HOUSING SATISFACTION, SUPPORTIVE SERVICES

AND SOCIAL NETWORKS AS RELATED

TO LIFE SATISFACTION

OF THE ELDERLY

By

SARAH TOLEDO TOLEDO

Bachelor of Science in Home Economics
University of Puerto Rico
Rio Piedras, Puerto Rico
1968

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1979

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
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Name: Sarah Toledo Toledo   Date of Degree: December, 1982

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Scope and Method of Study: This study examined perceived
    life satisfaction (PLS) of elderly female residents in
    two congregate housing projects that differ with re-
    spect to the neighborhood and the services available
    outside the project. The PLS of the respondents was
    related to housing satisfaction, use of social net-
    works, use of services on-site and off-site, and socio-
    demographic characteristics. Differences in PLS were
    expected among the two projects. Two hundred women 62
    years of age or older who where living independently
    and had no physical disabilities that prevented their
    mobility in the neighborhood were interviewed. A
    questionnaire developed by the author and the Life
    Satisfaction Index-Z were used to collect the data.

Findings and Conclusions: No significant difference was
    found in the PLS between respondents of the two hous-
    ing projects. Housing satisfaction, frequency of
    visits by family and friends, change in the number of
    friends, educational level, age, need for additional
    services, use of on-site services and health were
    found significantly related to PLS. Frequency of
    visits by family and friends, monthly rent and age
    influenced PLS differently for respondents in the two
    projects. The author concluded that (a) housing satis-
    faction and use of social networks were the two most
    important factors in explaining PLS and (b) the effect
    of new housing, the recent improvement of housing
    conditions and greater physical mobility probably
    intervene to lessen the negative influence of fewer
    neighborhood services on the PLS. Opportunities for
    socialization and for active and passive interaction
    with the neighborhood should be encouraged by planners
    and administrators of housing for the elderly.

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Thesis Approved:

L. Kay Stewart
Thesis Adviser

Lorene Beeler

George E. Arquitt, Jr.

Donald E. Allen

_____

Dean of the Graduate College

ii

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Housing plays a very important role in the relation-
ship between older people and their community. According
to Atchley (1971:272),

> . . . where a person lives largely determines
> his or her opportunities for contact with other
> people . . . affects access to various commun-
> ity services . . . One's home is where a large
> part of one's life is led, and it can either
> help or hinder the individual in his or her at-
> tempts to enjoy life.

Social gerontologists and environmental psychologists
of aging assume that the behavior and satisfactions of
older people are particularly dependent on physical fac-
tors in the environment that encourage or discourage
social interaction. One might assert that a sense of com-
munity alleviates fear and feelings of isolation of older
people. In agreement with this, Blank and Phelps (1979)
stated that environments which do not allow for, and pro-
mote social interaction are likely to lead to loneliness,
a cycle of loss of ability, and a growing sense of inabil-
ity and "differentness."

The percentage of elderly group is increasing more rapidly than any other group in our society. The majority of the elderly live independently in their homes within a community setting. The integration of elderly people into the larger community is a major concern.

The U.S. Census of Population and other statistics for Puerto Rico show that the elderly population increased considerably during the last decades. In 1980 it was estimated that persons 60 years or older comprised 10.5 percent of the population of the whole island and 11.9 percent for the city of San Juan (Puerto Rico Planning Board Report, 1978; Puerto Rico Gericulture Commission, 1980).

Statistics show that the elderly population in Puerto Rico is predominantly in the lower income group. In 1970, 72.1 percent of the total elderly population in Puerto Rico had incomes below the poverty level (Puerto Rico Census of Population, 1970).

The poverty conditions of many elderly in Puerto Rico place them in situations of extreme economic deprivation. Therefore, the opportunity to acquire goods and services, such as quality housing, necessary for a satisfactory life is extremely limited.

Congregate housing for the elderly, assisted by federal funds, started in the United States approximately 20 years ago. This housing alternative permits the elderly

to continue living independently in the community rather than in institutions or with relatives.

Congregate housing is a relatively new housing alternative for the low-income elderly in Puerto Rico. This housing type is comprised primarily of federally subsidized rental apartments which are designed for the elderly. In 1980 there were, on the island, 22 congregate elderly housing projects, of which 11 were located in the city of San Juan. All of them were high-rise buildings including efficiency and one bedroom apartments.

The construction of this type of housing as the most appropriate alternative for low-and middle-income elderly who lack adequate housing is becoming popular in the island. However, research that supports congregate housing as the best alternative for the elderly is missing in Puerto Rico. According to Royo and Rivera (1974), in Puerto Rico there is a very limited amount of research that identifies and analyzes the economic, social, and health conditions of the elderly that can be used by planners of programs to develop services for the elderly.

Results of past research in the United States suggest that the concept of congregate housing for the elderly is one of the better alternatives for the low- and middle-income elderly who desire to continue living independently. Research findings show that congregate housing for the elderly is related to higher exposure to environments of increased activities (Carp, 1975, 1978); improvements on

health and life expectancy (Carp, 1977); higher levels of well-being (Lawton & Nahemow, 1975); age integration that increases on-site activity participation, morale, housing satisfaction, and neighborhood mobility (Teaff et al., 1978); and higher levels of social relationships due to higher proximity between elderly residents (Lawton, 1968).

Lawton et al. (1980) pointed out that research-based knowledge is by no means conclusive as to what constitutes the ideal package of services for various kinds of tenants in planned housing for the elderly. Limited attention has been given to the effects of the availability of supportive services on-site and in the neighborhood on life satisfaction of elderly residents in these housing projects.

There is considerable deficiency in research regarding the effect of supportive services on the health, morale, or behavioral competence of residents of congregate housing for the elderly. Lawton (1969, 1980) has pointed out in several of his studies that there is an urgent need for research in this area.

Some studies assessing the importance of on-site supportive services have been conducted (Carp, 1975, 1978; Lawton 1969, 1976, 1980; Harel & Harel, 1978). However, few studies have been found that examine the importance of supportive services in the neighborhood to elderly residents of congregate housing.

The use of social network is another area which has

received little attention in recent studies (Cohen and Sokolvsky, 1979). However, the use of social network is an aspect which may be affected when the elderly are relocated in congregate elderly housing projects. The relocation of the elderly might be of critical importance because many of them are probably moving from familiar areas where some of their relatives and most of their oldest and close friends live. It has been reported that the change of residence can obstruct the existing social network of the elderly (Snow and Gordon, 1980).

Findings of recent studies indicate that the use of social network is related to satisfaction with housing (Lawton and Nahemow, 1975; Huttman, 1977), with availability and use of supportive services (Mitchell, 1969; Carp, 1979), and with life satisfaction (Campbell, Converse and Rogers, 1976). However, few studies have researched the relationships between any two of these variables and none has been found which analyzes the interrelationships of all these variables simultaneously.

It is necessary to assess the relationships of the use of supportive services and the use of social networks with the housing satisfaction of the elderly, because all of these may have a direct relationship with the life satisfaction of the elderly. Therefore, if the intent of housing, designed for the elderly, is to provide adequate dwellings which satisfy the most basic needs, then all these aspects should be considered.

The first preference of most elderly persons is to continue living independently in their single family homes as long as their physical and financial resources permit. At present, congregate housing appears to be the best alternative for elderly persons who want to live independently, but do not have resources to maintain their own single family homes. The most satisfying housing environment for the elderly may be created by integrating congregate housing into a neighborhood through supportive service interchanges. This approach needs to be evaluated empirically.

Purpose and Objectives

The purpose of this study is to examine the life satisfaction of elderly female residents in two congregate housing projects that differ with respect to the surrounding neighborhood and the supportive services available outside the project. The objectives of this study are as follows:

1. To assess characteristics of the two projects in terms of:

    a. sociodemographic characteristics of the residents

    b. services available on-site

    c. neighborhood services available

    d. use of social networks

    e. life satisfaction

    f. housing satisfaction

2. To analyze relationships between life satisfaction and:

> a. sociodemographic characteristics of respondents,
>
> b. the use of supportive services (in the neighborhood),
>
> c. the use of social networks,
>
> d. the perceived need for additional supportive services (on-site and in the neighborhood) and
>
> e. housing satisfaction

for residents in each of the projects.

Hypotheses

The following hypotheses were formulated to meet the objectives of this study:

Hypothesis One: The perceived life satisfaction of female residents of an elderly housing project that has greater accessibility to neighborhood services will be higher than for residents of a project with less accessibility to neighborhood services.

Hypothesis Two: Perceived life satisfaction of female residents in elderly housing projects is related to:

> a. sociodemographic characteristics of respondents.
>
> b. use of social networks.
>
> c. use of supportive services.
>
> d. need for additional services.

Hypothesis Three: The relationship between perceived life satisfaction and the independent variables will differ between projects where residents have easy access to supportive services in the neighborhood and where they do not.

Definitions

The following definitions will be utilized in the study:

1. Congregate Housing for the Elderly - Dwelling units occupied only by the elderly, grouped together in apartment complexes, cluster housing, or condominiums, age-segregated or proximate housing (Morris, 1978:224). For the purpose of this study, they are federally subsidized housing projects that offer rental apartments to middle- and low-income persons, 62 years or older.

2. Elderly - Being past middle age (Webster Dictionary, 1976:365). For the purpose of this study, the elderly is defined as all those persons of 62 years or older.

3. Neighborhood - Is a particular district or geographic area with a variety of distinctive physical, functional, and symbolic attributes. It includes a maximum radius of 10 city blocks (Cantor, 1979:39).

4. Social Network - A set of social linkages established and maintained among the elderly with family,

friends, and acquaintances in their housing project, in the neighborhood, and in the community in general. It is measured by two multiple item indexes and one single item index which assess frequency of visits by family and friends, change of frequency of meetings with friends and family, and change in number of friends.

5. Supportive Services - Those services or facilities in the community which are complementary to the need for shelter. Examples of them are: shopping facilities for groceries, medicine, clothing, and others, recreational and educational facilities, churches, public transportation, barber and beauty shops, banks, medical facilities, and offices for social services and housing utilities.

6. City Block - A portion of a city or town, usually bordered by four neighboring and intersecting streets (The Living Webster Encyclopedic Dictionary of the English Language, 1967:105). For the purpose of this study a block is a distance of 300 feet.

7. Satisfaction - The act of satisfying, or the state of being satisfied; fulfillment of desires, demands, or needs. (The Living Webster Encyclopedic Dictionary of the English Language, 1967:853).

8. Life Satisfaction - Sense of contentment and fulfillment with life in general. It is measured by the Life Satisfaction Index-Z, a modification by Wood et al. (1969) of the instrument developed by Neugarten, Havighurst, and Tobin (1961).

9. <u>Housing Satisfaction</u> - A state of the level of contentment with current housing conditions. Low levels of satisfaction are experienced as stress. The term may refer to the entire continuum of satisfaction from very dissatisfied to very satisfied. Thus, the level of satisfaction is inferred in addition to the idea of a state of being satisfied (Morris and Winter, 1978:80). In this study it is measured through five questions structured to indicate satisfaction with (a) apartment features, (b) amount of storage, (c) communal areas in the housing project, (d) neighborhood, and (e) housing project as a place to live. A five-point scale indicated degree of satisfaction for each of the five aspects of housing.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

A general review of the literature regarding per-
ceived life satisfaction among the elderly and how it has
been correlated to the living environment, use of suppor-
tive services and use of social networks is presented
here. The focus is on how these factors may affect the
residents of congregate housing projects for elderly. The
factors affecting life satisfaction of the elderly in
congregate housing may differ from factors affecting life
satisfaction of the general population in other living
situations.

Life Satisfaction

Definition of Concept

Life satisfaction is a complex variable. Barrow and
Smith (1979:57) state that,

> To many, happiness means no more than a state of
> not being unhappy. For some, happiness is a
> state of positive experiences, rewarding activi-
> ties, and a meaningful relationship throughout
> the life span. For others, happiness is achiev-
> ing distance from periods of trauma, stress, and
> unpleasant experiences.

Campbell, Converse and Rodgers (1976:219) state that, "sat-
isfactions are seen as a product of comparisons between
assessments of standards derived from past experiences and
observations."

George and Bearon (1980) emphasize that the quality
of one's life includes perception of well-being, a basic
level of satisfaction or contentment, and a general sense
of self-worth. Therefore, an individual's personal inter-
action and relations with the environment should be pros-
perous in order to maintain self-esteem. Also, George and
Bearon (1980:9) state, "Successful negotiations with the
environment are less likely in later life; the self-esteem
is less likely to be positive."

It has been reported that the self-esteem feeling is
not enough for some elderly's achievement of a general
sense of quality of life. Kahana, Felton, and Fairchild
(1976) point out that even older adults who are capable of
continued independent living in the community encounter
many special problems in coping with social role changes
and limited resources. Thus, we can infer that the behav-
ior and satisfactions of older people are also dependent
on psychological factors in the environment that encourage
or discourage social interaction.

Theory Development

In the study of life satisfaction of the elderly, two
major theories have been developed. These theories

are disengagement theory and activity theory.

The disengagement theory was developed by Cumming and Henry in 1961. This theory states that decreased activity, social and otherwise, is expected of the elderly and the extent to which an aged individual complies with this role expectation is related to his or her life satisfaction. A more explicit definition presented by Barrow and Smith (1979:54) states, "Disengagement is a mutual withdrawal of the aged from society and society from the elderly in order to insure its own optimal functioning." Cumming and Henry state that the time and form of disengagement varies from individual to individual.

The use of social networks by older persons is affected by disengagement behavior. Mitchell (1980:22) points out, "As the person's energy declines, the reaction is to reduce the number or the intensity of involvements, concomitantly focusing more on inner states." Because the older person reduces the level of social interaction, the result is loss of social ties. According to Brown (1974:259), "Those who were less than completely satisfied with immediate family relations had more frequently disengaged in general than those who expressed complete satisfaction." Disengagement behavior among the elderly has also been related to reduced self-esteem (Barrow and Smith, 1979).

This theory has been criticized by several social scientists. Mentioned as major criticisms are that it is ethnocentric, that it discourages intervention to help

old people, that it does not explain why some elderly disengage and others do not, and that it has not been systematically retested (Barrow and Smith, 1979; Mitchell, 1980).

