less satisfied with their neighborhoods than men. The author used the American Housing Survey data to show that married individuals were more likely to be satisfied with their

neighborhoods than unmarried individuals. In a study conducted in San Francisco's Chinatown, Loo (1986) found higher levels of neighborhood satisfaction among older and poorer individuals as compared to their younger, richer counterparts.

Perceived Safety and Residential Satisfaction

Few studies exist that look at the direct relationship between safety and residential satisfaction (to the exclusion of neighborhood satisfaction). In a case study designed to predict residential satisfaction, Potter et al. (2001) found that "safety, perception, and comfort contributed significantly to resident satisfaction in different settings" (p. 80). The same authors acknowledged that these findings applied only to their study and should not be generalized across populations. Findings in a Swedish study indicated, however, that residential satisfaction was associated with safety and security. The aforementioned study conducted by Fransson et al. (2001) found that the most important factor in residential satisfaction was safety and security. Lee and Guest (1983) found a link between residential satisfaction and neighborhood satisfaction but did not examine the association between perceived neighborhood safety and residential satisfaction. Potter et al. (2001) found that residents' perception of their surrounding affect their residential satisfaction. The previously described studies, however, did not look at residential satisfaction and safety among elderly individuals that are 65 and older.

The present study examines the association between elderly residents' perceived neighborhood safety and residential satisfaction and not neighborhood satisfaction. However, previous studies indicated that residential and neighborhood satisfaction were related and that residential satisfaction, community satisfaction, and neighborhood satisfaction were closely associated (McCrea, Stimson, & Western, 2005). Rioux and

Werner (2011) found that there was a need for greater research in examining the association between residential satisfaction and neighborhood safety among the elderly.

New Urbanism & Smart Growth

Since quality of life and perceived neighborhood safety have been linked for elderly individuals in previous research, it was essential to provide some insight into the findings of multiple researchers that New Urbanism design led to higher crime rates.

New Urbanism is a design plan that promotes the establishment and restoration of mixed-use, sustainable communities with smart transportation where the communities are walkable, connected, diverse, and vibrant (Cozens, 2008). The designs associated with New Urbanism incorporate housing, the workplace, shopping, dining, schools, parks and other essentials to daily living all within an easy walking distance of each other. This design also encourages increased use of trains and light rail instead of highways and roads. Smart Growth goes hand in hand with New Urbanism and has the main priority of reducing sprawl. All of the principles of New Urbanism are said to add up to an increased quality of life for residents of these communities (Fainstein, 2000).

The remainder of this section will be devoted to discussing principles of New Urbanism as they relate to crime as studied by previous researchers. Research consistently showed that, for the past three decades, permeability, which allows easy movement from one place to another, increased opportunities for crime (Cozens 2008). Rubenstein et al. (1980) reported that concentrated vehicle traffic and pedestrian flows were connected to higher rates of crime. A study performed in the United Kingdom by Knowles (2006), claimed that the costs to police a permeable community could be three times as high as a community with cul-de-sacs, and that, among the communities

investigated, crime was 5 times as high in communities with New Urbanism layouts. In a study of criminals, Town et al. (2003) found that approximately eighty six percent of the reasons burglars gave for choosing a particular location were related to accessibility and access routes. According to Davidson and Smith (2003), mixed use communities in residential areas were susceptible to crime, and homes were more accessible to criminals because of their proximity to shopping centers, schools, restaurants, etc. Cozens (2008) found mixed-use developments in suburban residential areas to be linked with increased levels of crime. According to Ekblom (1995), mixed use developments and more easily accessible streets led to more access for everyone including possible offenders which increased opportunities for crime.

Residential Satisfaction, Age and Safety

Since this study researched residential satisfaction and perceived neighborhood safety in the elderly population of the United States, it was important to include previous research that had findings associated with those three variables.

Fobker and Grotz (2006) found residential satisfaction to decrease slightly in old age due to increased risk of crime, harassment, and higher levels of fear. Perez et al. (2001) found that residential satisfaction increased with age and that there were differences among the elderly; “those aged 75 and over reported a higher level of satisfaction” (p.190). The discrepancy in satisfaction among the elderly led to an increased tendency to move among younger elderly individuals than older elderly individuals. Gonyea et al. (1990) believed that older elderly individuals hesitated to move because they were more vulnerable.

Overview

This review of literature showed that residential satisfaction and neighborhood satisfaction have been linked in the past but that safety and residential satisfaction have not been sufficiently studied to the exclusion of neighborhood satisfaction in previous United States studies. It also showed that age has been an important predictor in residential satisfaction in previous studies but has not been studied looking solely at the 65 and older population of the United States nor after breaking the 65 and older population into different age categories. Previous research also showed that there were many demographic and socioeconomic variables associated with residential satisfaction that should be included when conducting this research.

As stated earlier, given the growing elderly population, there is an increased need to examine the current relationship between residential satisfaction and perceived neighborhood safety for individuals 65 and older. With the baby boom generation aging, there will be more demand for housing in the elderly population than the United States has seen in the past, and there will be massive influxes of individuals into the progressive age categories as the baby boom generation continues to age.

CHAPTER 3

THEORETICAL FRAMEWORK

Many researchers who study housing do not incorporate theories into their research. A major housing theory is the housing adjustment theory which studies the inclination or tendency to relocate or improve current housing based on what a family or culture considers normal (Morris & Winter, 1975). This theory would not work with the current research because it focuses on how to improve housing deficits rather than whether or not safety is a predictor of residential satisfaction. Another popular housing theory is the new urbanism and smart growth theory. This theory promotes a design plan that promotes the establishment and restoration of mixed-use, sustainable communities with smart transportation where the communities are walkable, connected, diverse, and vibrant (Cozens, 2008). This theory would not work with the current research because it was implemented in an attempt to improve quality of life for individuals and does not focus on safety and residential satisfaction. In fact, the new urbanism and smart growth design has been found, in previous research, to increase incidences of crime.

The theories that would best complement the current research are the Person-Environment Fit Theory and the Ecological Model of Aging. Combined these two theories make up a theoretical framework that complements the current research better than other prominent housing theories. The following paragraphs will be used to explain in detail the two theories that make up the theoretical framework for the current research.

Overview: Person-Environment Fit Theory

Person-Environment Fit Theory (P-E Fit Theory) was used in an attempt to explain how an individual's residential satisfaction related to his or her environment. This theory has multiple properties that have previously been used in an attempt to understand adjustment in organizations. This attempt at understanding was done by looking at both the person and the environment individually and collectively to determine whether or not said person is a good fit for the organization. According to Tomoki Sekiguchi (2004), "the concept of person-environment (P-E) fit basically indicate[d] that alignment between characteristics of people and their environments result[ed] in positive outcomes for both individuals and organizations" (p.177). For the purposes of this study, the previous quote was interpreted as follows: an individual and a neighborhood will both have positive responses to a good person-environment fit. An individual will likely be more satisfied; therefore, the neighborhood will likely become more desirable by others who will see the satisfaction being had by current residents.

While other prominent theories study housing norms, deficits, and community design, this theory looks at the individual, the environment, the individual and environment combined, and the effect each of these has on personal issues such as satisfaction. According to Kahana, Lovegreen, Kahana, and Kahana (2003) "environmental features that affect[ed] residential satisfaction of older adults range[d] from the microenvironment to larger environmental units" (p.439). The microenvironment involved the apartment or housing unit and larger environmental units referred to buildings, neighborhoods, or communities as a whole. This theory is not normally used to look at a community, but rather an institution, but like Kahana, et al.

(2003), this paper attempted to apply it to the community. The research presented in this paper explained how one's neighborhood could have an impact on his or her residential satisfaction. According to Sekiguchi (2004), the "P-E Fit framework generally suggest[ed] that a high level of fit result[ed] in positive individual outcomes (e.g., satisfaction, commitment, performance)" (p.182). This study focused on P-E Fit as it related to satisfaction, namely residential satisfaction.