The activity theory states that activity is the essence in the life of people of all ages and that older people maintain adjustment through social contacts. This theory also states that to grow old normally, it is necessary to retain the activities and attitudes of middle-age as long as possible (Havighurst, 1961). According to Barrow and Smith (1979:53),

> Activity theory predicts that those who are able to remain socially active will be more likely to achieve a positive self-image, social integration, satisfaction with life and therefore, they will probably age successfully.

Activity has been positively related to well-being and life satisfaction. Abdel-Ghany (1977:39) concludes from his study,

> self-reports of adaptation or life satisfaction among the elderly are related to all types of social activities, from intimate friendships, getting together with acquaintances, relatives, or family, and activity in formal community and religious organizations.

Measures of Life Satisfaction Among the Elderly

Several research studies have been done during the past 30 years on the life satisfaction, well-being, morale

and contentment of older people. The most recent measures used in these studies define life satisfaction, or well-being, as a strictly internal construct, independent of the external conditions of a person's life. Of the scales that measure life satisfaction as a multi-dimensional construct the most frequently used are Life Satisfaction Index A (LSIA) developed by Neugarten, Havighurst and Tobin in 1961, and the Philadelphia Geriatric Center Morale Scale developed by Lawton in 1972.

Other scales measure life satisfaction and well-being as a unidimensional construct. Examples of these (Larson, 1978) are the Kutner Morale Scale, the Life Satisfaction Scale of the Cornell Study of Retirement, and the Scale of Happiness of Havighurst and Abrich.

These scales differ in the time span for which the assessment is being made. They also differ in the extent to which evaluations are based on a comparison to other people, to one's past experience, or to one's conception of how things are "supposed to be."

The LSIA (Neugarten et al., 1961) and its modifications is the most frequently used measure of life satisfaction in recent studies with the elderly. It measures five components of life satisfaction: zest(vs. apathy); resolution and fortitude; congruence between desired and achieved goals; positive self-concept; and mood tone. According to Neugarten et al. (1961:137),

An individual was regarded as being at the posi-
tive end of the continuum of psychological well-
being to the extent that he: (a) takes pleasure
from the round of activities that constitutes
his everyday life; (b) regards his life as mean-
ingful and accepts resolutely that which life
has been; (c) feels he has succeeded in achiev-
ing his major goals; (d) holds a positive image
of self; and (e) maintains happy and optimistic
attitudes and mood.

The Life Satisfaction Index-Z is probably one of the

measures of Life Satisfaction most commonly used to assess

the life satisfaction of elderly residents of congregate

housing (Blank and Phelps, 1979; Peterson et al., 1973).

This measure is relatively short, it consist of 13 items.

This permits the researcher to administer it and to record

the results in a relatively short period of time. Another

advantage of this measure is that it has consistently

given an adequate representation of the life satisfaction

of the elderly studied (Larson, 1978).

Contributors of Life Satisfaction

During recent decades social scientists have shown

increasing interest in the analysis of life satisfaction

of older persons. A review of the literature shows that

several factors have been identified as related to life

satisfaction among older persons. Family life, interper-

sonal relationships, physical and mental health, income,

sex, age, marital status, education, activity, institution-

alization, use of social networks, housing, transportation

and neighborhood are among the aspects that have been

correlated with the elderly's life satisfaction (Lawrence and Guy, 1980; Adams, 1971; Cutler, 1975; Abdel-Ghany, 1977; Cambell et al., 1977; Conner, Powers and Bultena, 1979; Blank and Phelps, 1979; and Mitchell, 1980).

Fewer studies have examined life satisfaction, use of social networks and use of supportive services among the elderly. Most studies treat these variables separately. No studies have been found that include all three variables and examine the relationships among them.

According to a survey by Larson (1978), the variables most related to life satisfaction are health, level of education, occupational status, marital status, availability of transportation, housing, and nonamorous forms of social interaction. Health was found to be the strongest predictor of life satisfaction. According to Abdel-Ghany (1979), the main factors that affect life satisfaction of the elderly are: housing, health, social relationships, independence, and economic conditions.

Findings of recent studies indicate that there is a direct relationship between high levels of social participation or social networks and life satisfaction among the elderly (Barrow and Smith, 1979; Bohland and Davis, 1979; Campbell, et al., 1976). Abdel-Ghany (1979) concludes from his study that elderly who are more socially active are more likely to be satisfied, and those who are less active and more likely to be dissatisfied with their lives.

Living Environment

Before discussing how the living environment affects life satisfaction of the elderly, a description of the concept of living environment is necessary. Living environment has been frequently described from a psychological perspective. As Ittelson (1976) states, man and his environment cannot be studied as separate entities. He concludes that,

> 'the environment' is thus seen as a total active, continuous process involving the participation of all aspects. All the components of the environment are defined in terms of their participation in the total process; no component is seen as an entity existing in an environment composed of other entities . . . the 'environment' has no fixed boundaries in either space or in time (Ittelson, 1976:153).

According to Crandall (1980:276), living environment is defined as "everything extraneous to the individual."

In order to examine some aspects more closely, Crandall (1980) subdivided the living environment into two main categories of living environment: (a) the people effect - the way individuals are affected by those around them and (b) the thing effect - the way things in the environment affect individuals.

A more detailed classification of the living environment is presented by Lawton (1975b). He places a great emphasis on the social aspects of the interrelation of the individual with the environment. The four major

categories of Lawton's taxonomy of the living environment are as follows:

1. _Personal environment_ - the significant others constituting the major one-to-one social relationships of an individual (family members, friends, work associates).

2. _Suprapersonal_ - the model characteristics of all the people in physical proximity to an individual (for example, the predominant race or the mean age of other residents in a person's neighborhood).

3. _Social environment_ - the norms, values and institutions operating in the individual's subgroup, society, or culture.

4. _The physical environment_ - defined as the non-personal, non-social residue (p. 22).

The preceding definitions and descriptions of the living environment point out the necessity for defining living environment to include more than the physical aspects of a house or apartment. In addition to the physical aspects, the living environment includes all the social and psychological components of the immediate environment and the surrounding neighborhood. Ittelson's (1976:151) statement confirms this.

> Environments are almost without exception en-
> countered as part of a social activity; other
> people are always a part of the situation and
> environment perception is largely a social
> phenomenon.

Therefore, when the intention is to study the living environment of any group of individuals, such as the elderly, the physical and non-physical aspects should be together and not analyzed as separate entities.

According to Windley and Scheidt (1980:410-13), the following are living environment attributes that housing for the elderly should fulfill:

1. Sensory Stimulation - the ways and extent to which environmental stimulation can help compensate for age changes;

2. Legibility - the degree to which a setting possesses spatial organization and incorporates the components of identity and structure;

3. Comfort - includes the presence or absence of luminous, acoustic, thermal, and anthropometric properties of a setting;

4. Privacy - the process in which the physical environment controls inputs from others and outputs to others;

5. Adaptability - manipulation of significant environmental factors to help compensate for aged-related changes;

6. Control (Territoriality) - the degree to which the environment facilitates personalization and conveys individual ownership of space;

7. Sociality - the features of an environment which encourage or discourage social contact among people;

8. Accessibility - the ease with which a person can traverse from Point A to Point B in a given setting, and the degree to which more stationary objects or products can be manipulated;

9. Density - the degree by which a space is perceived to be crowded or not;

10. Meaning - the attachment or symbolic meaning attributed to objects and places, based on social cultural roots;

11. Quality (Aesthetics) - deals with the aesthetic appeal of a setting from the user's point of view.

Congregate Housing

Over 95 percent of the elderly live independently in the community (Crandall, 1980). During recent years, a considerable number of the independent older people have moved to housing designated for the elderly. According to Carp (1977), in 1977 about 600,000 elderly were living in special housing projects for the elderly funded by the Department of Housing and Urban Development (HUD). Because of lower rent, good quality structure, and the opportunity to live independently, elderly housing projects might be the better alternative for low and moderate-income elderly.

Congregate housing for the elderly, as one type of independent household arrangement, has proliferated both in number and variety in the past decade. Federally

assisted congregate housing as an alternative for the middle and low income elderly began in 1959. These age segregated multi-family units are developed by H.U.D. and sponsored by local governmental or private organizations in the community.

These congregate housing projects are mostly high-rise buildings localized in the metropolitan areas. The majority of the projects consist of apartments of one bed-room. The apartments are rented to persons 62 years old and over, who are able to live independently, whose income is low or moderate, and who do not have much in assets. Rent subsidy is provided through the Section 8 Rental Assistance Program to eligible tenants in some of these projects.

Living in this type of housing project has proved to be beneficial for the elderly. According to studies by Carp (1975, 1978) and Lawton and Cohen (1974) life satisfaction levels of residents of these housing projects has been found to be higher than for residents who were not admitted to the projects and remained in the community. Lawton (1980) also states that congregate housing provides very desirable heterogeneity and probably stimulates leadership among its residents.

When compared with elderly in traditional housing, Lawton's (1976) findings indicated that tenants of congregate housing for the elderly perceived relative improvement in morale, housing satisfaction and available social

network. Peterson, Longino and Phelps's (1979) study
indicates that when there are no constraints because of
mobility or building design which can inhibit social inter-
action, fewer residents of congregate housing perceived
that they were lonely, lacked friends, felt unneeded or
lacked enough to do to keep busy. Carp (1978:88) con-
cludes from her studies with elderly residents of Victoria
Plaza that,

> Since better life satisfaction and life expec-
> tancy accompanied this higher level of activity,
> . . . - for intact people who chose it - a liv-
> ing environment which provides for and expects
> an active life-style can be a beneficial setting
> in which to grow old.

During recent years several studies have been conduct-
ed with residents of HUD housing projects for the elderly.
Example of the most relevant aspects studied are:

1. Housing design, housing satisfaction and life
satisfaction - Blank and Phelps (1979)

2. Housing needs, housing satisfaction and life
satisfaction - Peterson, Hamovitch and Larson (1977)

3. Housing satisfaction - Carp (1975b)

4. Housing needs and housing satisfaction - Toledo
(1979)

5. Housing characteristics and well-being - Lawton,
Nahemow and Teaff (1975)

6. Well-being - Lawton and Cohen (1974; Lawton
(1976)

7. Social areas and the well-being - Lawton and Nahemow (1979)

8. Social relationships - Lawton and Simon (1968)

9. Activity and use of time - Carp (1978)

10. Supportive services - Lawton (1969)

11. On-site services - Harel and Harel (1978), Lawton (1969)

12. Health and life expectancy - Carp (1977)

13. Location within the city - Carp (1975a)

The majority of these studies analyze the influence of one or two variables and but a combination of variables simultaneously. Also, results of past studies indicate that aspects other than housing design and services available on-site might be affecting the housing satisfaction and life satisfaction of elderly residents. However, studies which analyze simultaneously the interrelation and influence that the use of social network, the use of supportive services in the neighborhood and housing satisfaction have on the life satisfaction of elderly residents have not been conducted.

Satisfaction With Housing
and Neighborhood

Housing

The housing component of the living environment probably has the greatest potential influence on elderly

families and individuals. It is in the house that the elderly spend much of their time (Barrow and Smith, 1979). According to Rowles (1981:309), the home is "the more salient space in terms of both individual's time and emotional investment."

It is assumed that as the individual becomes older, the environmental vulnerability increases (Rowles, 1981). In general, elderly individuals show a reduction in mobility and a gradual constriction of their zone of activity. Many elderly are less mobile because of economic or physical conditions. In relation to this, Crandall (1980:277) states that "Generally the aged respond to their environment differently than younger age groups primarily because the senses of the aged are usually operating at a lower level." This voluntary or forced reduction in mobility encourages them to remain in their homes and in the familiar neighborhood. Therefore, the elderly individual's satisfaction with housing is very important.

Several factors have been considered as contributors to the elderly's satisfaction with housing. The most important aspects are, the physical conditions of the residential environment, the convenience of having nearby public and private facilities and services, the size of the dwelling, the presence of conditions, such as spacious, quiet and safe surroundings, the quality of the neighborhood and accessibility to friends and relatives (Campbell, et al., 1976; Peterson, Hamovitch and Larson,

1973; Mathiew, 1976; Carp, 1979; Blank and Phelps, 1979).

In relation to this, Barrow and Smith (1979:215) state that to the elderly, "housing becomes unsatisfactory if its location is not within walking distance of friends and services." From this we can infer the great importance that supportive services in the neighborhood and use of social networks have for the elderly. If the elderly feel isolated from the people and places that they need to visit, other factors such as design, space, comfort, cost, and quality of housing might be of secondary importance.

The aspects that influence housing satisfaction are very similar for people of all ages. However, the way in which housing and neighborhood are perceived may be affected by increasing age. According to Bohland and Davis (1979), age influences satisfaction with the neighborhood because the perception of the environment is affected by physiological and psychological changes that occur with aging. They state also that the expectations and aspirations and the standards against which reality is judged are affected by age.

Neighborhood

Neighborhood is defined by Lawton (1979:XVIII) as

a sociological concept as much as a physical environmental concept. From the social point of view, a network of face-to-face relationships and at least economic, if not social and affective, interdependencies are implied.

According to Cantor (1979), the elderly participants in her study defined neighborhood as the area surrounding the housing which includes a maximum of 10 city blocks.

As a component of the living environment, neighborhood is considered as one of the elements or the element which most affects the elderly's satisfaction with housing (Campbell et al., 1976; Mathiew, 1976; Crandall, 1980; Huttman, 1977; Lawton, 1975b, 1980). According to Peterson et al. (1973), the neighborhood seems to have a considerable meaning to the elderly whether they live in an age-segregated type of housing or not. In relation to this, Huttman (1977) indicates that elderly, living in housing projects in inner areas, who have more opportunity to participate in community activities are more satisfied with their housing.

The accessibility of and convenient distance to services, facilities and social contacts influence the way in which the neighborhood is evaluated (Lawton, 1975b; Crandall, 1980). Also the neighborhood is of particular importance to the elderly if it is a familiar place and if the neighbors are the most frequented social contacts. Kahana, Felton and Fairchild (1976) categorize neighborhoods as stressors or facilitators. The physical characteristics and social fabric of the neighborhood may affect the older person and influence the need for services. Therefore, we can infer that when an elderly person is relocated in a new neighborhood, a major number of

similarities with the previous one and adequate accessibility to places they need to go will help ease the adaptation of the older person.

In addition to this, Huttman (1977:41) states that an adequate neighborhood for the elderly "should be clean, with decent lighting, with parks, with familiar buildings, with possibly a concentration of elderly, and it should be a safe place to live." Lawton (1975) infers that neighborhoods of predominantly industrial and non-retail commercial areas are not recommended for the elderly because they may be unsafe and far from the places they need to visit.

From the previous literature, one can infer that housing and neighborhood have a strong relationship and are very important to the elderly. Neighborhood satisfaction might have a direct relationship with elderly's housing satisfaction . This is especially important because many elderly spend most of their time in their homes.

Studies indicate that elderly people may prefer to maintain social relationships with other aged individuals (Kalish, 1975; Huttman, 1977). According to Barrow and Smith (1979:152), "The elderly find more friends and sociable neighbors when they live in areas where the proportion of aged is high." Elderly may be more satisfied if they have more opportunities to share time and experiences with other people of similar age.

Relations with friends are of great importance to the elderly. Friendship ties may provide greater satisfaction to the elderly than relationships with relatives (Blau, 1973; Philblad and Adams, 1972). Siemaszko (1980) states that the elderly's relationship to friends are only secondary to those with children.

Supportive Services

The availability or nonavailability of services and facilities in close proximity to the house is another factor that affects the elderly's satisfaction with housing. For the purpose of this study, supportive services include all those services and facilities which are currently needed and are or are supposed to be close to the housing. Services such as shopping, medical, transportation, restaurants and barber and beauty shops, and facilities such as places for worship, education and recreation are included here.

Supportive services in close proximity to the housing are very important if the elderly are to continue living independently in the community (Lopata, 1975; Huttman, 1977; Brody, 1979). The majority of older people demonstrated needs for certain basic programs, facilities and services to encourage customary lifestyles and to improve the quality of life (Carp, 1975b). One of Carp's findings after her eight years study with tenants of Victoria

Plaza, a congregate housing for the elderly, indicate that the respondents reported dissatisfaction with shopping facilities due to the location of the project. According to Lawton (1975a) proximity to a few basic services fosters continued engagement with the world outside the housing site.

Of the supportive services needed by the elderly, proximity to grocery and shopping facilities, medical services, and transportation are given the highest priority (Peterson et al., 1973; Huttman, 1977; Larson, 1978; Carp, 1979). The grocery store is considered by the elderly as the most important service to be available in the neighborhood (Carp, 1975b; Cantor, 1979; Barrow and Smith, 1979; Toledo, 1979; Crandall, 1980). Shopping for groceries is one of the most frequent activities for the elderly in their neighborhood. Reasons for this are the lack of own car or other people's help to bring the groceries home, their sense of independence and self-sufficiency in being able to shop for themselves for being alone, and the need for exercise through walking, and social contacts that are made in the process.

Accessibility to medical services is one of the facilities believed as very important for the elderly (Cantor, 1979; Peterson et al., 1973; Toledo, 1979). This is especially important because health is considered as one of the most, and sometimes the most influential

sociodemographic characteristic to the life satisfaction of the elderly (Abdel-Ghany, 1976; Larson, 1978).

Services must be accessible in order to be adequately utilized by the aged. It is recommended that the services most frequently used should be within walking distance of the housing of the elderly. A distance of four to six blocks from their housing is the distance that the elderly are willing to walk (Lawton, 1975b; Regnier, 1975).

Adequate public transportation is also considered of critical importance for the elderly (Lawton, 1975b; Carp, 1979; Crandall, 1980). When distance between housing and the places of social interaction and acquisition of services is too far for the elderly, the dependency on available transportation as a means of mobility is higher because walking is less frequently used. In relation to this Carp (1979:129) states:

> Without appropriate transportation, the old person's living environment is limited to his home. No matter how nice that housing, and particularly in view of the generally inferior housing for the elderly, the person will have difficulty maintaining independence, dignity, and freedom of choice.

According to Barrow and Smith (1979) lack of adequate transportation affects the fulfillment of some of the basic needs of the elderly such as independent living and human contacts elderly are willing to walk (Lawton, 1975b; Regnier, 1975). The time that it takes to reach the

services is another factor that affects their utilization (Kahana, 1976). According to Carp (1976b) the following factors are very important in the provision of services for the elderly:

(a) Sufficient proximity to enable access without vehicles on the part of elderly persons;

(b) sufficient safety of the pedestrian trip to service;

(c) The greater ease of providing services for the elderly where many of them are congregated.

Social Networks

From the preceding literature we can infer that the use of social networks has a reciprocal relationship with the elderly's satisfaction with housing and life satisfaction. Perceptions and satisfactions with the living environment may affect the establishment, maintenance, and use of social networks among the elderly. Therefore, the analysis of social networks can be a useful tool to provide insights into the housing needs of the elderly (Cohen and Sokolvsky, 1980).

According to Snow and Gordon (1980:465),

Social network is necessary in order to determine the structure and functioning of the older person's inter-personal world,and for examining the nature of changes in one's social network over time and of the impact of these changes on the individual.

Social network has been described by Mitchell (1969) as a multiple set of linkages between definite groups of people which exist simultaneously on the basis of different interests and which remain after the completion of any particular transaction. The social network reflects a great variety of personal and social relationships. Mitchell (1969:49) stated that,

> The network approach deliberately seeks to examine the way in which people may relate to one another in terms of several different normative frameworks at one and the same time, and how a person's behavior might in part be understood in the light of the pattern of coincidence of these frameworks or 'contents'.

The analysis of social networks of the elderly might permit the researcher the identification of significant social contacts and relationships that affect older persons' satisfactions with their living environment. The social network of elderly persons living in a housing project designed for them may affect their particular use and need of supportive services.

How the environment and living conditions affect persons who move into congregate housing projects for the elderly has become of popular interest among social researchers as more elderly move into this type of housing. The impact that this new living environment has on the well-being of the elderly is a matter of concern. As was stated by Snow and Gordon (1980:465),

The influence of significant life events like the change of residence may impose a stress on the individual and also can seriously disrupt the existing social network or interfere with the individual's willingness or ability to participate in it.

Research findings indicate that there is a positive relationship between the use of social network and residing in housing projects for the elderly. Lawton and Simon (1968:108) state that, "Proximity to age peers and increased opportunity for social relationships are major advantages of planned congregate housing." According to Huttman (1977), congregate housing has been beneficial for the elderly because they prefer neighbors of their own age and type, and, as a result, they feel higher satisfaction with housing. In relation to this, Lawton and Nahemow (1975) conclude that the new social network developed in the housing project is highly fulfilling for them, however, many do not participate in housing-sponsored activities.

Location and characteristics of the neighborhood around the housing project are factors that can also affect the social behavior and participation of the elderly residents. Carp's (1979:21) findings from a study of elderly living in congregate housing projects suggest that, "Centrality of location will be associated with more active, autonomous, and satisfying use of time, space, and the social network." Safety, adequate transportation,

neighborliness, familiarity with place, services and facil-
ities, and a high proportion of elderly are neighborhood
characteristics that stimulate social interrelationships
among the elderly (Cohen and Sokolvsky, 1979; Mitchell,
1969; Carp, 1979; Lawton, 1980).

<center>Life Satisfaction Related to Aspects
of the Living Environment</center>

The preceding discussion of the literature indicates
that housing, neighborhood, supportive services and social
networks are aspects of the living environment which are
very important in the life of the elderly. Throughout all
this presentation it is implied that all these aspects are
interrelated and reciprocal relationship may exist.
Campbell, Converse and Rogers (1976:265) present part of
this idea in this statement:

> Satisfaction with community is strongly related
> to satisfaction with the neighborhood, and satis-
> faction with neighborhood shows a strong rela-
> tionship to housing satisfaction. Satisfaction
> with these domains of the environment are also
> related to satisfaction with other domains of
> life experience. Finally, satisfactions with
> these residential environments, as well as satis-
> faction with other domains of life experiences,
> are related to expressed satisfaction with life
> as a whole.

As part of the living environment, housing involves
the interrelationship of many aspects. Housing is affect-
ed by a diverse number of factors, and it also affects

other aspects of the life of the elderly. Therefore, the interrelation of housing satisfaction with life satisfaction is broad and abstract and it can be considered as reciprocal. Recent research findings indicate that there is a positive relationship between housing satisfaction and life satisfaction (Bohland and Davis, 1979; Carp, 1978; Abdel-Ghany, 1977; Campbell et al., 1976; Crandall, 1980).

Neighborhood, supportive services and social networks are considered as aspects which directly or indirectly affect the elderly's satisfaction with housing and life in general. The use of supportive services in the neighborhood may influence the elderly to widen their social networks. Therefore, with higher levels of activity and an increased number of social relationships, higher levels of satisfaction with life are expected (Adams, 1971; Carp, 1978).

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

This chapter describes the methodology used in this study. A detailed description of the selection of the sample, instruments used for the collection of the data and the procedures used for the analysis of the data are included.

Research Design

The survey research design was used in this study. This design permitted the researcher to randomly select a sample from a population of elderly female residents of housing projects. A sample of the population may provide the same information with more speed and efficiency, less costs, and as much or more accuracy as a survey of the entire population would reveal. In addition, this method has been used successfully in previous studies with elderly subjects. Studies by Lawton and Cohen (1974), Carp (1977), Teaff, Lawton, Nahemow, and Carlson (1978), Blank and Phelps (1979), and Lawrence and Guy (1980) are some examples.

Population and Sample Selection

The population for this study was female residents of housing projects for the elderly, founded by the Department of Housing and Urban Development (HUD) in San Juan, Puerto Rico. Included in this population were women of 62 years of age or over who were living independently and had no physical disabilities that prevented their mobility in the neighborhood.

The sample was identified in a two stage procedure. In the first stage two housing projects were selected. The criteria for selection was (1) the projects were very similar regarding the on-site services available to the residents and (2) the projects were different in terms of location in relation to services available in the immediate surrounding neighborhood. Information about on-site services, location and neighborhood services was obtained by site visits to all 11 HUD sponsored elderly housing projects in San Juan. Comunidad del Retiro (356 units) and Leopoldo Figueroa (240 units) were selected as the test projects because they were the most similar in terms of on-site services and the most different in terms of location and neighborhood services. Leopoldo Figueroa was well integrated into a residential area that includes numerous services.

In the second stage of sampling a random sample was drawn from each project. The two project administrators

identified the apartment numbers of all residents meeting the criteria for sex, age, and mobility. A table of random numbers was used to draw the sample of 100 residents from each project.

Instrument

This study involved the use of two instruments: (a) Life Satisfaction Index-Z (LSI-Z), a modification by Wood et al. (1969) of the instrument developed by Neugarten, Havighurst, and Tobin (1961); and (b) a questionnaire developed by the author. The questionnaire was designed to collect information about: (a) sociodemographic characteristics, (b) housing satisfaction, (c) social networks, and (d) use of supportive services.

The instruments were translated into Spanish in order to be administered to the Puerto Rican elderly. A final revision for style and grammar of the translated instruments was performed by a professor of the Foreign Language Department of Oklahoma State University.

In order to determine clarity of questions and to evaluate whether or not the purpose of the research was fulfilled by the instruments, a pre-test was conducted. The pre-test consisted of 10 elderly female residents of an elderly housing project in Catano, Puerto Rico. These women were similar to the elderly women in San Juan in terms of the important sociodemographic characteristics

and housing characteristics. Following the pre-test, the questionnaire was revised by simplifying some items to increase clarity.

Data Collection

The data were collected in San Juan, Puerto Rico during July and August of 1981. An introductory letter explaining the purpose of the study, confidentiality, and suggested time for interviewing was sent as a first contact with each person in the sample (see Appendix A).

The instruments were administered by the researchers and three trained interviewers through personal interviews with the respondents in their apartments. The interviewers were trained individually and advised of the purpose of the study and the importance of consistency in interviewing techniques to avoid bias in the data. The approximate time for each interview was one hour.

Analysis of the Data

A set of 48 variables which were considered to be the most relevant for the purpose of the study was selected as the first step. These variables were classified and coded using a coding guide developed for that purpose (see Appendix C).

Construction of Indexes

In order to develop a measure of housing satisfaction,

questions were asked about the respondents' satisfaction
with five different aspects of their housing. The ques-
tions included in the index, which was called Housing
Satisfaction Index, were questions 14 to 18 in the ques-
tionnaire: Satisfaction with (a) apartment features, (b)
storage, (c) communal areas in the building, (d) neighbor-
hood, and (e) the place as a residence (see Appendix B).
The maximum possible score for this index was 25 and the
lowest was five because each of the five questions includ-
ed in the index has five categories with values from one
to five. The original values assigned to the categories
were negatively related to the level of satisfaction: for
example, very satisfied had a value of one while very dis-
satisfied had a value of five. In order to invert this,
the housing satisfaction score for each respondent was
multiplied by negative one (-1).

Two multiple item indexes and one single item were
used as measures of social network. The first index,
which was called Frequency of Visits by Family and
Friends, included data collection in section B of the
questionnaire (see Appendix B). This index measures the
frequency of visits by children, grandchildren, siblings
and relatives, friends, and acquaintances. The respon-
dents listed the number of persons who visited them in
each of the five categories; daily, weekly, monthly, or
annually. As a first step, a scale of 15 values was
developed to tabulate the responses by number of persons

and by frequency of visits (see Appendix C). However, in order to use a more accurate measure of weekly contacts, the frequencies were transposed to the equivalence of number of persons visiting per week. The categories were described in Table I as follows with the corresponding equivalences.

TABLE I

CATEGORIES FOR VISITS BY FAMILY AND FRIENDS

Code Number	Description	Equivalence of Number of Persons Visiting Per Week
14 = everyday - 2 or more persons		14
13 = everyday - 1 person		7
12 = more than once a week - 2 or more persons		4
11 = more than once a week - 1 person		2
10 = once a week - 2 or more persons		2
9 = once a week - 1 person		1
8 = 2 or 3 times a month - 2 or more persons		1
7 = 2 or 3 times a month - 1 person		.50
6 = once a month - 2 or more persons		.50
5 = once a month - 1 person		.25
4 = several times a year - 2 or more persons		.16
3 = several times a year - 1 person		.08
2 = once a year or less - 2 or more persons		.04
1 = once a year or less - 1 person		.02
0 = NEVER		.00

The period index of social network was called Change of Frequency of Meetings with Friends and Family. It included questions number 20 and 21 in the questionnaire which measured the change of frequency of meetings with friends and family after moving into the housing project.