Previous Uses of P-E Fit Theory

Up to this point P-E Fit Theory was used mainly to connect individuals with their work environments. According to Amy Kristof-Brown (2006), "the dominant approach to [P-E Fit] studies [was] to examine the fit between an individual and a single aspect of the work environment" (p.1). Holland (1959) "propose[d] a theory of vocational choice based on the concept of congruence between the individual and the occupational environment" (p.178). Holland's P-E Fit Theory made the suggestion that individuals sought out work environments that matched their own interests. This search could result in a high P-E Fit or a low P-E Fit. According to Holland, a high P-E Fit would likely result in satisfaction, stability, and achievement. Low P-E Fit, in turn, would likely result in dissatisfaction with the environment.

Caplan (1987) applied P-E Fit Theory to understand the process of adjustment between agents and their environments. The Caplan (1987) study used the theory from both a personal and organizational perspective. From a personal perspective, the theory was used to find a job that fit with one's abilities. From an organizational perspective, the theory was used to find an individual whose abilities fit with the job requirements. Another use of the P-E Fit Theory was to relate stress to person-environment fit. Edwards

and Cooper (1990) applied the P-E Fit Theory to model numerous theoretical and methodological problems in relation to stress.

Several constructs have evolved from P-E Fit such as P-J Fit, P-O Fit, P-G Fit, and P-V Fit. P-J Fit was recognized as an individual's fit with his or her job. P-O Fit was recognized as an individual's fit with his or her organization. P-G Fit was recognized as an individual's fit with his or her group. P-V Fit was recognized as an individual's fit with his or her vocation or occupation.

Another theory that came out of P-E Fit Theory is the Theory of Work Adjustment (TWA). This theory "emphasize[d] the process through which individuals attempt[ed] to obtain and maintain correspondence with their environments, because correspondence fluctuates over time due to changes in the individual and the environment" (Dawis, Lofquist, & Weiss, 1968). This theory looked mainly at workforce satisfaction. Sekiguchi (2004) suggested in another model that stemmed from P-E Fit Theory, that if P-E Fit was poor, an individual was more likely to leave the environment.

P-E Fit In Relation to Current Study

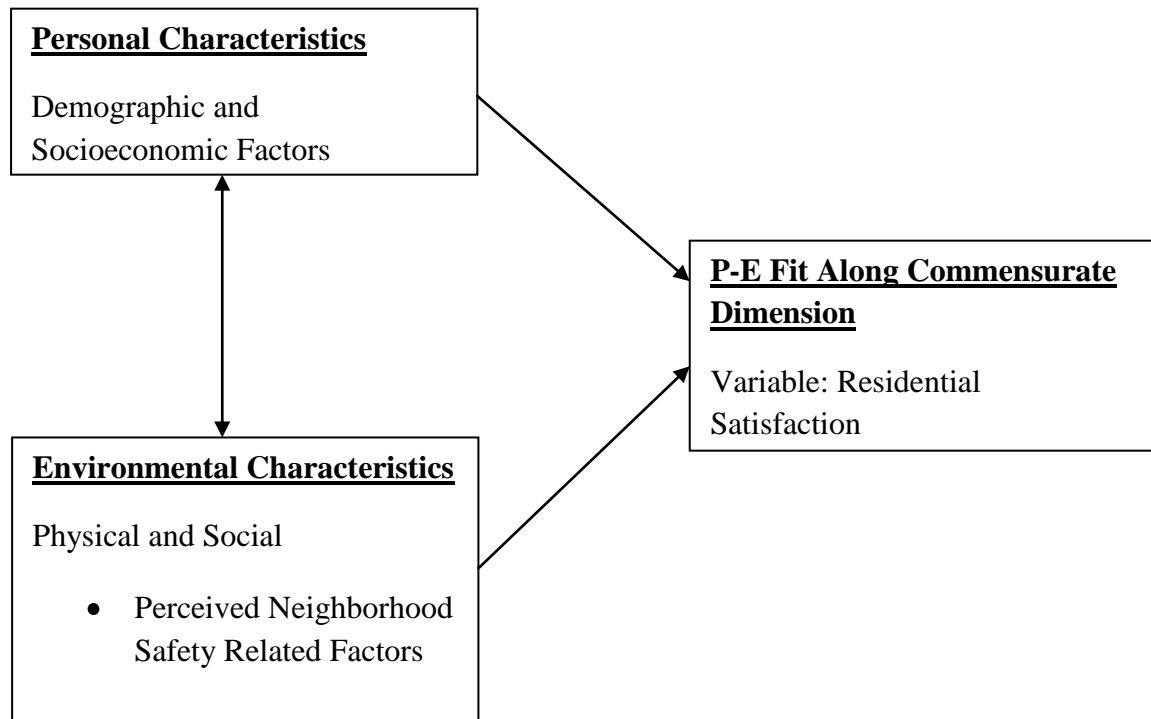
In the current study, P-E Fit was defined as being satisfied with one's current residence. P-E Misfit or poor P-E Fit was defined as being dissatisfied with one's current residence. For this study environment was equated to one's neighborhood and person was equated to an individual's demographic and socioeconomic characteristics. Based on other studies, we suggested that P-E Misfit could lead to individuals being dissatisfied with their current residences. The current study focused on the overall "fit" or "misfit" between an individual's satisfaction with his or her residence and perceived neighborhood safety along with other demographic and socioeconomic factors.

This research applied the concept of P-E Fit Theory to residential satisfaction in relation to perceived neighborhood safety. Just as an individual may be satisfied or dissatisfied with his or her job based on his or her qualities in relation to the qualities needed for the job, he or she may be dissatisfied with his or her residence based on his or her expected qualities in relation to the qualities provided by the neighborhood (i.e. safety of the neighborhood).

For the purposes of this study, we considered “fit” to mean residential satisfaction. Certain individuals may feel as if they “fit” regardless of safety based on some personal characteristics. On the opposite end of the spectrum, certain individuals may feel as if they do not “fit” regardless of safety based on some personal characteristics. Overall, however, an individual was likely to achieve residential satisfaction mainly based upon having both a certain environment (neighborhood attributes) and certain personal characteristics (demographic and socioeconomic) that led him or her to believe that his or her neighborhood was either safe or dangerous.

In this study, we determined if individuals’ perception of safety within their respective environment was associated with their residential satisfaction. Some individuals may feel that a neighborhood is safe while others feel that the same neighborhood is not safe. The purpose of this study was not to determine why there were variations on the perceived safety of a specific neighborhood but rather to determine if perceptions of safety affect residential satisfaction. We also determined if the perception of a safe neighborhood played a greater role in the residential satisfaction of respondents from different elderly age categories.

P-E Fit Adapted Theoretical Framework Relating to Current Study



Overview: Ecological Model of Aging

The ecological model of aging was one of the three primary theoretical models of person-environment interaction and focused on the environment and its effects on an individual as he or she aged (Lawton & Nahemow, 1973). The ecological model of aging acknowledged old age as an important life course phase and noted that this stage in the life course was influenced by the physical environment (Wahl et al., 2012). Wahl et al. (2012) acknowledged that “the physical environment ha[d] the potential to impose significant constraints in late life” but that it “may also enhance opportunities for aging well, as new housing solutions and new technologies support declining competencies” (p.2). The aforementioned authors also acknowledged the desire of elderly individuals as they aged to remain in their current home for as long as possible. Wahl and Oswald (2010) further investigated the model and found that elderly, as they age, wanted to

remain in their current location regardless of potential risks because they valued their homes and neighborhood and are familiar with their environment. However, Fobker and Grotz (2006) found that residential satisfaction could decrease gradually in old age due to increased risk of crime, harassment, and higher levels of fear.