The third measure of social network, Change in Number of Friends, consisted of a single question, number 19 in the questionnaire. It measured the change in number of friends after moving into the housing project.

For scoring these two indexes, the following values were used:

$$-1.00 = less$$

$$.00 = same$$

$$1.00 = more$$

Therefore, for the index Change of Frequency of Meetings with Friends and Family, the maximum score possible was 2.00 and the minimum -2.00, and for Change in Number of Friends, 1.00 was the maximum and -1.00 the minimum.

For measuring the frequency of use of supportive services, two indexes were developed. One index, called On-Site Services, included items one, two, three, and seven in Section C of the questionnaire (see Appendix B). This index measured the use of the following on-site services: (a) nursing/doctor examination, (b) mini-bus, (c) social worker, and (d) religious services. The second index, which was called Off-Site Services, measured use of services in the neighborhood. It included the use of the

following services: (a) grocery store, (b) drugstore, (c) clothing store, (d) barber/beauty shop, (e) bank, (f) restaurant, (g) church (h) hospital, and (i) public transportation (see Questionnaire, Section C).

As a first step, a scale of eight values was developed to tabulate the responses of use of services by frequency of use (see Appendix C). The scores obtained were also transposed into a measure of weekly visits (see Table II).

TABLE II

CATEGORIES FOR USE OF SERVICES

Code Number	Description	Weekly Visits
7 = daily		7
6 = more than once a week		2
5 = once a week		1
4 = 2 to 3 times a month		.50
3 = once a month		.25
2 = several times a year		.08
1 = once a year or less		.02
0 = never		.00

Regarding the Life Satisfaction Index, the following scores were used:

0 = wrong answer (low satisfaction)

1 = question mark or no response

2 = correct answer (high satisfaction)

The responses were summed to obtain an overall rating ranging from 2 (lowest) to 26 (highest).

Dummy variables were created for the identification of the projects, the desire for additional services, the most needed services, the most liked aspects of project and the most disliked aspects of project. According to Mueller et al. (1977, p. 307), "Dummy variable analysis is a procedure for including into a multiple regression analysis nominal variables with more than two classes." Project location as a characteristic is a simple dichotomy and can be a predictor variable by coding one category as one and the other as zero.

Statistical Tests

A t-test was used for the Hypothesis One. The following formula was used for estimating the t-ratio.

$$t = \frac{(M_1 - M_2) - E(M_1 - M_2)}{\sqrt{\frac{(N_1-1)S_1^2 + (N_2-1)S_2^2}{N_1 + N_2} \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}}$$

where

M = sample mean

E = expected value

N = sample size

S^2 = unbiased sample variance

(Hays, 1973:409)

A stepwise regression analysis was the statistical method used for testing the second and third hypotheses. All the statistics for the analysis were performed using a Statistical Analysis System (S.A.S.) computer program.

CHAPTER IV

CHARACTERISTICS OF HOUSING PROJECTS

AND RESPONDENTS

Description of the Housing Projects

Various characteristics are similar or relatively
similar in both housing projects studied. Both projects
are located in the area of Rio Piedras Municipality of San
Juan, Puerto Rico. Both are funded by H.U.D. and publicly
sponsored; Comunidad del Retiro by the municipal govern-
ment of the city of San Juan, and Leopoldo Figueroa by the
local Housing Department.

The two projects are also very similar in terms of
the services offered to their residents. Services common
to both projects are: scheduled transportation to medical
and social services facilities, nurse examination, house-
keeping -- help service, and recreational and educational
activities. However, nurse and medical examinations, and
housekeeping help are offered with more regularity at
Leopoldo Figueroa. There these services are available
every week, but in Comunidad del Retiro these services are
offered only when volunteers or other resources are avail-
able.

Leopoldo Figueroa

When the data were collected, this project was ten years old. It consists of a single rectangular shaped building nine stories high. All the 240 apartments in the building are of one-bedroom. The apartments do not have balconies; however, they have eight feet high jalousie windows permitting ample sunlight and an outside view. All the corridors from the second to the ninth floor have six open balcony-like areas suitable for sitting.

The areas in the building common to all the residents include: the entrance area with the elevators on the left side and the mail boxes on the right side, a multi-purpose room, an office for administrative and social work, and a room available for medical examinations. Behind the building there is a yard with two sheltered areas for sitting. The parking lot is in front of the building.

This project is located in a residential area composed of multifamily condominiums and single detached houses (see Figure 1). Families in this area are from middle to upper-middle incomes. Commercial areas and services are also integrated into this neighborhood.

The neighborhood around this housing project includes many of the services used by its residents (see Figure 2). Included in the neighborhood are grocery stores, drugstores, clothing and other stores, a hospital, a bank, restaurants, a school, public transportation service,

a) Front View of Building (Right)
and Neighborhood

Figure 1. Leopoldo Figueroa - View of the Project

b) Back View of Building (Center) and
Residential Neighborhood

Figure 1.   (Continued)
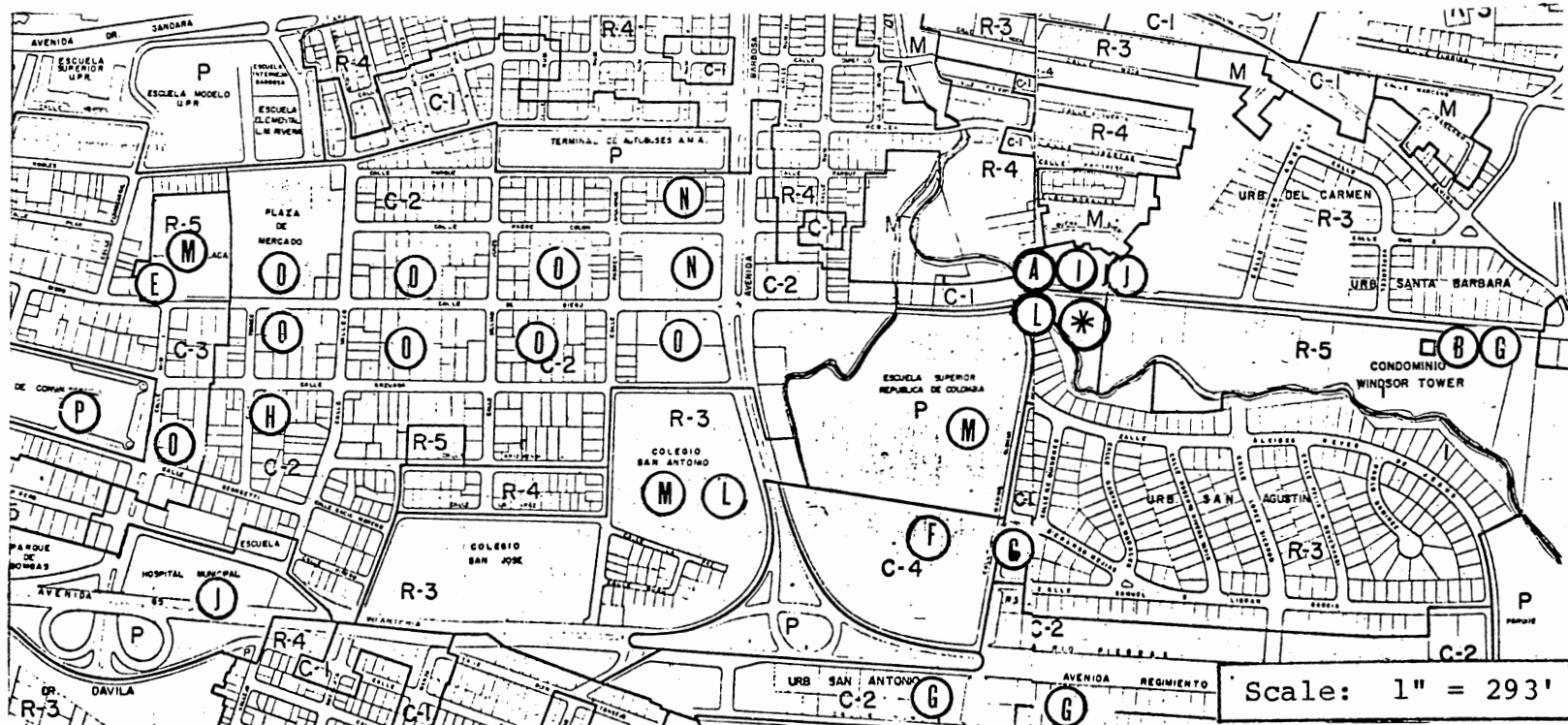
LEGEND
* = Housing Project   D = Other stores   H = Post office   L = Church
A = Grocery store   E = Bank   I = Bus stop   M = School
B = Drugstore   F = Shopping center   J = Hospital   N = Social services
C = Clothing store   G = Restaurant   K = Movie theater   O = Business district
                                                                    P = Park

Figure 2.   Leopoldo Figueroa - Neighborhood Services and Facilities

beauty shops and churches. Many of the services are very close to the project such as the bus stop which is located across the parking area in front of the building. A hospital and a grocery store are very close across the street. A church is located about one block away. A large shopping center, including supermarket, drugstore, clothing and other stores, restaurants, a bank, and a bowling center is located approximately four blocks away. At a distance of approximately five blocks from the housing project is located a large commercial and business district.

Comunidad del Retiro

At the time of the collection of the data this project was three years old. With 356 one-bedroom apartments, this housing project for the elderly is the largest on the island. The project is comprised of two adjacent fifteen-story buildings which are connected by a sheltered corridor and communal facilities.

There are no balconies on the apartments nor on the corridors. The outside walls of the living room and bedroom have jalousie windows; however, they are too high to permit visibility to the exterior when the persons inside the apartment are sitting.

The communal facilities in the project include a lobby area, administrative office, social services office, postal service boxes, a room available for possible

medical examinations, and a multi-purpose room. The grass-covered, open space around the buildings is furnished with some benches, but no outdoor, sheltered area is provided. Parking areas are available at the sides of the buildings, but there is a large, underdeveloped area behind the project. This area is covered with undergrowth.

The neighborhood surrounding Comunidad del Retiro is a mixture of commercial and residential uses with underdeveloped land areas scattered through the area (see Figures 3 and 4). The nearest residential area is public residential area for low-income families. Next to this residential area at approximately three blocks is located a small shopping center consisting of a small grocery, a drugstore and a clothing store. These stores are the closest to the housing project.

The nearest public transportation available to the residents of the project is on the highway approximately three blocks away. The elderly residents have to walk about 10 minutes to the nearest bus stop. This situation offers many inconveniences for the elderly especially when they are sick or on rainy days.

An infirmary which is the closest medical facility is located within a distance of approximately four blocks. A primary school is also located at this distance. Other facilities in the neighborhood which are used by many elderly are the post office located at approximately six blocks, a restaurant at seven blocks and a shopping center

a)   View of Building

Figure 3.   Comunidad del Retiro - View of
the Project

b) Main Entrance to Project (Highrise
         Building in Far Background)

Figure 3. (Continued)

c) Secondary Entrance to Project (Center)
    and Residential Neighborhood

Figure 3. (Continued)
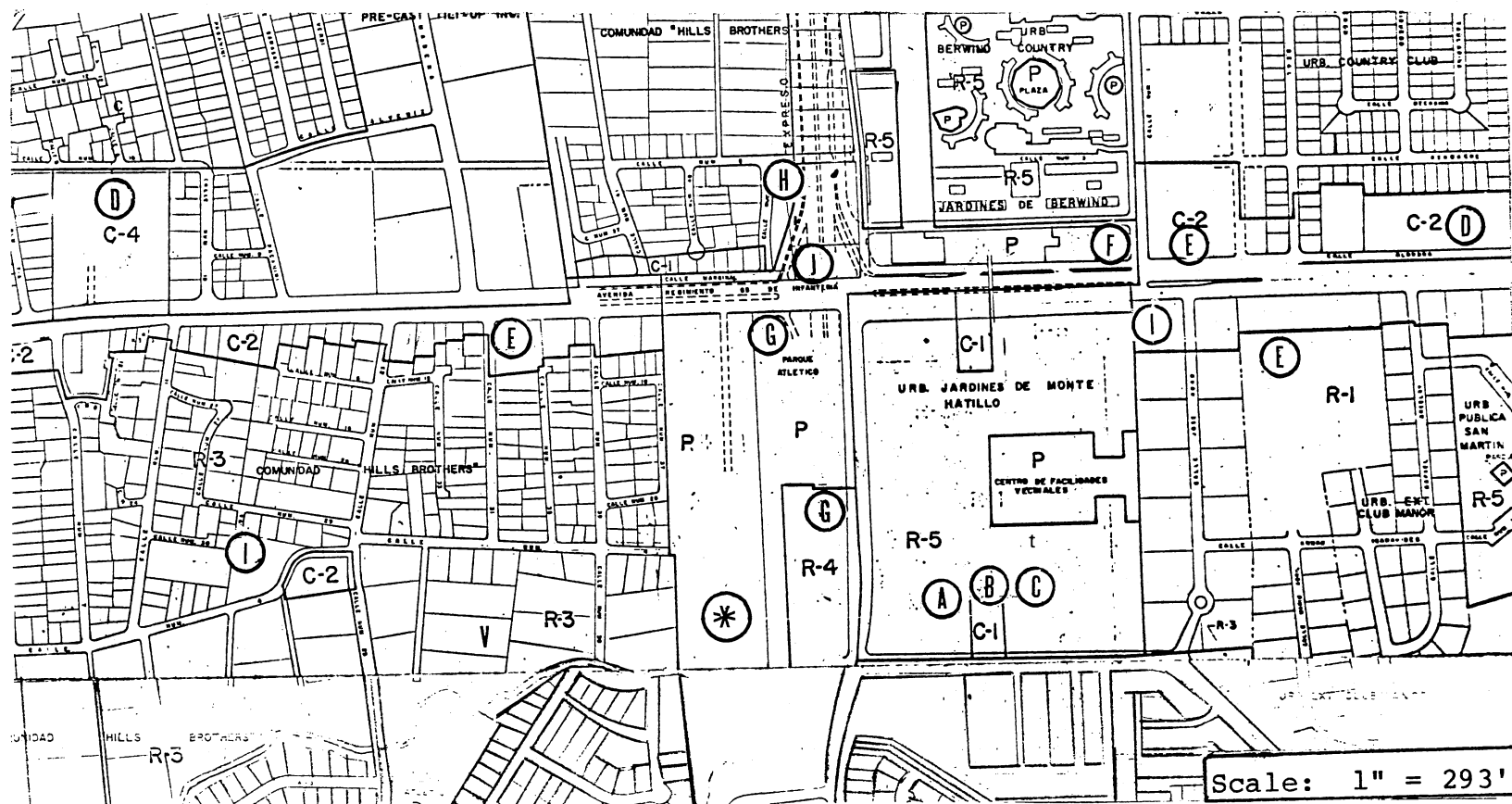
LEGEND:
* = Housing project   D = Shopping center   H = Hospital or infirmary
A = Grocery store   E = Restaurant   I = Church
B = Drugstore   F = Post office   J = School
C = Clothing store   G = Bus stop

Figure 4. Comunidad Del Retiro - Neighborhood Services and Facilities

at ten blocks. Some elderly tenants walk there, but take public transportation to return.