Research Question & Hypotheses

Is there a significant relationship between residential satisfaction and perceived neighborhood safety in the elderly? This study addressed whether or not residential satisfaction depended on one's perceived safety in his or her neighborhood. This study also explored whether the personal and/or environmental characteristics affected residential satisfaction of elderly United States respondents in different age categories. As dictated by the theoretical framework and the literature on residential satisfaction, along with a human being's natural instinct to preserve his or her life, it was reasonable to expect that residential satisfaction was, in fact, related to one's perceived neighborhood safety.

H1: There is a relationship between perceived neighborhood safety and residential satisfaction in the elderly population of the United States.

H2: There is a relationship between perceived neighborhood safety and residential satisfaction after controlling for demographic, socioeconomic, and safety factors in the elderly population of the United States.

H3: The perceived neighborhood safety variables will affect residential satisfaction differently within the progressively aging categories after controlling for demographic and socioeconomic factors in the elderly population of the United States.

CHAPTER 4

METHODOLOGY

Description of Dataset

The American Housing Survey (AHS) was used to obtain data for the current study. The American Housing Survey (AHS) was conducted by the Bureau of the Census for The Department of Housing and Urban Development (HUD) and was designed to provide a longitudinal data set for researchers. It is the “largest regular national housing sample survey” in the U.S. AHS collects data on a national level and reports on housing (apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers). This national dataset is collected on odd numbered years and in 2009 included a sample size of approximately 60,000 housing units. AHS also collected data for 47 metropolitan areas to measure “local conditions” but for the purposes of this study the national data was used.

The AHS began in 1973, and the same housing units have been used since 1985 (using the same sample allows one to see how changes occur across time). The sample units were chosen based on addresses which were randomly chosen. Since addresses and not people are the basis of the sample, if an individual moved, the next individual who took up residence at that address was to be interviewed the next time and so on. This study was not affected by using the house as the sample because only 2009 data was

used. Responses were analyzed based on the responses of the individual who resided in the house in 2009.

The data was collected individually via personal visit or telephone. If a unit was unoccupied at the time of the survey, the survey was presented to one of three potential candidates: landlord, rental agent, or neighbor. According to the American Housing Survey for the United States (2011), “[s]ample units [were] weighted and represent[ed] about 2000 other units in the national survey. The weighting [was] designed to minimize sampling error and utilize independent estimates of occupied and vacant housing units” (p. 4).

Methods

This study used 2009 American Housing Survey data, and respondents comprised of individuals aged 65 and older. After dropping all responses from individuals under the age of 65 this study was left with a sample size of 9,779. The analysis of this study evaluated the respondents’ reported residential satisfaction after taking into account 6 different factors related to perceived neighborhood safety and several demographic and socioeconomic factors. The dependent variable measured the respondents’ satisfaction of the unit as a place to live based on their responses to a Likert-type scale, where 10=most satisfied and 1=least satisfied.

Our independent variables comprised of various controls of personal and environmental characteristics as discussed in the P-E fit theory. Among environmental characteristics, we examined six different neighborhood safety related variables including absence of serious neighborhood crime, bothersome/noisy neighbors, presence of abandoned or vandalized buildings, majority of neighbors aged 55 or older, walls or

fences surrounding the community, and police protection in the neighborhood. These neighborhood safety variables have been drawn from findings of prior literature (Chapman & Lombard, 2006; Galster & Hesser, 1981; Jirovec et al. 1985; Lee & Guest, 1983). The variables related to the “environmental characteristics” of the P-E Fit Theory consisted of perceived neighborhood safety variables as follows: walls/fences surrounding community (with yes coded as 1 and 0 otherwise), neighborhood police protection satisfactory (with yes coded as 1 and 0 otherwise), absence of serious neighborhood crime in last 12 months (with yes coded as 1 and 0 otherwise), people in neighborhood are bothersome/noisy (with yes coded as 1 and 0 otherwise), abandoned/vandalized buildings within ½ block (with yes coded as 1 and 0 otherwise), and majority of neighbors 55+ (with yes coded as 1 and 0 otherwise).

The empirical model of this study also controlled for various personal characteristics of the respondents and the housing unit. These included several demographic and socioeconomic variables as they related to residential satisfaction. The variables related to the “personal characteristics” of the respondents of the P-E Fit Theory included: income, length of time in years householder has lived in current residence, age, homeowner (with owner coded as 1 and 0 otherwise), gender (with female coded as 1 and 0 otherwise), race (with white coded as 1 and 0 otherwise), marital status (with married coded as 1 and 0 otherwise), and education level of householder (ranging from “< high school” to “graduate school”). The variables related to the “personal characteristics” of the housing unit of the P-E Fit Theory included: market value of unit, Northeast (with yes coded as 1 and 0 otherwise), Midwest (with yes coded as 1 and 0 otherwise), South (with yes coded as 1 and 0 otherwise), West (with yes coded as 1 and 0 otherwise),

home/apartment/flat (with yes coded as 1 and 0 otherwise), mobile home (with yes coded as 1 and 0 otherwise), central city (with yes coded as 1 and 0 otherwise), urban area (with yes coded as 1 and zero otherwise). The personal characteristics of the respondents were drawn from the findings of the previous literature on residential and neighborhood satisfaction (Adriaanse, 2007; James III, 2008; Lu, 1999; Spain, 1988).

In order to test the hypotheses of this research, Ordered Logit Models (OLM) were run. To test the third hypothesis, we separated individuals aged 65 and older into four age categories then compared the significant variables across age groups. The age groups were as follows: 65 – 70, 71 – 75, 76 – 80, and 81+. The OLM model was effective because the dependent variable responses were collected using a Likert Scale question. This model was specifically designed to analyze ordered responses (such as those collected on a Likert Scale) and was more appropriate than an OLS Regression which was developed to analyze a continuous dependent variable. Lu (1999) stated that “for ordinal dependent variables, the appropriate model [was] the ordered logit” (p. 271). Lu also stated that other regression techniques, such as the OLS regression, were often used on Likert Scale dependent variables, but they likely “underestimate[d] the relative impact of certain explanatory variables on satisfaction” (p. 271).

Confidentiality

The U.S. Code had multiple sections regarding maintaining privacy of individuals surveyed for the American Housing Survey. Confidentiality was guaranteed to respondents through the Census Bureau; information containing confidential information [could] be seen only by “sworn Census Bureau employees” (American Housing Survey for the United States (2011), p.4), and said information [could] only be used for statistical

purposes. Disclosure of private information without authorization [came] at a cost of a fine of up to \$5000 and or up to a five year prison sentence for the offending individual.

IRB Approval

Since the American Housing Survey used secondary data, a request was submitted to the Human Subjects Office of the University of Georgia requesting determination of not human subject research. This request was submitted on December 22, 2012, and was approved by the director of the Human Subjects Office on January 10, 2012.

CHAPTER 5

RESULTS

In this chapter, the results of the hypotheses' testing will be presented. Presented first are the effects of perceived neighborhood safety on residential satisfaction of the elderly population of the United States. Presented second are the effects of perceived neighborhood safety on residential satisfaction of the elderly population of the United States after controlling for a number of demographic and socioeconomic factors. Presented third are the effects of perceived neighborhood safety on residential satisfaction after separating individuals aged 65 and older into four age categories.

Descriptive Statistics Overview

The descriptive statistics from table 1 indicated that on a scale of 1 (minimum satisfaction) through 10 (maximum satisfaction), the average residential satisfaction among the respondents was 8.7. Among neighborhood safety related characteristics, approximately 11% of the respondents lived in a gated community, approximately 92% were satisfied with their police protection, and approximately 30% of the respondents lived in a neighborhood where the majority of their neighbors were aged 55 or older. Among personal characteristics, the average age of the respondents was 75. Approximately 77% of respondents were homeowners, women made up 52% of respondents, 43% of respondents were married, and 13% of respondents had an educational attainment of college or higher.

Descriptive Statistics

Table 1: Descriptive Statistics

	Variable	Obs	Mean	Std. Dev.	Min	Max
	Residential Satisfaction	9779	8.698	1.504	1	10
<i>Environmental Characteristics</i>						
	Neighborhood Safety					
	Gated Community	9779	0.108		0	1
	Satisfactory Police protection	9779	0.921		0	1
	Crime	9779	0.124		0	1
	Bothersome neighbors	9779	0.03		0	1
	Abandoned or Vandalized Property	9779	0.05		0	1
	Majority of residents are 55plus	9779	0.296		0	1
<i>Personal Characteristics</i>						
<i>Respondent</i>						
	Family Income	9779	40659.4	47,657.1	0	607,402
	Housing Tenure	9779	22.54	17.342	0	91
	Householder Age	9779	75.383	7.641	65	93
	Owner	9779	0.770		0	1
	Female	9779	0.518		0	1
	White	9779	0.861		0	1
	Married	9779	0.426		0	1
	Educational Attainment					
	<High school	9779	0.226		0	1
	High School	9779	0.327		0	1
	Some college	9779	0.257		0	1
	College	9779	0.131		0	1
	Grad school	9779	0.1		0	1
<i>Housing Unit</i>						
	Value of home	9779	230808	274,663	1	2,465,647
	Home, apt, flat	9779	0.941		0	1
	Mobile home	9779	0.039		0	1
	Region					
	Northeast	9779	0.242		0	1
	Midwest	9779	0.261		0	1
	South	9779	0.324		0	1
	West	9779	0.173		0	1
	Central city	9779	0.264		0	1
	Urban area	9779	0.451		0	1

Relationship between Neighborhood Safety and Residential Satisfaction

Hypothesis 1 proposed a link between perceived neighborhood safety and residential satisfaction on the elderly population of the United States. The results are reported in table 2. Each of the six safety variables included in the model were found to be statistically significant predictors of residential satisfaction of the elderly. Living in a gated community was positively associated with residential satisfaction of elderly individuals in the United States. Having satisfactory police protection within the neighborhood was positively associated with residential satisfaction of elderly individuals in the United States. Presence of serious neighborhood crime in the past 12 months was negatively associated with residential satisfaction of elderly individuals in the United States. Feeling bothered by other individuals in the neighborhood was negatively associated with residential satisfaction of elderly individuals in the United States. Living in a residence that was within half a block of one or more abandoned or vandalized buildings was negatively associated with residential satisfaction of the elderly in the United States. Residing in a unit where the majority of one's neighbors were fifty-five years of age or more was positively associated with residential satisfaction of the elderly of the United States.

Table 2: Ordered Logit Results: Effects of Perceived Neighborhood Safety on Residential Satisfaction of Elderly U.S. Residents

Residential Satisfaction	Coef.	Std. Err.	Significance
Gated Community	0.122	0.059	**
Satisfactory Police Protection	0.303	0.078	***
No Crime in last 12 months	0.411	0.058	***
Neighbors are bothersome	-0.345	0.112	**
Abandoned Property within 1/2 Block	-0.622	0.087	***
Majority Neighbors 55+	0.241	0.043	***

N=9779, Pseudo R-squared=0.0376

*p<.1,**p<.05,***p<.001

Relationship between Neighborhood Safety, Personal Characteristics, and Residential Satisfaction

Hypothesis 2 proposed a link between perceived neighborhood safety and residential satisfaction after controlling for demographic, socioeconomic, and safety factors in the elderly population of the United States. The results are reported in table 3. Eighteen of the twenty-four demographic, socioeconomic, and safety variables included in the model were found to be statistically significant predictors of residential satisfaction of the elderly. Those variables that were not found to be statistically significant were as follows: completed high school, completed some college, living in the Midwest, living in the South, income, and living in a mobile home.

Living in a gated community was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.192. Having satisfactory police protection was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.365. Absence of serious neighborhood crime in the past 12 months was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.405. Residing in a unit where the majority of one's neighbors were fifty-five years of age or older was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.213. Having bothersome/noisy neighbors was statistically significant and negatively associated with residential satisfaction of the elderly and had an odds ratio of 0.720. Living in a residence that was within a half block of one or more abandoned or vandalized buildings was statistically significant and negatively associated with residential satisfaction of the elderly and had an odds ratio of 0.615. Age of respondent

was statistically significant and positively associated with residential satisfaction in the elderly population and had an odds ratio of 1.019. Being a homeowner was statistically significant and positively associated with the residential satisfaction of the elderly and had an odds ratio of 1.836. Being female was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.365. Being married was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.201. Being white was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.148. Completing college was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.234. Completing graduate school was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.271. Living in the West was statistically significant and negatively associated with residential satisfaction of the elderly and had an odds ratio of 0.879. Living in a central city was statistically significant and negatively associated with residential satisfaction of the elderly and had an odds ratio of 0.777. Living in an urban area was statistically significant and negatively associated with residential satisfaction of the elderly and had an odds ratio of 0.863. The current market value of the unit in which one resided was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.043. The length of time the respondent had lived in his or her current residence was statistically significant and negatively associated with residential satisfaction of the elderly and had an odds ratio of 0.992. Living in a home, apartment,

or flat was statistically significant and positively associated with residential satisfaction of the elderly and had an odds ratio of 1.547. See Table 3 for full results.

Table 3: Ordered Logit Results: Effects of Demographic, Socioeconomic, and Perceived Neighborhood Safety Variables on Residential Satisfaction of Elderly U.S. Residents

Residential Satisfaction	Coef.	Std. Err.	Odds	Sig
Gated Community	0.196	0.062	1.192	***
Satisfactory Police Protection	0.319	0.079	1.365	***
No Crime in last 12 months	0.363	0.058	1.405	***
Majority Neighbors 55+	0.199	0.044	1.213	***
Neighbors are bothersome	-0.34	0.114	0.720	***
Abandoned Property with 1/2 Block	-0.53	0.089	0.615	***
Age	0.008	0.004	1.019	**
Owner	0.336	0.044	1.836	***
Female	0.314	0.043	1.365	***
Married	0.134	0.047	1.201	***
White	0.188	0.056	1.148	***
Completed High School	0.201	0.242	1.220	
Completed Some College	0.207	0.405	1.225	
Completed College	0.236	0.153	1.234	*
Completed Graduate School	0.289	0.158	1.271	*
Midwest	0.021	0.051	1.010	
South	0.037	0.067	1.014	
West	-0.11	0.058	0.879	*
Central city	-0.24	0.054	0.777	***
Urban	-0.13	0.046	0.863	***
Log Income	0.024	0.014	1.031	
Log market value of home	0.038	0.004	1.043	***
Tenure	-0.01	0.001	0.992	***
Live in a home, apartment, or flat	0.474	0.188	1.547	**
Live in a mobile home	0.643	0.398	1.675	

N=9779; Pseudo R-squared=0.072

*p<.1, **p<.05, ***p<.001

Relationship between Residential Satisfaction and Demographic, Socioeconomic, and Perceived Safety Factors in Progressively Aging Categories

Hypothesis 3 proposed that the perceived neighborhood safety variables would affect residential satisfaction differently in the progressively aging categories after controlling for demographic and socioeconomic factors in the elderly population of the United States. Age was found to be positively associated with residential satisfaction; therefore, in order to provide a more in depth analysis of this, age was broken down into the following categories: 65 – 70, 71 – 75, 76 – 80, and 81 – 93.