The neighborhood where Comunidad del Retiro is located lacks many services and facilities needed by the elderly. Therefore, the elderly tenants who do not have their own car, which is the majority, have to depend on public transportation, rides with friends or relatives, or the limited service of the mini-bus, operated by the housing project, to reach the services needed.

Description of the Sample

This section includes a detailed description of the respondents' characteristics that were selected as most relevant for this study. The 11 characteristics studied are presented in Table III. The mean and the range for each of the characteristics were obtained for all the respondents and then for the two projects separately.

Socio-Demographic Characteristics

The age range for all the respondents was 62 to 92 years with a mean of 72.19 years. The mean was 73.45 years old for the respondents of Leopoldo Figueroa and 70.93 years old for Comunidad del Retiro. The age of the respondents from both projects was very similar, however, respondents of Leopoldo Figueroa were slightly older than those of Comunidad del Retiro.

TABLE III

DESCRIPTION OF RESPONDENTS

Characteristics	Total Respondents			L. Figueroa			C. Retiro		
	Range		Mean	Range		Mean	Range		Mean
	Min.	Max.		Min.	Max.		Min.	Max.	
A. Socio-Demographic									
1 - Age (years)	62.00	92.00	72.19	62.00	88.00	73.45	62.00	92.00	70.93
2 - Health	1.00	4.00	2.22	1.00	4.00	2.13	1.00	4.00	2.30
3 - Education Level (yrs)	.00	17.00	6.57	.00	17.00	6.21	.00	17.00	6.93
B. Monthly rent (dollars)	.00	136.00	37.92	2.00	103.00	35.92	2.00	103.00	39.93
C. Use of Social Network									
1 - Frequency of Visits by Family and Friends	0.00	31.50	5.55	0.00	30.50	5.54	0.00	31.50	5.56
2 - Change of Frequency of Meeting with Friends and Family	-2.00	2.00	-0.70	-2.00	2.00	-0.60	-2.00	2.00	-0.79
3 - Change in Number of Friends	-1.00	1.00	0.13	-1.00	1.00	0.09	-1.00	1.00	0.17

TABLE III (Continued)

Characteristics	Total Respondents			L. Figueroa			C. Retiro		
	Range		Mean	Range		Mean	Range		Mean
	Min.	Max.		Min.	Max.		Min.	Max.	
D. Use of Supportive Services									
1 - On-Site Services	0.00	7.52	0.70	0.00	7.41	0.61	0.00	7.52	0.78
2 - Off-Site Services	0.00	17.58	3.73	0.50	17.58	3.79	0.00	16.25	3.67
E. Housing Satisfaction Index	5.00	25.00	21.40	5.00	25.00	21.44	5.00	25.00	21.37
F. Life Satisfaction Index	2.00	26.00	16.85	2.00	26.00	17.21	2.00	26.00	16.50

Health was scored in four categories. Originally the values from one to four were equivalent to excellent, good, fair, and poor respectively. This was inverted by multiplying each score by negative one (-1) so that the highest score indicates the best state of health.

A mean of 2.22 was reported as the health condition for all the respondents. With a mean of 2.13 for respondents of Leopoldo Figueroa and 2.30 for Comunidad del Retiro health status was found to be very similar for the respondents of both housing projects. These results indicate that, in general, the respondents perceived their health as fair. Respondents from Leopoldo Figueroa reported a slightly lower perceived rating of their health condition, however, this might be related to their age. The mean age was 2.53 year older for them than for respondents of Comunidad del Retiro.

The mean years of education reported by the total respondents was 6.57. For respondents of Leopoldo Figueroa the mean was 6.21, and for Comunidad del Retiro it was 6.93. The mean educational level for both projects was quite similar and was relatively low. However, education ranged from zero to 17 years, indicating that some residents had college educations.

Monthly Rent

The average monthly rent paid by respondents from each housing project varied by approximately 11 percent.

The overall mean reported by all the respondents was $37.92 per month. Respondents from Comunidad del Retiro reported an average monthly rent of $39.93, compared to $35.92 reported by Leopoldo Figueroa.

Use of Social Networks

A mean of 5.55 was obtained for the Frequency of Visits by Family and Friends for all the respondents. The mean of this social network measure was very similar for the two projects; Leopoldo Figueroa had 5.54 and Comunidad del Retiro 5.56. According to the categories developed for this measure, a mean of 5.55 indicated that, on the average, the respondents received five one-person visits a week or that two or more persons visited several times a week but less than five times. From these, one can infer that, in general, the respondents of these two housing projects are visited with some regularity.

The Change of Frequency of Meetings with Friends and Family resulted in a mean of -0.70 for all the respondents. This indicates that the respondents experienced a slight reduction in the frequency of meetings with friends and family as a result of moving into the housing projects. The mean for both housing projects was similar. However, respondents of Leopoldo Figueroa with a mean of -0.60 experienced less reduction in the frequency of meetings with friends and family than respondents from Comunidad del Retiro (mean = -0.79).

Regarding the Change in Number of Friends, the mean
obtained for the total respondents was 0.13, indicating
that after moving into the housing project, the respon-
dents perceived a slight increase in the number of
friends. When the projects are compared, respondents from
Comunidad del Retiro (mean = 0.17) reported that their
number of friends increased slightly more than did respon-
dents from Leopoldo Figueroa (mean = 0.09).

Use of Supportive Services

For use of service on-site the overall mean was 0.70.
This indicated that the respondents were using one of
these services (nursing/doctor examination, min-bus, so-
cial worker or religious services) almost once a week.
The means for each individual housing project were simi-
lar; however, respondents from Comunidad del Retiro (mean
= 0.78) reported a higher use of the services than respon-
dents from Leopoldo Figueroa (mean = 0.61).

Services off-site were used more frequently than were
services on-site. The overall mean for use of services
off-site was 3.73. This indicates that, in general, the
respondents used almost four off-site services during a
week, or that the respondents left their apartments four
times a week to get four or less services. Of the ser-
vices off-site (grocery store, drugstore, clothing store,
barber/beauty shop, bank, restaurant, church, hospital and

public transportation) some were more frequented by the respondents. The grocery store was the off-site service used most frequently by the elderly, probably once a week or more. The average use of off-site services was very similar for both housing projects, however, respondents from Leopoldo Figueroa reported slightly higher usage (3.79) than respondents of Comunidad del Retiro (3.67).

Housing Satisfaction Index

The mean for perceived satisfaction with housing for all the respondents was 21.40, which was a very high score. The means obtained for each individual housing project were similar; Leopoldo Figueroa with 21.44, and Comunidad del Retiro with 21.37. These results indicated that the majority of the respondents were very satisfied with their housing in general.

Life Satisfaction Index

A mean of 16.85 was obtained for the index of life satisfaction of all the respondents. The means of both housing projects were similar. However, respondents from Leopoldo Figueroa reported a slightly higher mean (17.21) than respondents from Comunidad del Retiro (16.50). The range was the same for both housing projects. From these results one can generally say that the respondents were relatively satisfied with their life in general since the

mean scores for life satisfaction were always found to be greater than the midpoint (13) on the Life Satisfaction Index-Z.

Summary

Sociodemographic characteristics of the respondents from both housing projects were found to be very similar. The average age for the total respondents was 72 years old. Health condition was reported as fair, and an average of seven years of school was the educational level attained. The monthly rent paid by all the respondents averaged $37.92. There was an 11 percent difference in monthly rent paid between respondents of the two housing projects.

Use of social network was measured by three separate indexes. The index of Frequency of Visits by Family and Friends indicated that in general the respondents were visited by five or six persons every week. However, this result did not indicate how the visits occurred; by one person at a time or by two or more persons together. This result might be considered a relatively low number of person contacts because the respondents also counted as visits the short period of contact when a neighbor comes to say "Hello" or to borrow something.

The second indicator of social network measured the Change in Frequency of Meetings with Friends and Family

after moving into the housing project. For the group as a whole there was almost no change. This indicates that moving into the housing project did not affect the respondents' contacts with friends and family.

The Change in Number of Friends after moving into the housing project was the last measure of social network included. The change for this measure was also very small. However, there was a slight positive increase in the number of friends.

Two indexes of use of supportive services were included; on-site services and off-site services. The average use of on-site services was one time a week, which can be considered low. Explanation for this low use of services might be that the respondents did not like to use the services provided in the housing project or that these were services that were not needed by these mobile residents.

The respondents also indicated a relatively low use of services in the neighborhood (off-site). They reported an average use of only four services per a week. However, the index did not identify whether these were four different services or four uses of one service, etc. Neither did it indicate whether all four services were obtained in a single trip or four separate trips.

Of the last two indexes included, one measured the respondents' satisfaction with housing and the other the perceived life satisfaction. The results from the Housing

Satisfaction Index indicated that in general the respon-
dents were very satisfied with their housing. In relation
to the perceived life satisfaction, the respondents were
relatively satisfied because the score obtained was slight-
ly over the midpoint of the total score possible.

CHAPTER V

ANALYSIS OF DATA

This chapter presents the testing of the hypotheses
and a discussion of the findings obtained in this study.
In order to give a clear presentation of the analysis, the
chapter is divided into two main sections. These sections
are: Differences Between Projects in Perceived Life Satis-
faction, and Relationship of the Independent Variables to
Perceived Life Satisfaction.

Differences Between Projects in

Perceived Life Satisfaction

The first hypothesis tested in this study was:

Hypothesis One: The perceived life satisfaction of
residents of an elderly housing project that has greater
accessibility to neighborhood services will be higher than
for residents of a project with less accessibility to
neighborhood services.

A difference in terms of perceived life satisfaction
was expected between the respondents of the two housing
projects. Neighborhood has been considered as having
considerable meaning to the elderly person (Peterson et
al., 1973; Huttman, 1977). Some findings indicate that

68

satisfaction with the neighborhood has a positive relation-
ship with an elderly person housing satisfaction (Mathiew,
1976; Crandall, 1980). Also it has been found that
housing satisfaction is an important indicator of life
satisfaction (Campbell et al., 1976). The accessibility
of services in the neighborhood was hypothesized to be one
of the neighborhood aspects which could influence in the
housing satisfaction of the elderly. Therefore, the
residents of the project with greater accessibility to
services were expected to have higher life satisfaction.

This hypothesis was examined using a t-test. Table
IV shows that no significant difference was found between
the means of perceived life satisfaction of the residents
of the two projects. Therefore, Hypothesis One was not
tenable.

TABLE IV

DIFFERENCES IN PERCEIVED LIFE SATISFACTION
AMONG RESIDENTS OF THE TWO PROJECTS

Housing Project	Mean
Leopoldo Figueroa	17.21
Comunidad Del Retiro	16.50

df = 198
 t = 1.29
(not significant at p = .05)

This result implies that differences in accessibility to services in the neighborhood was not strongly related to the perceived life satisfaction of these elderly residents. Other characteristics of the residents, their housing, and their neighborhood might be of greater influence to their life satisfaction. As Campbell et al. (1976) indicated life satisfaction is a very complex variable which is affected by satisfaction with several other factors such as life experiences, housing, neighborhood and community. Respondents from Leopoldo Figueroa could be satisfied because of the many services and facilities available in their neighborhood, while respondents from Comunidad del Retiro might feel satisfied because the quietness of the housing project and the comfort of their apartments compensate for the absence of services in the neighborhood.

<div align="center">

Relationships of the Independent

Variables to Perceived

Life Satisfaction

</div>

The next step in the analysis was to identify the independent variables which made a significant contribution to life satisfaction. Hypothesis Two guided this analysis.

Hypothesis Two: Perceived life satisfaction of female residents in elderly housing projects is related to:

a.   sociodemographic characteristics of

the respondents.

b.   housing satisfaction.

c.   use of social networks.

d.   use of supportive services.

e.   need for additional services.

According to the review of the literature, it was expected that a relationship might exist between the perceived life satisfaction of the respondents and these independent variables. Recent studies had found that when examined one at a time, health, housing satisfaction, use of social networks and educational level were strong indicators of life satisfaction among the elderly (Abdel-Ghany, 1977; Campbell et al., 1976; Larson, 1978; Lawrence and Guy, 1980; Adams, 1971). The relationship of use of supportive services and need for additional services was inferred from an expected relationship between satisfaction with the neighborhood and life satisfaction. Age, has also been found to be related to life satisfaction; however in many studies it has reflected a negative relationship (Larson, 1978). No research was found that analyzed the simultaneous effect of these variables on perceived life satisfaction.

A multiple regression model was developed to test Hypothesis Two.

$$\text{LIFE SATISFACTION INDEX} = \beta_0 + \beta_1 \text{ HSI} + \beta_2 \text{ FVFF} + \beta_3 \text{ ONS}$$
$$+ \beta_4 \text{ OFFS} + \beta_5 \text{ CFMFF} + \beta_6 \text{ Q 19A} + \beta_7 Q_3 + \beta_8 Q_5$$
$$+ \beta_9 Q_7 + \beta_{10} Q_9 + \beta_{11} Q_{41}$$

where:

HSI = Housing Satisfaction Index

FVFF = Frequency of Visits by Family and Friends

ONS = Use of On-Site Services

OFFS = Use of Off-Site Services

CFMFF = Change of Frequency of Meetings with Friends and Family

Q19A = Change in Number of Friends

Q_3 = Age

Q_5 = Health

Q_7 = Educational level

Q_9 = Monthly Rent

Q_{41} = Need Additional Services

It was further hypothesized that the relationship of the independent variables to life satisfaction might be different for residents of the two projects. Hypothesis Three guided this analysis.