Means were reported for each age category and Pair-wise t-tests were run for each age category. The Pair-wise t-test of means for residential satisfaction by age category were run to confirm that the difference in means were statistically significant. The results of the Pair-wise t-tests can be seen in Table 4. The results indicate that residential satisfaction among the elderly within the 81-93 age category was significantly higher than the residential satisfaction of the elderly in the 65-70 and 71-75 age categories. Conversely, the respondents in the 65-70 age category had significantly lower residential satisfaction when compared with respondents in other age categories.

Results of the ordered logit analysis for the different age categories are reported in table 5. The results showed that perceived neighborhood safety variables affected residential satisfaction differently within the progressively aging categories after controlling for numerous demographic and socioeconomic factors. In individuals aged 65 – 70 each safety factor was found to be a statistically significant predictor of residential satisfaction. For individuals in this age category, living in a gated community was statistically significant and positively associated with residential satisfaction and had an

odds ratio of 1.258. For individuals in this age category, having satisfactory police protection was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.345. For individuals in this age category, residing in a unit where the majority of one's neighbors are fifty-five years of age or more was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.180. For individuals in this age category, living in the absence of serious neighborhood crime within the past 12 months was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.553. For individuals in this age category, having bothersome/noisy neighbors was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.640. For individuals in this age category, living in a residence that is within half a block of one or more abandoned or vandalized buildings was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.637. For individuals aged 65 – 70 there were numerous non-safety factors that were found to be statistically significant predictors of residential satisfaction. The non-safety variables that were not statistically significant predictors of residential satisfaction for this age group were as follows: being white, living in the Midwest, living in the South, living in the West, completing high school, completing some college, completing college, completing graduate school, living in a home/apartment/flat, living in a mobile home. For individuals in this age category, being a homeowner was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.882. For individuals in this age category, being female was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.402. For individuals in this age

category, being married was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.233. For individuals in this age category, income was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.063. For individuals in this age category, market value of unit was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.059. For individuals in this age category length of time in current residence was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.983. For individuals in this age category, living in the central city was statistically significant and negatively associated with residential satisfaction and had an odds ratio of .791. For individuals in this age category, living in an urban area was statistically significant and negatively associated with residential satisfaction and had an odds ratio of .785.

In individuals aged 71 – 75 four of the six safety factors were found to be statistically significant predictors of residential satisfaction. The safety variables that were not found to be statistically significant predictors of residential satisfaction for this age category were as follows: having bothersome/noisy neighbors, living within ½ block of abandoned or vandalized property. For individuals in this age category, living in a gated community was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.171. For individuals in this age category, having satisfactory police protection was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.266. For individuals in this age category, residing in a unit where the majority of one's neighbors are fifty-five years of age or more was statistically significant and positively associated with residential

satisfaction and had an odds ratio of 1.424. For individuals in this age category, living in the absence of serious neighborhood crime within the past 12 months was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.253. For individuals aged 71 to 75 there were numerous non-safety factors that were found to be statistically significant predictors of residential satisfaction. The non-safety variables that were not statistically significant predictors of residential satisfaction for this age category were as follows: being white, living in the Midwest, living in the South, living in the West, completing high school, completing some college, completing college, completing graduate school, income, length of time living in current residence, living in a home/apartment/flat, living in a mobile home, living in an urban area. For individuals in this age category, being a homeowner was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.718. For individuals in this age category, being female was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.468. For individuals in this age category, being married was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.357. For individuals in this age category, market value of unit was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.050. For individuals in this age category living in the central city was negatively associated with residential satisfaction and had an odds ratio of 0.785.

In individuals aged 76 - 80 five of the six safety factors were found to be statistically significant predictors of residential satisfaction. The safety variable that was not found to be a statistically significant predictor of residential satisfaction for this age

category was as follows: having bothersome/noisy neighbors. For individuals in this age category, living in a gated community was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.306. For individuals in this age category, having satisfactory police protection was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.629. For individuals in this age category, residing in a unit where the majority of one's neighbors are fifty-five years of age or more was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.308. For individuals in this age category, living in the absence of serious neighborhood crime within the past 12 months was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.550. For individuals in this age category living in a residence that is within half a block of one or more abandoned or vandalized buildings was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.636. For individuals aged 76 to 80 there were numerous non-safety factors that were found to be statistically significant predictors of residential satisfaction. The non-safety variables that were not statistically significant predictors of residential satisfaction for this age category were as follows: being married, being white, living in the Midwest, living in the South, completing high school, completing some college, completing college, completing graduate school, income, length of time in current residence, living in a mobile home, living in a central city. For individuals in this age category, being a homeowner was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.678. For individuals in this age category, being female was statistically significant and positively associated with residential satisfaction

and had an odds ratio of 1.263. For individuals in this age category, market value of unit was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.055. For individuals in this age category, living in a home, apartment, or flat was statistically significant and positively associated with residential satisfaction and had an odds ratio of 3.628. For individuals in this age category living in the west was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.753. For individuals in this age category, living in an urban area was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.829.

In individuals aged 81 – 93, four of the six safety variables were found to be statistically significant predictors of residential satisfaction. The safety variables that were not found to be statistically significant predictors of residential satisfaction for this age category were as follows: living in a gated community, living in a unit where the majority of one's neighbors are 55 years of age or older. For individuals in this age category, having satisfactory police protection was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.332. For individuals in this age category, living in the absence of serious neighborhood crime within the past 12 months was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.243. For individuals in this age category, having bothersome/noisy neighbors was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.574. For individuals in this age category, living in a residence that is within half a block of one or more abandoned or vandalized buildings was negatively associated with residential satisfaction and had an

odds ratio of 0.403. For individuals aged 81 to 93 there were numerous non-safety factors that were found to be statistically significant predictors of residential satisfaction. The non-safety variables that were not statistically significant predictors of residential satisfaction for this age category were as follows: being a homeowner, being married, living in the Midwest, living in the South, completing high school, completing some college, completing college, completing graduate school, income, living in a home/apartment/flat, living in a mobile home, living in an urban area. For individuals in this age category, being female was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.223. For individuals in this age category, being white was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.360. For individuals in this age category, market value of unit was statistically significant and positively associated with residential satisfaction and had an odds ratio of 1.020. For individuals in this age category living in the West was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.809. For individuals in this age category, length of time in current residence was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.989. For individuals in this age category, living in a central city was statistically significant and negatively associated with residential satisfaction and had an odds ratio of 0.758.

Table 4: Residential Satisfaction Means and Pair-wise Tests

Age	Residential Satisfaction (1=Min; 10=Max)					
65-70	8.59					
71-75	8.71					
76-80	8.74					
81-93	8.78					

Pair-wise tests of Means for Residential satisfaction by Age Categories						
Age 1	Age 2	Diff	St. Error	ttest	Sig	
81-93	65-70	0.189	0.040	4.77	***	
81-93	71-75	0.067	0.034	1.53	*	
81-93	76-80	0.033	0.046	0.72		
76-80	65-70	0.156	0.044	3.54	***	
76-80	71-75	0.034	0.048	0.71		
71-75	65-70	0.121	0.042	2.9	***	

Table 5: Ordered Logit Results: Effects of Demographic, Socioeconomic, and Perceived Safety Variables on Individuals Aged 65+ Broken Down into Age Categories