Hypothesis Three: The relationship between perceived life satisfaction and the independent variables will differ between projects where residents have easy access to supportive services in the neighborhood and where they do not.

In order to allow for differences in slopes between the two projects, dummy variables were created for each of

the independent variables. A value of one was assigned for Comunidad del Retiro and Leopoldo Figueroa was assigned a value of zero. The addition of dummy variables permitted the assessment of differences among the two projects, which was used for testing Hypothesis Three.

The full model for testing Hypothesis Two and Three was as follows:

$$
\begin{aligned}
\text{LIFE SATISFACTION INDEX} = {} & \beta_0 + \beta_1 \text{ HSI} + \beta_2 \text{ FVFF} + \beta_3 \text{ ONS} \\
& + \beta_4 \text{ OFFS} + \beta_5 \text{ CFMFF} + \beta_6 \text{ Q 19A} + \beta_7 Q_3 + \beta_8 Q_5 + \\
& \beta_9 Q_7 + \beta_{10} Q_9 + \beta_{11} Q_{41} + \beta_{12} Q_1 + \beta_{13} (Q_1 \times \text{HSI}) + \\
& \beta_{14} (Q_1 \times \text{FVFF}) + \beta_{15} (Q_1 \times \text{ONS}) + \beta_{16} (Q_1 \times \text{OFFS}) + \\
& \beta_{17} (Q_1 \times \text{CFMFF}) + \beta_{18} (Q_1 \times \text{Q 19A}) + \beta_{19} (Q_1 \times Q_3) + \\
& \beta_{20} (Q_1 \times Q_5) + \beta_{21} (Q_1 \times Q_7) + \beta_{22} (Q_1 \times Q_9) + \\
& \beta_{23} (Q_1 \times Q_{41})
\end{aligned}
$$

where:

Project $0 = \beta_0$

Project $1 = \beta_0 + \beta_{12} Q_1$

Hypotheses Two and Three were tested in one regression analysis. Stepwise regression analysis was used to identify the best model from the 11 independent variables and the 11 corresponding dummy variables. The best representative model included nine independent variables and four dummy variables, and explained 36 percent of the variance in perceived life satisfaction (see Table V). Eight independent variables in this model were statistically significant at the 10 percent level or lower. These

TABLE V

RELATIONSHIP OF THE INDEPENDENT VARIABLES TO
PERCEIVED LIFE SATISFACTION

	Independent Variables	Beta Value	F-Value	Probability
	(Intercept)	33.02		
1.	Housing Satisfaction Index	.68	41.01	.0001
2.	Change in Number of Friends	1.41	13.01	.0004
3.	Frequency of Visits by Family and Friends	.25	8.49	.0040
4.	Education Level	-.20	5.98	.0154
5.	Age	-.12	5.04	.0259
6.	Need of Additional Services	-1.43	4.88	.0284
7.	Use of On-Site Services	-.70	3.25	.0730
8.	Health	.68	2.86	.0926
9.	Monthly Rent	.03	2.39	.1241
10.	Frequency of Visits by Family and Friends (Dummy)	-.35	9.03	.0030
11.	Monthly Rent (Dummy)	-.05	3.93	.0490
12.	Age (Dummy)	.04	3.78	.0535
13.	Use of On-Site Services (Dummy)	.78	1.79	.1824

R Square = .3590

independent variables were: (a) Housing Satisfaction
Index, (b) Change in the Number of Friends, (c) Frequency
of Visits by Family and Friends, (d) Educational Level,
(e) Age, (f) Need of Additional Services, (g) Use of
On-Site Services, and (h) Health.

The Relationships of the Independent Variables to Perceived Life Satisfaction

Housing Satisfaction Index. Housing satisfaction
resulted with the highest F-value, 41.01, and a probabili-
ty of .0001. This indicated that housing satisfaction was
the major contributor to perceived life satisfaction of
the residents. This finding agrees with findings of pre-
vious studies which stated that a positive relationship
exists between housing satisfaction and life satisfaction
of the elderly (Campbell et al., 1976; Abdel-Ghany, 1977;
Carp, 1978; Bohland and Davis, 1980; Lawton, 1980).

Change in Number of Friends. Change in the num-
ber of friends was the second most important contributor
to the life satisfaction of the respondents. This measure
of social network obtained an F-value of 13.01 and a proba-
bility of .0004. Respondents who indicated an increase in
the number of friends also indicated a perception of
greater life satisfaction. As Adams (1971) suggested from
his findings, increases in social participation have a

positive relationship with life satisfaction among the elderly. Lawton (1980), Carp (1978), and Peterson et al. (1979) concluded from their studies that congregate housing for the elderly is beneficial because it helps to increase social interaction. Social interaction is stimulated through age homogeneity and proximity of tenants in congregate housing (Lawton, 1968).

Frequency of Visits by Family and Friends. This second measure of use of social network was also significantly related to the life satisfaction of the respondents as indicated by an F-value of 8.49 and a probability of .0040. This finding indicated that respondents who were visited more frequently perceived higher life satisfaction. In this study the frequency of visits by family and friends was considered to be one of the most important indicators of the social relationships of the respondents. This finding supports previous studies that have consistently found the use of social networks to be one of the most important indicators of life satisfaction among the elderly (Abdel-Ghany, 1977; Larson, 1978; Campbell et al., 1976).

Educational Level. With an F-value of 5.98 and a probability of .0154, the respondents' level of education was another variable which had a significant relationship with life satisfaction. However, this relationship was negative indicating that the respondents with a lower

education level perceived higher life satisfaction. This

finding agrees in part with some results of previous

studies in which education level and life satisfaction had

a negative relationship for some elderly. This relates to

Campbell et al. (1976:143) statement,

> If a broadened awareness of alternatives is
> associated with education in a variety of other
> domains as well, and if there is a net trend for
> people who are most aware of alternatives to be
> more critical of their current situations, then
> . . . in most domains there is a faint tendency
> for reported satisfaction to decline with advanc-
> ing education.

According to Larson (1978) elderly persons of middle educa-

tion level reported the highest life satisfaction.

Age. Age also had a significant relationship

with perceived life satisfaction of the respondents. This

variable obtained an F-value of 5.04 and a probability of

.0259. The relationship between age and the perceived

life satisfaction of the respondents was negative. Accord-

ing to findings of some previous studies advancing age

tends to be accompanied by a decline in perceived life sa-

tisfaction (Larson, 1978). Other researchers have stated

that there is not a definitive relationship between age

and life satisfaction (Campbell et al., 1976; Abdel-Ghany,

1977). However, the influence of age in the life satisfac-

tion of the elderly might be affected by factors such as a

negative perception of old age, widowhood, health, loss of

friends, decreased financial resources and decreased acti-
vity (Adams, 1971; Crandall, 1980).

Need for Additional Services. Need for addition-
al services was the first indicators of use of supportive
services that resulted in a significant relationship with
life satisfaction, F-value equals 4.88 with a probability
of .0284. This variable also had a negative relationship
with life satisfaction which means that respondents who
expressed less need for additional services perceived
higher life satisfaction. This result might indicate that
these respondents felt a lower need for additional ser-
vices because they were quite satisfied with the services
available in their neighborhood. No studies have been
found which relate this particular variable with the life
satisfaction of the elderly. However, the literature
indicated a possible relationship between the satisfaction
with the neighborhood and the life satisfaction of the
elderly (Bohland and Davis, 1979; Campbell et al., 1976).

Use of On-Site Services. This independent vari-
able was the measure of use of supportive services
provided within the housing project. It obtained an
F-value of 3.25 and a probability of .0730. The relation-
ship of this independent variable was negative also. This
result indicates that the respondents who less frequently
use the services provided on-site reported a higher level

of life satisfaction. As was reported in the previous
chapter, the respondents in general indicated a relatively
low use of on-site services. As was explained before this
result might indicate that the respondents probably did
not use the services on-site because they did not feel the
need for them. It may also be that persons who are able
to go outside the project for the things they need are
experiencing more involvement with the larger community
and are thus more satisfied.

Health. This was the last of the independent
variables which had a significant relationship with life
satisfaction of the respondents. The F-value obtained was
2.86 and the probability .0926. Respondents who reported
better health condition also indicated higher perceived
life satisfaction. This finding agree with previous
studies (Adams, 1971; Abdel-Ghany, 1977; Spreitzer et al.,
1980), which concluded that health was one of the most
important predictors of life satisfaction among the elder-
ly. According to Abdel-Ghany (1977) physical health can
affect elderly's social participation and by consequence
their life satisfaction.

Hypothesis Two was supported for the eight indepen-
dent variables which were found to be significant indica-
tors of life satisfaction. Therefore, the null hypothesis
was rejected for these variables. These eight independent

variables were representative of all the categories stated in the hypothesis except monthly rent and use of services off-site.

Differences Between Projects

The testing of Hypothesis Three analyzed possible differences between the projects in terms of variables that relate to life satisfaction. In order to compare differences among the housing projects, two equations, one for each project, were obtained. Beta coefficients indicated the relationship of each independent variable with life satisfaction. The equations for the projects were the following.

Leopoldo Figueroa:

LIFE SATISFACTION INDEX = 33.02 + .68 HSI + 1.41 Q19A
$-$ .20 Q_7 + .68 Q_5 $-$ 1.43 Q_{41} $-$ .12 Q_3 $-$
.70 ONS + .25 FVFF + .03 Q_9

Comunidad del Retiro:

LIFE SATISFACTION INDEX = 33.02 + .68 HSI + 1.41 Q19A
$-$ .20 Q_7 + .68 Q_5 $-$ 1.43 Q_{41} $-$ .07 Q_3 $-$
.09 ONS + .10 FVFF + .02 Q_9

The comparison of both equations indicated that the relationship of four independent variables with life satisfaction was different for the two projects. The results

indicated that only three of them were statistically sig-
nificant at the .05 level. These were Frequency of Visits
by Family and Friends (p < .0030), Monthly Rent (p < .05),
and Age (p < .05).

Frequency of Visits by Family and Friends (FVFF).
The difference between projects in the contribution of
this independent variable to perceived life satisfaction,
was highly significant. The difference in the beta
coefficients indicated that FVFF contributed more to the
life satisfaction of respondents who lived in Leopoldo
Figueroa than to respondents in Comunidad del Retiro.

Leopoldo Figueroa is more integrated into the neigh-
borhood and has greater accessibility to transportation
and services than does Comunidad del Retiro. Respondents
from Leopoldo Figueroa may have greater expectations
visits from family and friends and thus experience greater
life satisfaction when these expectations are met.

Monthly Rent. Monthly rent also differed signif-
icantly in its relationship to life satisfaction for the
respondents in the two projects. This variable also had a
stronger relationship with the life satisfaction of the
respondents from Leopoldo Figueroa. As was reported in
the previous chapter respondents from Leopoldo Figueroa
reported an average monthly rent lower than Comunidad del
Retiro. From this one can infer that to the respondents
of Leopoldo Figueroa the economical advantage that the

congregate housing offers probably contributed to their overall life satisfaction.

Age. This was the last independent variable for which the relationship to the life satisfaction differed significantly between the projects. This variable also had a stronger relationship to the life satisfaction of respondents from Leopoldo Figueroa. As was reported in the previous chapter the mean age of respondents from Leopoldo Figueroa was slightly higher than for respondents of Comunidad del Retiro. The fact of being older might have reduced life expectations of the respondents from Leopoldo Figueroa, thereby increasing the influence that age had to their life satisfaction.

Because differences between the two housing projects were found for three independent variables, Hypothesis Three was partially supported. Therefore, the null hypothesis was only rejected for the frequency of visits from family and friends, monthly rent, and age which indicated a significant difference.

<center>Summary</center>

Two housing projects which differ in accessibility to services in the neighborhood were studied. An analysis of significant difference in the means of life satisfaction was conducted first. However, no significant difference was found implying that a difference in accessibility to

services in the neighborhood was not accompanied by a difference in life satisfaction. Therefore, Hypothesis One could not be supported.

Hypothesis Two guided the assessment of the relationship of the independent variables to the life satisfaction of the respondents. Of 11 independent variables which were analyzed with life satisfaction, eight were found to have a significant relationship to it. Housing satisfaction, frequency of visits by family and friends, change in the number of friends, educational level, age, need for additional services, use of on-site services, and health were statistically significant at the 10 percent level or lower. Based on these findings the Hypothesis Two was partially accepted.

Further analysis was made to investigate differences between the two housing projects in terms of the relationship of each independent variable with life satisfaction. Hypothesis Three guided this analysis. Three independent variables were found to have a significant difference in their relationship to life satisfaction between the two projects; frequency of visits by family and friends, monthly rent, and age. On the basis of these results Hypothesis Three was partially accepted for these three independent variables.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Contrary to what was expected no significant difference in perceived life satisfaction (PLS) was found when respondents of Comunidad del Retiro, a congregate housing project less integrated in a residential neighborhood with less accessibility to services and facilities, were compared to respondents of Leopoldo Figueroa, a housing project well integrated in a residential neighborhood with higher accessibility to services and facilities. It is possible that other factors which were not considered and which could not be controlled affected the relationship between neighborhood characteristics and the perceived life satisfaction of the respondents. The two housing projects studied were selected because of their similarities in all the aspects except for neighborhood characteristics and accessibility to services and facilities. In order to choose two housing projects with the desired characteristics for this study, it was not possible to match projects on the basis of age of the structure. Comunidad del Retiro was three years old and Leopoldo Figueroa was approximately 10 years old.

The difference in the age of the projects was no doubt related to length of residence of the respondents. The difference in length of residence of respondents in the two housing projects might have affected their perception of life satisfaction. Respondents of the newest project, Comunidad del Retiro, were possibly still feeling the "new effect" of the new housing and the improvement of their housing conditions, because the longest possible time for living in this housing project was three years. This relatively recent improvement in their housing conditions probably had a strong impact on the respondents' PLS, compensating for other deficiencies in the living environment such as the absence of accessible services and facilities in the neighborhood. This might explain why the respondents from Comunidad del Retiro perceived similar life satisfaction to respondents from Leopoldo Figueroa.

Another factor that might have affected this finding was the relatively recent feeling of "good fortune" for obtaining an apartment in this type of housing for which the demand is very high in Puerto Rico. Elderly who have the opportunity to obtain an apartment in congregate housing projects might feel very satisfied because chances to obtain these apartments are limited.

It is too early to guess how the lack of services in the neighborhood will influence the PLS of respondents in Comunidad del Retiro in the future after the "new effect" is gone. One probably can expect that awareness of the

conditions of the neighborhood will increase over time and this might have a negative effect on the respondents' PLS. Also it can be expected that other compensations might occur to cause perceived life satisfaction to remain high.

Another aspect that probably could help explain the absence of significant differences in PLS between the two housing projects was the differences or similarities of the previous neighborhood to the new one. Respondents were not asked about the characteristics and conditions of their previous housing and neighborhood. One can expect that if the respondent came from a neighborhood with characteristics similar to the project neighborhood, then the characteristics of the new neighborhood might not have much influence on their satisfaction with housing and PLS. Also it can be inferred that respondents who were dissatisfied with their previous neighborhood might feel more satisfied with the new one.

The fact the respondents from Comunidad del Retiro were slightly younger than respondents from Leopoldo Figueroa might reduced the influence of the neighborhood on the PLS of the respondents. Younger elderly persons with greater physical mobility might be more willing to leave the housing project in order to obtain needed services thus they may not be as aware of neighborhood disadvantages. The sample was restricted to the more physically mobile residents so differences in the accessibility to services might not be such a critical aspect affecting

the respondents PLS because they can go by themselves to obtain services.

Life satisfaction is internal in the consciousness of the individuals, therefore different individuals might perceive different degrees of satisfaction to similar stimulus. Therefore, even when the measure used in this study, LSI-A, has proven its efficacy in previous studies with elderly, one cannot definitively ascertain that the respondents' answers do not have certain error, especially if this elderly feel very satisfied with their relatively recent improvement in housing conditions.

One of the most important findings of this study is the highly significant relationship obtained between housing satisfaction and life satisfaction. From this result one can conclude that housing satisfaction is definitely related to the life satisfaction of the elderly. This also confirms the literature which states that for the elderly housing is probably the most important aspect of the physical environment. Therefore, how the elderly person feels about his or her home affects other aspects of living.

Another important finding which has implications for planning housing for the elderly is the highly significant positive relationship between the frequency of visits by family and friends (FVFF) and the perceived life satisfaction of the respondents. This finding clearly shows the importance of social participation for the elderly. Thus,

one can conclude that better planned housing for the elderly should give attention to and provide opportunities for the development and use of social networks among its residents.

The findings support the conclusion that use of social networks and housing satisfaction were the two factors that had the greatest influence on the life satisfaction of the respondents. These findings agree with some of the researcher's expectations that aspects other than the physical environment were probably strong contributors to the perceived life satisfaction of the tenants of congregate housing for the elderly.

Use of supportive services was not found to be a very strong influence on the respondents' PLS. Less use of on-site services was significantly related with a higher PLS only at the 10 percent level. This low use of on-site services might be related to the higher mobility of the elderly studied. More mobile elderly might feel higher PLS if they were able to decide when and where they would obtain needed services.

Respondents who indicated no need for additional services also perceived a higher PLS. From this one can concluded that respondents might feel satisfied with the type and amount of services available, however, this does not indicate that they are satisfied with the quality of the services. Data regarding respondents' satisfaction with on-site and off-site services was not analyzed, therefore,

we cannot conclude to what degree these are or are not important indicators of PLS.

As a final statement it is concluded that other physical and non-physical environmental factors not included in this study are important to the perceived life satisfaction of the elderly. It is important to identify these other factors and assess their relationship with life satisfaction. Perceived life satisfaction of tenants of congregate housing for the elderly who are mobile enough to walk in the neighborhood and to use public transportation to obtain needed services and to satisfy social contacts might not be strongly affected by certain differences in the neighborhood. However, this does not mean that differences in the neighborhood are not important because factors such as the ones discussed previously might affect the perception of these neighborhood differences by the elderly. Another important consideration is that elderly persons move into congregate housing as their last residence. Therefore, as they become older their mobility will be reduced and they will become more dependent on supportive services in and near their housing. When planning housing for the elderly these aspects should be considered.

It is also important to consider that even if the elderly reflect a more disengaged behavior it does not mean that they want to be isolated from the community or from the activities of other people. Wherever the elderly person lives, he or she should be able to choose when to be

active or passive. Therefore, congregate housing for the elderly should provide possibilities for the mobility of the more active and healthy elderly as well as the reduced mobility of older and not very healthy tenants.

Congregate housing should be planned in locations which could satisfy the tenants' need for security, comfort, activity and passivity. The fulfillment of needs should be planned for the present and future and for later, for the more mobile and the less mobile elderly, and for the more active and for the less active elderly.

Planning of housing for the elderly should take into consideration changes that time might bring to the elderly and to the living environment. If these aspects are considered, tenants of congregate housing for the elderly will not have to make extra compensations and spend extra energy in order to adapt to environmental deficiencies.

Recommendations

The following are recommendations for further studies:

1. Case studies with some elderly tenants of both housing projects in this study should be made as a follow-up of this study.

2. More indepth analysis is needed in order to determine which aspects of the neighborhood are the most important contributors to the life satisfaction of residents of congregate housing for the elderly. An index including

the neighborhood aspects considered as most important to the elderly should be examined in relation to perceived life satisfaction.

3. Elderly tenants' evaluation of the conditions of their previous housing and their level of housing satisfaction should be assessed in further studies.

4. Length of residence of elderly tenants in congregate housing should be included in future analysis.

5. In order to obtain more precise data regarding the use of social networks by the elderly, information should be collect about (a) when and how the elderly are visited and (b) the number of times that the elderly leave their apartment to visit family and friends.

6. The measure of frequency of use of services in the neighborhood should also record information regarding the number of times that the elderly leave the housing project to obtain one service or several services at the same time.

7. An indicator of satisfaction with the use of social networks and use of supportive services should be included as part of these measures. These subjective indicators might improve the explaining power of these measures related to life satisfaction.

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92

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APPENDIX A

LETTER OF INTRODUCTION

10 de julio de 1981

Estimado residente:

Usted ha sido seleccionado para participar en un estudio sobre las necesidades y satisfacciones en relación a la vivienda. Las personas seleccionadas para participar en este estudio son personas de 62 años en adelante que viven en edificios para envejecientes en San Juan.

El propósito de este estudio es el de completar requisitos para estudios avanzados en la Universidad Estatal de Oklahoma. Ademas tiene la intención de hacer recomendaciones para mejorar la vivienda de personas envejecientes.

Su cooperación es muy importante, pues solo personas como usted me pueden ayudar y decirme que ustedes necesitan para sentirse mejor en su apartamento.

Su participación en este estudio será completamente confidencial, pues ni su nombre ni el numero de su apartamento no es necesario ni sera anotado durante la entrevista. Solo informacion sobre servicios y facilidades que usted necesita será preguntado. La información solamente sera usada para el estudio universitario.

Su cooperación es muy importante para el exito de este estudio, le estaré muy agradecida. Esperando saludarle próximamente quedo.

Cordialmente,

Sarah Toledo Toledo
Economista del Hogar
Servicio de Extensión Agrícola
Río Piedras

July 10, 1981

Dear resident:

You have been chosen to participate in a study dealing with housing needs and satisfactions. The people chosen to participate in this study are 62 years of age or older who live in housing projects for the elderly in San Juan.

The purpose of this study is to fulfill requirements for graduate study at Oklahoma State University. In addition, it will also be used to make recommendations for the improvement of housing for the elderly.

Your cooperation is very important, since only people such as yourself can help me and tell me what you need to feel better in your apartments.

Your participation in this study will be completely confidential, since neither your name or your apartment number is needed nor will they be written down during the interview. Only information concerning the serving and facilities you need will be asked. The information will only be used for this university study.

Your cooperation is very important for the success of this study, and will be greatly appreciated. Hoping to greet your soon.

Cordially yours,

Sarah Toledo

APPENDIX B

QUESTIONNAIRE

CUESTIONARIO - VIVIENDA PARA ENVEJECIENTES

_____ 1. Proyecto numero _____

_____ 2. Tipo de apartamento _____

A. Favor de indicar la alternativa mas apropiada a su respuesta

_____ 3. Cuantos anos tiene usted?_____

_____ 4. Cual es su estado civil?

      a) soltera   d) vuida
      b) casada   e) separada
      c) divorciada

_____ 5. Como se siente de salud?

      a) excelente   c) regular
      b) bien   d) mal

_____ 6. Como le afecta su estado de salud para hacer lo que tiene que hacer todos los dias?

      a) puedo hacer todo sin necesitar ayuda
      b) puedo hacer la mayoria de las cosas
      c) necesito ayuda para hacer la mayoria de las cosas
      d) necesito ayuda para todo lo que tengo que hacer

_____ 7. Cual es su nivel educativo?_____
      _____

_____ 8. Cual es su mayor fuente de ingreso?

      a) empleo   d) servicios sociales
      b) seguro social   e) ayuda de familia
      c) retiro   f) otro_____

_____ 9. Cuanto paga de renta aqui?_____

_____ 10. Cuanto tiempo hace que vive aqui?
      _____

_____ 11. Cuanto tiempo hace que vive en este vecindario de _____
_____?

_____ 12. Que es lo mas que le gusta de este projecto para envejecientes?

_____
_____

_____ 13. Que es lo menos que le gusta de este projecto?

_____
_____

_____ 14. Cuan satisfecha esta con las comodidades de este apartamento?

    a) muy satisfecha   d) poco satisfecha
    b) satisfecha   e) muy insatisfecha
    c) neutral

_____ 15. Cuan satisfecha esta con el espacio para almacenaje que tiene disponible?

    a) muy satisfecha   d) poco satisfecha
    b) satisfecha   e) muy insatisfecha
    c) neutral

_____ 16. Cuan satisfecha esta usted con las areas comunes para todos los residentes y la entrada del edificio?

    a) muy satisfecha   d) poco satisfecha
    b) satisfecha   e) muy insatisfecha
    c) neutral

_____ 17. Cuan satisfecha esta usted con el vecindario donde esta este edificio?

    a) muy satisfecha   d) poco satisfecha
    b) satisfecha   e) muy insatisfecha
    c) neutral

_____ 18. Cuan satisfecha esta usted con este lugar para vivir?

    a) muy satisfecha   d) poco satisfecha
    b) satisfecha   e) muy insatisfecha
    c) neutral

_____ 19. Despues de mudarse aqui, tiene mas o menos amigos que antes de mudarse?

    a) menos   b) igual   c) mas

_____ 20. Despues de mudarse aqui, cuan frequentemente usted ve a sus amigos?

    a) con menos frequencia
    b) igual que antes
    c) con mas frequencia

_____ 21. Despues de mudarse aqui, cuan frequentemente usted ve a sus familiares?

    a) con menos frequencia
    b) igual que antes
    c) con mas frequencia

Persona	Cuántas veces usted ve esa persona?					Con qué propósito se ven o se visitan?			Vive la persona en el edificio?		Edad de la persona	Sexo
	al Día	Semana	Mes	Año	Nunca	Social	Servicio	Social y Servicio	Si	No		
Hermanos y otros Familiares 7.												
8.												
9.												
10.												
Amigos Intimos 11.												
12.												
13.												
Conocidos 14.												
15.												
16.												

C. Favor de indicar información sobre los servicios y facilidades que usted tiene disponibles en este edificio y en el vecindario.

Servicios y Facilidades	Cuáles servicios tiene disponible? (edificio, vecindario)	Está satisfecha con los servicios?		Veces que usa cada servicio					Servicios fuera del edificio	
		Si	No	al Día	Semana	Mes	Año	Nunca	A cuántos bloques queda?	Cómo los obtiene? 1. camina 2. carro propio 3. guagua edificio 4. guagua publica 5. taxi 6. pon
En el edificio: 1. Enfermeria/ examen medico									XXXXXXXX	XXXXXXXXXXXXXXXX
2. Transportación									XXXXXXXX	XXXXXXXXXXXXXXXX
3. Trabajadora social									XXXXXXXX	XXXXXXXXXXXXXXXX
4. Servicio de ama de ama de llave limpieza									XXXXXXXX	XXXXXXXXXXXXXXXX

Servicios y Facilidades	Cuáles servicios tiene disponible? (edificio, vecindario)	Está satisfecha con los servicios?		Veces que usa cada servicio					Servicios fuera del edificio	
		Si	No	al Día	Semana	Mes	Año	Nunca	A cuántos bloques queda?	Cómo los obtiene? 1. camina 2. carro propio 3. guagua edificio 4. guagua publica 5. taxi 6. pon
5. Centro de envejecientes									XXXXXXXX	XXXXXXXXXXXXXXXX
6. Servicio de comidas									XXXXXXXX	XXXXXXXXXXXXXXXX
7. Otro									XXXXXXXX	XXXXXXXXXXXXXXXX
En el vecindario: 8. Colmado										
9. Farmacia										
10. Tienda de ropa										

Servicios y Facilidades	Cuáles servicios tiene disponible? (edificio, vecindario)	Está satisfecha con los servicios?		Veces que usa cada servicio					Servicios fuera del edificio	
		Si	No	al Día	Semana	Mes	Año	Nunca	A cuántos bloques queda?	Cómo los obtiene? 1. camina 2. carro propio 3. guagua edificio 4. guagua publica 5. taxi 6. pon
11. Otras tiendas										
12. Lavanderia										
13. Barbería/Salón de Belleza										
14. Banco										
15. Restaurante/ Bar										
16. Cine/Teatro										

Servicios y Facilidades	Cuáles servicios tiene disponible? (edificio, vecindario)	Esta satisfecha con los servicios?		Veces que usa cada servicio					Servicios fuera del edificio	
		Si	No	al Día	Semana	Mes	Año	Nunca	A cuántos bloques queda?	Cómo los obtiene? 1. camina 2. carro propio 3. guagua edificio 4. guagua publica 5. taxi 6. pon
17. Plaza/Parque										
18. Servicios Educativos										
19. Centro de envejecientes										
20. Servicio de Comidas										
21. Iglesía										
22. Médico/ Hospital										

Servicios y Facilidades	Cuáles servicios tiene disponible? (edificio, vecindario)	Está satisfecha con los servicios?		Veces que usa cada servicio					Servicios fuera del edificio	
		Si	No	al Día	Semana	Mes	Año	Nunca	A cuántos bloques queda?	Cómo los obtiene? 1. camina 2. carro propio 3. guagua edificio 4. guagua publica 5. taxi 6. pon
23. Oficinas de servicios sociales										
24. Oficina de pago de luz, agua, etc.										
25. Transportación										
26. Otro										

27. Qué otros servicios y facilidades usted necesita?_____

28. Cuáles son los tres (2) servicios ó facilidades más necesarios para usted?
_____   _____
_____

D. Satisfacción en su vida

A continuacion se incluyen ideas sobre lo que piensan algunas personas de la vida en general. Favor de leer cada oración cuidadosamente. Si usted piensa igual que lo que dice la oración haga una marca (X) bajo ACUERDO. Si usted cree que lo que dice la oración no es cierto haga una marca (X) bajo DESACUERDO. Si usted esta indecisa haga una marca (X) bajo el signo de interrogación ? . Favor de contestar todas las oraciones en la lista. Conteste de acuerdo a lo que usted piensa de su propia vida.