Residential Satisfaction	Overall				Age 65-70				Age 71-75				Age 76-80				Age 81-93				
	Coef.	Std. Err.	Odds	. Sig	Coef.	Std. Err.	Odds	Sig	Coef.	Std. Err.	Odds	Sig	Coef.	Std. Err.	Odds	Sig	Coef.	Std. Err.	Odds	Sig.	
age7175	0.134	0.051	1.144	***																	
age7680	0.216	0.054	1.242	***																	
age8193	0.34	0.052	1.405	***																	
Gated Community	0.173	0.062	1.189	***	0.229	0.111	1.258	**	0.257	0.131	1.171	*	0.266	0.144	1.306	*	0.075	0.12	1.079		
SatisfactoryPolice Protection	0.309	0.079	1.363	***	0.276	0.102	1.345	***	0.325	0.123	1.266	***	0.339	0.124	1.629	**	0.376	0.125	1.332	***	
Majority Neighbors 55+	0.195	0.043	1.216	***	0.165	0.075	1.180	**	0.223	0.044	1.424	***	0.148	0.071	1.308	*	0.051	0.085	1.053		
No Crime in Last 12 Months	0.341	0.057	1.407	***	0.38	0.063	1.553	***	0.235	0.121	1.253	***	0.228	0.109	1.550	**	0.217	0.108	1.243	**	
Neighbors are Bothersome	-0.332	0.114	0.717	***	-0.446	0.188	0.640	**	-0.518	0.643	0.980		-0.566	0.76	0.771		-0.578	0.149	0.574	***	
Aban. Prop. within 1/2 Block	-0.49	0.089	0.612	***	-0.451	0.136	0.637	***	-0.472	0.444	0.762		-0.542	0.217	0.636	**	-0.909	0.224	0.403	***	
Owner	0.236	0.053	2.239	***	0.632	0.082	1.882	***	0.541	0.100	1.718	***	0.517	0.106	1.678	***	-0.065	0.079	0.937		
Female	0.311	0.043	1.366	***	0.337	0.071	1.402	***	0.3842	0.094	1.468	***	0.233	0.104	1.263	**	0.200	0.091	1.223	**	
Married	0.177	0.046	1.195	***	0.209	0.076	1.233	***	0.304	0.098	1.357	***	-0.018	0.109	0.982		0.077	0.104	1.081		
White	0.143	0.057	1.154	**	0.003	0.092	0.996		0.132	0.117	1.004		0.145	0.138	1.157		0.307	0.129	1.360	**	
Midwest	0.014	0.052	1.014		0.136	0.092	1.147		0.022	0.113	1.023		-0.007	0.123	0.993		-0.111	0.102	0.895		
South	-0.04	0.051	0.961		0.062	0.089	1.064		0.066	0.109	1.068		-0.116	0.12	0.890		-0.172	0.192	0.825		
West	-0.123	0.059	0.884	**	-0.017	0.086	0.834		-0.026	0.126	0.942		-0.283	0.111	0.753	**	-0.211	0.115	0.809	*	
Completed High School	0.022	0.052	1.023		0.071	0.111	1.074		0.09	0.113	1.094		0.066	0.119	1.069		-0.015	0.096	0.984		
Completed Some College	0.013	0.057	1.015		0.077	0.105	1.078		0.223	0.322	1.081		0.062	0.132	1.065		0.144	0.113	1.155		
Completed College	0.036	0.069	1.041		0.064	0.124	1.066		0.019	0.114	1.063		0.07	0.159	1.074		-0.063	0.135	0.939		
Completed Graduate School	0.094	0.079	1.103		0.092	0.101	1.083		0.134	0.158	1.104		0.073	0.176	0.941		-0.159	0.148	0.853		
Log income	0.029	0.014	1.030	**	0.06	0.002	1.063	***	0.026	0.034	1.027		0.014	0.033	1.015		-0.003	0.026	0.997		
Tenure	-0.008	0.001	0.992	***	-0.008	0.002	0.983	***	-0.002	0.002	0.981		-0.002	0.002	0.991		-0.008	0.001	0.989	***	
Market Value of Unit	0.041	0.004	1.043	***	0.047	0.006	1.059	***	0.049	0.009	1.050	***	0.053	0.01	1.055	***	0.019	0.008	1.020	**	
Home/Apartment/Flat	0.592	0.297	1.653	*	0.602	0.727	1.827		0.199	0.828	1.221		1.288	0.639	3.628	*	0.178	0.686	1.196		
Mobile Home	0.100712	0.395	1.106		0.154	0.739	1.167		0.065	0.847	1.068		0.976	0.956	2.655		-0.468	0.708	0.626		
Central City	-0.25021	0.054349	0.779	***	-0.2345	0.09352	0.791	**	-0.24168	0.115987	0.785	**	-0.1809	0.12604	0.835		-0.276	0.109	0.758	**	
Urban	-0.14423	0.046691	0.866	***	-0.2424	0.07862	0.785	***	-0.11206	0.099366	0.894		-0.1872	0.109958	0.829	*	-0.019	0.096	0.981		
N	9779				3288				2123				1806				2562				
Pseudo R-squared	0.06598				0.0808				0.0616				0.0622				0.051				

*p<.1, **p<.05, ***p<.001

While this study found a number of variables to be statistically significant predictors of residential satisfaction in the elderly population of the United States, it is important to note that there were different factors that were significant to different age groups within the elderly population. Living in a gated community was found to be statistically significant and positively correlated with residential satisfaction in elderly United States respondents aged 65 – 70, 71 – 75, and 76 - 80 but was not a statistically significant predictor of residential satisfaction in elderly respondents over the age of 80. Living in a unit where the majority of one’s neighbors are aged 55 or older was found to be statistically significant and positively associated with residential satisfaction in elderly United States respondents aged 65 – 70, 71 – 75, and 76 - 80 but was not a statistically significant predictor of residential satisfaction in elderly respondents over the age of 80. Living in a residence with bothersome/noisy neighbors was found to be statistically significant and negatively associated with residential satisfaction in elderly United States respondents aged 65-70 and those aged 81 or older but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 71 – 75 nor those aged 76 - 80. Living within ½ block of abandoned or vandalized property was found to be statistically significant and negatively associated with residential satisfaction in elderly United States respondents aged 65-70, 76 – 80, and those aged 81 and older but was not found to be a significantly significant predictor of residential satisfaction in elderly respondents aged 71 – 75. Being a homeowner was found to be statistically significant and positively associated with residential satisfaction in elderly United States respondents aged 65 – 70, 71 – 75, and 76 – 80 but was not found to be a statistically significant predictor of residential satisfaction in elderly respondents over the age of 80. Being

married was found to be statistically significant and positively associated with residential satisfaction in elderly United States respondents aged 65 – 70 and 71 - 75 but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 76 – 80 nor those aged 81 or older. Being white was found to be statistically significant and positively associated with residential satisfaction in elderly United States respondents aged 81 and older but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 65 – 70, 71 -75, nor those aged 76 – 80. Living in the West was found to be statistically significant and negatively associated with residential satisfaction for elderly United States respondents aged 76 – 80 and those 81 years of age or older but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 65 – 70 nor those aged 71 - 75. Income was found to be statistically significant and positively associated with residential satisfaction in elderly United States respondents aged 65 to 70 but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 71 -75, 76 – 80, nor those over the age of 80. Length of time respondent has lived in current residence was found to be statistically significant and negatively associated with residential satisfaction in elderly United States respondents aged 65 - 70 and 81 or older but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 71 -75 nor those aged 76 - 80. Living in a home, apartment, or flat was found to be statistically significant and positively associated with residential satisfaction in elderly United States respondents aged 76 – 80 but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 65 – 70, 71 – 75, nor those aged 81 or older. Living in a central city was found to be statistically significant and negatively associated

with residential satisfaction in elderly United States respondents aged 65 - 70, 71 – 75, and those aged 81 or older but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 76 - 80. Living in an urban area was found to be statistically significant and negatively associated with residential satisfaction in elderly United States respondents aged 65 – 70 and 76 – 80 but was not a statistically significant predictor of residential satisfaction in elderly respondents aged 71 -75 nor those 81 and older.