	ACUERDO	DESACUERDO	?
1. Segun voy envejeciendo, las cosas me parecen mejor de lo que yo había pensado.	_____	_____	_____
2. He obtenido más chances (oportunidades) en la vida que muchas de las personas que conozco.	_____	_____	_____
3. Esta es la epoca más trieste de mi vida.	_____	_____	_____
4. Me siento tan feliz como cuando era joven.	_____	_____	_____
5. Estos son los años más felices de mi vida.	_____	_____	_____
6. La mayoría de las cosas que hago son monotonas o aburrídas.	_____	_____	_____
7. Las cosas que hago ahora son tan interesantes para mí como simpre fueron.	_____	_____	_____
8. Cuando miro hacia mi pasado me siento relativamente satisfecha.	_____	_____	_____
9. He planeado cosas que voy a hacer dentro de un mes o de un año a partir de hoy.	_____	_____	_____

ACUERDO DESACUERDO   ?

10. Cuando pienso en mi vida
    pasada pienso que no he
    obtenido las cosas más
    importantes que he deseado.   _____   _____   _____

11. Si me comparo con otras
    personas encuentro que
    yo me siento deprimída
    con mucha frequencia.   _____   _____   _____

12. Yo he obtenido bastante
    de lo que he esperado
    en la vida.   _____   _____   _____

13. Contrario a lo que la
    gente dice la vida del
    del hombre comun se está
    poniendo peor y no mejor.   _____   _____   _____

INTERVIEW - HOUSING FOR THE ELDERLY

_____ 1. Project number _____

_____ 2. Apartment type _____

_____ 3. What is your age?_____

_____ 4. What is your marital status?

    a) never married   d) widow
    b) married   e) separated
    c) divorced

_____ 5. How do you rate your health?

    a) excellent   c) fair
    b) good   d) poor

_____ 6. How does your health status influence what you have to do everyday?

    a) can do everything without help
    b) can do most things without help
    c) need help to do most things
    d) need help to do all activities

_____ 7. What is your educational level?_____

_____ 8. What is your primary source of income?

    a) employment   d) public assistance
    b) Social Security   e) donative from relatives
    c) retirement system   f) other_____

_____ 9. How much rent do you pay per month for this apartment?_____

_____ 10. How long have you lived in this housing project?

_____ 11. How long have you lived in this neighborhood of (name this area of the city)_____?

_____ 12. What do you like most about this housing
project?

_____
_____

_____ 13. What do you dislike most about this housing
project?

_____
_____

_____ 14. How satisfied are you with the features and
arrangement of this apartment?

a) very satisfied   d) dissatisfied
b) satisfied   e) very dissatisfied
c) neutral

_____ 15. How satisfied are you with the amount of
storage available?

a) very satisfied   d) dissatisfied
b) satisfied   e) very dissatisfied
c) neutral

_____ 16. How satisfied are you with the lobby and
communal areas?

a) very satisfied   d) dissatisfied
b) satisfied   e) very dissatisfied
c) neutral

_____ 17. How satisfied are you with the neighborhood
were this project is located?

a) very satisfied   d) dissatisfied
b) satisfied   e) very dissatisfied
c) neutral

_____ 18. How is your overall satisfaction with this as a
place to live?

a) very satisfied   d) dissatisfied
b) satisfied   e) very dissatisfied
c) neutral

_____ 19. Do you have more or fewer friends than you had
before moving here?

a) less   b) same   c) more

_____ 20. Since you moved here do you see your friends less often, about the same, or more often?

    a)   less often
    b)   same
    c)   more often

_____ 21. Since you moved here do you see your family less often, about the same or more often?

    a)   less often
    b)   same
    c)   more often

B. Please indicate here information about your social networks.

	Frequency of visits					Purpose of this Person's visit			Does this person live here?		His/her age	Sex (F or M)
	Daily	Weekly	Monthly	Annually	Never	Social	Service	Social & Service	Yes	No		
Family												
Children 1.												
2.												
3.												
Grandchildren 4.												
5.												
6.												
Siblings & other Relatives 7.												
8.												

	Frequency of visits					Purpose of this Person's visit			Does this person live here?		His/her age	Sex (F or M)
	Daily	Weekly	Monthly	Annually	Never	Social	Service	Social & Service	Yes	No		
9.												
10.												
Friends 11.												
12.												
13.												
Acquaintances 14.												
15.												
16.												

C.   Supportive Services

Services and Facilities	Services Available (On-Site and in Neighborhood)	Are You Satisfied With the Service?		Frequency of Use Of Each Service					Services Outside the Project	
		Yes	No	Daily	Weekly	Monthly	Annually	Never	How Far Is the Service? (Blocks)	Mode of Transpt. 1. Walk 2. Own Car 3. Mini-Bus 4. Bus 5. Taxi 6. Ride
On-site 1. Nursing/doctor examination										
2. Mini-bus										
3. Social worker										
4. Housekeeping/ help										
5. Senior center										
6. Congregate meals										

Services and Facilities	Services Available (On-Site and in Neighborhood)	Are You Satisfied With the Service?		Frequency of Use Of Each Service					Services Outside the Project	
		Yes	No	Daily	Weekly	Monthly	Annually	Never	How Far Is the Service? (Blocks)	Mode of Transpt. 1. Walk 2. Own Car 3. Mini-Bus 4. Bus 5. Taxi 6. Ride
7. Other_____										
In the Neighborhood 8. Grocery store										
9. Drugstore										
10. Clothing store										
11. Other stores										
12. Dry cleaning										
13. Barber/Beauty shop										

Services and Facilities	Services Available (On-Site and in Neighborhood)	Are You Satisfied With the Service?		Frequency of Use Of Each Service					Services Outside the Project	
		Yes	No	Daily	Weekly	Monthly	Annually	Never	How Far Is the Service? (Blocks)	Mode of Transpt. 1. Walk 2. Own Car 3. Mini-Bus 4. Bus 5. Taxi 6. Ride
14. Bank										
15. Restaurant/Bar										
16. Movie/Theater										
17. Recreation Park										
18. Educational services										
19. Senior center										
20. Congregate meals										

Services and Facilities	Services Available (On-Site and in Neighborhood)	Are You Satisfied With the Service?		Frequency of Use Of Each Service					Services Outside the Project	
		Yes	No	Daily	Weekly	Monthly	Annually	Never	How Far Is the Service? (Blocks)	Mode of Transpt. 1. Walk 2. Own Car 3. Mini-Bus 4. Bus 5. Taxi 6. Ride
21. Church										
22. Doctor/Hospital										
23. Welfare Offices										
24. Utility Payment										
25. Transportation										
26. Other_____										

27. What other services do you need?_____

28. Which ones are the three (3) most needed services for you?_____

Here are some statements about life in general that people feel differently about. Would you read each statement on the list, and if you agree with it, put a check mark in the space under "AGREE." If you do not agree with a statement, put a check mark in the space under "DIS-AGREE." If you are not sure one way or the other put a check mark in the space under "?". PLEASE BE SURE TO ANSWER EVERY QUESTION ON THE LIST. Respond according to your feelings about your own life.

		AGREE	DISAGREE	?
1.	As I grow older, things seem better than I thought they would be.	_____	_____	_____
2.	I have gotten more of the breaks in life than most of the people I know.	_____	_____	_____
3.	This is the drearist time of my life.	_____	_____	_____
4.	I am just as happy as when I was younger.	_____	_____	_____
5.	These are the best years of my life.	_____	_____	_____
6.	Most of the things I do are boring or monotonous.	_____	_____	_____
7.	The things I do are as interesting to me as they ever were.	_____	_____	_____
8.	As I look back on my life, I am fairly well satisfied.	_____	_____	_____
9.	I have made plans for things I'll be doing a month or a year from now.	_____	_____	_____
10.	When I think back over my life, I didn't get most of the important things I wanted.	_____	_____	_____

		AGREE	DISAGREE	?
11.	Compared to other people, I get down in the dumps too often.	____	____	____
12.	I've gotten pretty much what I expected out of life.	____	____	____
13.	In spite of what people say, the lot of the average man is getting worse not better.	____	____	____

APPENDIX C

CODING GUIDE

CODING GUIDE

Card Number 1

Column	Question	Variable Number	Description
1	1	1	Project Number
			0 = Leopoldo Figueroa
			1 = Comunidad del Retiro
2,3,4		2	Respondent Number
5,6	3	3	Age (number)
7	5	5	Health
			1 = Excellent
			2 = Good
			3 = Fair
			4 = Poor
8,9	7	7	Educational level (number of school years)
10,11,12	9	9	Monthly rent (number)
13,14	10	10	Time living in project

Housing Satisfaction

Column	Question	Variable Number	Description
15	14	14	Satisfaction with apartment features and arrangement
16	15	15	Satisfaction with storage
17	16	16	Satisfaction with communal areas
18	17	17	Satisfaction with neighborhood
19	18	18	Satisfaction - overall

Categories
1 = very satisfied
2 = satisfied
3 = neutral
4 = dissatisfied
5 = very dissatisfied

Column	Question	Variable Number	Description

Social Networks

Column	Question	Variable Number	
21,22	19	19(a)	Change in number of friends after moving here -1 = less 00 = same 01 = more
24,25	20	20(a)	Change in frequency of meeting with friends after moving here, -1 = less often 00 = same 01 = more often
26,27	21	21(a)	Change of frequency of meeting with family after moving here, -1 = less often 00 = same 01 = more often
29,30	Part B	22	Children's visits frequency
31,32	Part B	23	Grandchildren visits frequency
33,34	Part B	24	Siblings and relatives visits frequency
35,36	Part B	25	Friends visits frequency
37,38	Part B	26	Acquaintances visits frequency

Categories

14 = everyday - 2 or more persons
13 = everyday - 1 person
12 = more than once a week - 2 or more persons
11 = more than once a week - 1 person
10 = once a week - 2 or more persons
09 = once a week - 1 person
08 = 2 or 3 times a month - 2 or more persons
07 = 2 or 3 times a month - 1 person
06 = once a month - 2 or more persons
05 = once a month - 1 person
04 = several times a year - 2 or more persons
03 = several times a year - 1 person
02 = once a year or less - 2 or more persons
01 = once a year or less - 1 person
00 = never

Column	Question	Variable Number	Description
			Use of Supportive Services
39	Part C	27	Nursing/Doctor examination
40	Part C	28	Mini-bus
41	Part C	29	Social worker
42	Part C	30	Other - Religious services
43	Part C	31	Grocery store
44	Part C	32	Drugstore
45	Part C	33	Clothing store
46	Part C	34	Barber/Beauty shop
47	Part C	35	Bank
48	Part C	36	Restaurant
49	Part C	37	Church
50	Part C	38	Hospital
51	Part C	39	Public transportation

Categories
7 = daily
6 = more than once a week
5 = once a week
4 = 2 to 3 times a month
3 = once a month
2 = several times a year
1 = once a year or less
0 = never

52,53	Part D	40	Life Satisfaction Index
54	27(Part C)	41	Other services needed

Categories
0 = none
1 = one or more mentioned

Column	Question	Variable Number	Description

Three most needed services

Column	Question	Variable Number	Description
55	28(Part C)	42	Medical
56	28(Part C)	43	Grocery
57	28(Part C)	44	Drugstore
58	28(Part C)	45	Transportation
59	28(Part C)	46	Housekeeping help

Categories
0 = not mentioned
1 = mentioned

Liked most in project

60	12(Part A)	47	Location
61	12(Part A)	48	Tranquility
62	12(Part A)	49	Low-rent
63	12(Part A)	50	Comfortability (apartment & building)
64	12(Part A)	51	Good relations with neighbors

Categories
0 = not mentioned
1 = mentioned

Disliked most

65	13(Part A)	52	Nothing
66	13(Part A)	53	Loneliness
67	13(Part A)	54	Bad behavior of some neighbors
68	13(Part A)	55	Long distance to services

Categories
0 = not mentioned
1 = mentioned

VITA

Sarah Toledo Toledo

Candidate for the Degree of

Doctor of Philosophy

Thesis: SUPPORTIVE SERVICES AND SOCIAL NETWORKS AS
          RELATED TO LIFE SATISFACTION OF THE ELDERLY

Major Field: Home Economics - Housing, Design, and
               Consumer Resources

Biographical:

    Personal Data: Born in San Juan, Puerto Rico,
        February 24, 1948, the daughter of Mr. and Mrs.
        Primitivo Toledo.

    Education: Bachelor of Science in Home Economics,
        University of Puerto Rico, San Juan, Puerto
        Rico, 1968; Master of Science, Oklahoma State
        University, Oklahoma, 1979; completed require-
        ments for the degree of Doctor of Philosophy at
        Oklahoma State University, December, 1982.

    Professional Experience: Agricultural Extension
        Service Home Economist, 1968 - .

    Professional Organizations: American Home Economics
        Association, Agricultural Extension Service Home
        Economist Association, and National Trust for
        Historic Preservation.