CHAPTER 6

DISCUSSION & IMPLICATIONS

The purpose of this study was to examine the relationship between residential satisfaction and perceived neighborhood safety in the elderly population of the United States. It was important to examine the aforementioned relationship because America's population is aging rapidly and the results will be beneficial to housing professionals, local policy makers, and consumers alike. Housing developers have to give attention to the special needs of the elderly in order to implement appropriate designs that will increase the residential satisfaction of the elderly. Local governments have to consider the needs and concerns of the aging population in planning and implementing new policies for cities and communities. Consumers can use the results found in this study to make educated housing location choices.

The most important finding of this study is that among the United States elderly population, perceived neighborhood safety is, in fact, a significant predictor of residential satisfaction. This is extremely important because the population of the United States is, at this moment, aging rapidly. It is also interesting to note that there are differences in the determinants of residential satisfaction of the elderly in progressive age categories 65-70, 71-75, 76-80, and 81-93. Further research could be conducted in an attempt to understand why there are differences in predictors of residential satisfaction among the elderly across the different age categories.

Based on the theoretical framework of this study, three hypotheses were tested to examine the residential satisfaction of the elderly population of the United States. The first hypothesis tested the relationship between various environmental factors within the setting of a P-E fit theory framework in the context of perceived neighborhood safety and residential satisfaction in the elderly population of the United States. The second hypothesis tested the relationship between the above mentioned environmental characteristics and residential satisfaction after controlling for various personal characteristics based on the framework of the P-E fit theory including demographic and socioeconomic factors in the elderly population of the United States. The ecological model of aging used for our third hypothesis posited that as age increased, the satisfaction of the individual with life was affected by his or her physical environment. Based on the framework of the ecological model of aging and the P-E fit theory, the third hypothesis addressed whether the perceived neighborhood safety variables affected residential satisfaction differently within the progressively aging categories after controlling for demographic and socioeconomic factors in the elderly population of the United States.

Results indicated that consistent with the assumption of association between environmental characteristics and residential satisfaction within the framework of the P-E fit theory, neighborhood safety related factors in this study were associated with the residential satisfaction of elderly respondents 65 years of age or older. The results were significant for hypothesis 1. The results were also significant for hypothesis 2, where several personal characteristics were controlled for along with the neighborhood safety related environmental factors in examining residential satisfaction within the framework of the P-E fit theory. Consistent with the ecological model of aging, there were mixed

results for the neighborhood safety related factors across different age groups of the elderly respondents.

The environmental characteristics related to neighborhood safety were found to be significant in this study. The results indicated that living in a gated community, satisfaction with police protection, no incidence of crime in the previous 12 months, and having majority of the neighbors who are 55 years of age or older were positively associated with the residential satisfaction of the elderly. Although this study examined the association between the neighborhood safety related characteristics and residential satisfaction, the neighborhood safety related findings were consistent with the findings of studies that investigated the relationship between neighborhood safety and neighborhood satisfaction of respondents (Chapman & Lombard, 2006; Galster & Hesser, 1981; Jirovec et al., 1985; Lee & Guest, 1983; Normoyle, 1987). Living in a gated community was found to be a statistically significant predictor of residential satisfaction in this study. In their study, Chapman and Lombard (2006) found that gated communities decreased perceptions of crime which, in turn, increased neighborhood satisfaction. Having satisfactory police protection was found to be a statistically significant predictor of satisfaction in this study as well as in studies performed by Lee and Guest (1983) and Jirovec, et al. (1985). Living in an area where the majority of the respondent's neighbors were 55 years of age or older was found to be a statistically significant predictor of residential satisfaction in this study as well as in similar studies on neighborhood satisfaction conducted by Galster and Hesser (1981) and Normoyle (1987). Absence of crime was found to be a statistically significant predictor of residential satisfaction in this

study as well as in previous studies on neighborhood satisfaction performed by Galster and Hesser (1981), Jirovec et al. (1985), and Lee and Guest (1983).

Conversely, living in a neighborhood with noisy/bothersome neighbors and presence of abandoned property within half a block were negatively associated with the residential satisfaction of the respondents. These findings were consistent with findings of similar studies that were conducted to examine the association between these factors and neighborhood satisfaction of respondents (Galster & Hesser, 1981; James III, 2008; Jirovec et al., 1985). Having bothersome/noisy neighbors was found to be negatively associated with residential satisfaction in this study as well as in studies performed by James III (2008) and Jirovec et al. (1985). Living in a home with abandoned/vandalized buildings within $\frac{1}{2}$ a block was found to be a statistically significant predictor of residential satisfaction in this study as well as in studies on neighborhood satisfaction by Galster and Hesser (1981) and Jirovec et al. (1985).

A number of previous studies have found association between demographic and socioeconomic characteristics (personal characteristics) and housing satisfaction of respondents. Many of the findings of this study were consistent with the findings from previous studies. In this study, age was found to be a statistically significant predictor of residential satisfaction as was the case in earlier studies on neighborhood and residential satisfaction performed by Adriaanse (2007), James III (2008), and Lu (1999). Being a homeowner was found to be positively associated with residential satisfaction in this study as well as in studies conducted by Baldassare (1982), Golant (1982), Lu (1999), and Li and Chen (2011). Being female was found to be positively associated with residential satisfaction in this study as well as in a study conducted by Lu (1999). In this

study, being married was found to be positively associated with residential satisfaction as was the case in a previous study conducted on neighborhood satisfaction by Spain (1988). In this study, being white was found to be positively associated with residential satisfaction as was the case in previous studies conducted by James III (2008) and Lu (1999). In this study, income was found to be positively associated with residential satisfaction consistent with the Lu (1999) study. In this study, living in a central city was negatively associated with residential satisfaction. Hayutin et al. (2010) showed that older individuals living in central cities and non-metropolitan areas preferred to move to the suburbs. Hayutin et al. (2010) found this trend to continue over a longitudinal period of time ranging from the 1970s to present. In this study, length of time respondent had lived in current residence was found to be negatively associated with residential satisfaction as was the case in a neighborhood attachment study conducted by Bonaiuto et al (1999).

When examining the determinants of residential satisfaction among the 65-70, 71-75, 76-80, and 81-93 age groups, the findings of this study indicate that when compared to the reference group of respondents aged between 65-70, those who were 71 and older were more likely to have higher residential satisfaction. These findings are consistent with the findings of previous studies (Adriaanse, 2007; Lu, 1999). Of all the variables included in the model, only four were statistically significant predictors of residential satisfaction among elderly respondents in each of the four created age categories. Having satisfactory police protection was found to be statistically significant and positively associated with residential satisfaction for elderly United States respondents in each age category. Absence of crime within the last 12 months was found to be statistically significant and positively associated with residential satisfaction for elderly United States

respondents in each age category. Being female was found to be statistically significant and positively associated with residential satisfaction for elderly United States respondents in each age category. Market value of unit was found to be statistically significant and positively associated with residential satisfaction for elderly United States respondents in each age category.

Prior to this study, there was no known literature that examined the direct relationship between residential satisfaction and perceived neighborhood safety in the elderly population of the United States. This study showed that residential satisfaction was, in fact, affected by the perception of neighborhood safety and other demographic and socioeconomic factors in the elderly population of the United States. The affects neighborhood safety variables and other demographic and socioeconomic factors have on the ever-growing elderly population will be important aspects of study for professionals in the housing industry, local policy makers, and consumers.

Implications for Housing Professionals

Housing professionals could use the results of this study in many ways. This study showed that among elderly individuals, all but those over the age of 81 found living in a gated community to be an important predictor of residential satisfaction. Housing professionals could use these findings to better understand when the addition of gates could improve the satisfaction of residents either in an apartment community or a subdivision type setting. Developers could use these results when deciding what features are important to include in a new development. The results of the study showed that among elderly individuals, all but those over the age of 81 found living in an area where the majority of one's neighbors are at least 55 years of age to be important. Housing

professionals could utilize this information when deciding what types of communities to develop. These were important findings for professionals who may be interested in developing retirement communities or were planning on using a new urbanism or smart growth design. New urbanism and smart growth promote the establishment and restoration of mixed-use, sustainable communities with smart transportation where the communities are walkable, connected, diverse, and vibrant and have the main priority of reducing sprawl (Cozens, 2008). Previous research has shown that new urbanism designs increase opportunities for crime and can increase the cost of policing an area by up to three times (Cozens, 2008 & Knowles, 2006). Knowles (2006) also found that among the communities investigated, crime was five times as high in communities with New Urbanism layouts. In this study, living in the absence of serious neighborhood crime and having satisfactory police protection are both important predictors of residential satisfaction of elderly United States respondents. Housing developers should re-consider the new urbanism design when catering to the elderly population because of the increase in crime and increase in cost of policing and area associated with said design. This study showed that for all elderly individuals, except those over the age of 80, homeownership was positively related to residential satisfaction. Housing developers could use this information to justify building more single family homes or condominiums and fewer multi-family or apartment communities.

The results of this study also showed that for three of the four age categories, the presence of abandoned or vandalized properties within half a block of one's residence was negatively related to residential satisfaction. Housing professionals could take this information and know that maintenance and cleanup of their properties is money well

spent to keep residents happy, whether it be in a subdivision or apartment community. This study also showed that for two of the four age categories, having bothersome/noisy neighbors was negatively related to one's residential satisfaction. Property managers could work in conjunction with local policy makers to lobby for noise ordinances that are strictly enforced from the bottom up.

Housing educators could use the results of this study to educate consumers. Consumers need information in order to make educated and informed decisions; therefore, it is the responsibility of housing educators to relay information, like the results of this study, to consumers so that they might make appropriate or rational housing decisions for themselves and their families.

Implications for Local Policy Makers

Local policy makers could use this information to better understand and decide how to allocate scarce resources. Dassopoulos et al. (2012) said that "faced with scarce resources, policy makers struggle with how to best maintain residents' quality of life, often weighing whether to focus on the physical aspects of neighborhoods over the social ones" (p.25). This study showed that there were certain factors that were more important than others to elderly residential satisfaction. Satisfactory police protection and absence of crime in the last 12 months were important predictors of residential satisfaction among the elderly in each age category; therefore, local policy makers could make sure that local police are regularly patrolling communities with a high percentage of residents over the age of 65. These finding suggests that it would be costly to allow new urbanism and smart growth designs in a community where there is a large elderly population because a previous study by Knowles (2006) found that crime was as much as five times as high in

communities with new urbanism layouts and that the costs to police such communities could be three times as high as communities without new urbanism layouts. Being faced with scarce resources, in order to be able to offer police protection which would likely decrease crime, local policy makers could push for blocking developers who tried to push new urbanism and smart growth designs on a community because of the heightened costs associated with these designs. This study found that having bothersome/noisy neighbors was negatively associated with residential satisfaction of respondents aged 65 to 70 as well as those aged 81 and older. Policy makers could work with housing professionals in deciding, based upon average age of residents, where noise ordinances would be beneficial to residential satisfaction. This study showed that for all elderly individuals, except those over the age of 80, homeownership was positively related to residential satisfaction. Local policy makers could work with public housing representatives to help initiate more home-buying opportunities for low-income elderly individuals.

Implications for Consumers

Consumers under the age of 65 could benefit from this study on a practical level when deciding where to locate. Individuals who like the ideas of new urbanism and smart growth may want to consider moving to an area where police satisfaction and living in the absence of serious neighborhood crime in the last 12 months are not important predictors of residential satisfaction. Stated another way, individuals who would enjoy the designs of new urbanism and smart growth may want to consider moving to a community with low percentages of individuals over 65 years of age. Lovejoy et al. (2010) made a compelling argument when they said, “ understanding preferences for neighborhood characteristics is important because these preferences influence residential

location choice, and residential location choice may have significant environmental, economic, and social implications” (p. 44). This study showed that bothersome/noisy neighbors were negatively associated with the residential satisfaction of the elderly population of the United States. Since the elderly population is rapidly growing, individuals, couples and families who enjoy “the night life” could logically conclude that they would not want to live in a community with a high percentage of residents over the age of 65. This would be a logical decision because, as described in the previous paragraph, local policy makers could enhance the residential satisfaction of elderly individuals in their communities by providing noise ordinances or enforcing previously disregarded noise ordinances. From another angle, consumers under the age of 65 who make safety a top priority when making a housing decision may want to move into a community with a high percentage of residents over the age of 65 because satisfactory police protection is important to them. With the United States population aging as it is, it will be important for housing professionals and local policy makers to keep these individuals satisfied; as this study showed, satisfactory police protection was an important predictor of residential satisfaction in the elderly.

Limitations

The major limitation of this study is the survey used. Since the American Housing Survey collects responses based on the structure and not on the person, it is not possible to follow an individual over time. A longitudinal study that follows an individual over time could not be conducted using this survey, but the survey works well when conducting a cross-sectional study like the one presented here. Following an individual over time could be important if one was attempting to determine if an individual's

preferences change over time or as he or she ages. Another limitation of this study is that it considers only United States residents. While the population of the United States is aging rapidly, so are the shares of the population over the age of 65 in other places such as Japan and most of Europe (Olshansky et al., 2009).

Future Research

Future research could be conducted in this area to investigate other non-housing related factors that are predictors of residential satisfaction among the elderly. While most previous studies have focused on the association between several housing related factors and residential satisfaction, this study is amongst a small number of studies that have examined the effect of non-housing related factors on the residential satisfaction of the elderly. Since the elderly population of the United States is growing rapidly, finding the predictors of residential satisfaction could prove to be beneficial overall. Just as universal design is now often applied to apartment communities or subdivisions that are not directed specifically at disabled persons, predictors of residential satisfaction which span across ages could also be implemented throughout the housing community.

Conclusions

As mentioned earlier in this study, the population of the United States is aging rapidly. This aging population will majorly affect the lives of all Americans, not just the elderly population. As stated by Hayutin, Dietz, & Mitchell (2010), aging of the population will “profoundly affect housing choices and living arrangements, much like suburbanization and changes in family structure dramatically changed living arrangements over the past half century” (p.5). Some researchers believe that, because of increased life expectancy caused by behavioral changes or scientific advances, the

population aged 65 and older could be as much as 22% higher than predicted by the Census Bureau by the year 2050 (Olshansky et al., 2009). The population aged 65 and older is important to consider when making housing policy decisions because over the next few decades, “the older population will grow by 120%, compared with 36% for children and 28% for working-age adults” (Olshansky et al., 2009).

This study is extremely important because of the potential implications the findings could have on housing professionals, policy makers, and consumers. Based on the results of this study, there could be major changes in apartment community management, subdivision development, ordinances, police patrol, and housing location choice. The results showing that living in a unit where the majority of one’s neighbors are 55 years of age or older is positively associated with residential satisfaction could lead to a huge increase in demand for the number of retirement communities available to the elderly population.

Although some studies have argued that preference for living in a neighborhood with a majority elderly population could lead to self-selection into age-segregated housing, according to Antunes et al. (1977), this could lead to some serious social consequences and various outcomes could occur. Two of the outcomes are as follows: possible increase in isolation of elderly individuals, possible decrease in opportunity for age-related stereotypes to be disproven with relaxed, informal, everyday encounters.

The finding, that living in an area where the majority of one’s neighbors are aged 55 and older is positively and statistically significant in predicting residential satisfaction, could lead to the consequences stated in Antunes et al. (1977). However, the preference for neighborhood safety found in this study also creates opportunities for developers to build

more inclusive communities, perhaps through mixed housing developments that include elderly housing within a regular community setting.

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