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The Spatial Origins of the Homeless: How the Homeless Vary in Their Geographic Distribution

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THE FLORIDA STATE UNIVERSITY

COLLEGE OF SOCIAL SCIENCE

THE SPATIAL ORIGINS OF THE HOMELESS:
HOW THE HOMELESS VARY IN THEIR GEOGRAPHIC DISTRIBUTION

By

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Dedicated to
My late father -Dr. H.M.E. Suhendar and my mother -Hj. Pien S. Suhendar
who affectionately pour me with encouragement and prayers

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ABSTRACT

Many studies on homelessness have identified the factors that correspond to the spatial distribution of homelessness. They used data on intercity measures of homeless prevalence and identified where people end up as homeless. Such studies could neither assess spatial variation and processes that contribute to the incidence of homelessness within a jurisdiction having the same homelessness regulation nor reveal where the homeless come from. There have been two studies using intracity data and identified where the homeless come from. These studies were conducted by Culhane, Lee and Wachter (1996) in New York City and Philadelphia and by Wong and Hillier (2001) in Philadelphia that identified the residential origins of homeless families.

There has been no such study to date to investigate the residential origin of the varying categories of homeless. This study investigates the spatial distribution of residential origins of the varying categories of homeless and the factors that contribute to the vulnerability of individuals to become homeless. The study categorizes homeless people based on gender, family status, the occurrence of alcohol, drug and mental health (ADM) problem, chronicity and veteran status. Data for this study was obtained through the 2005 point-in-time homelessness survey in Miami-Dade County, Florida.

The use of hot spot analyses reveal the differences in the spatial distribution of the prior addresses of varying categories of the homeless including by gender, family status, the occurrence of ADM problem and chronicity. The spatial distribution statistics indicate that the differences are statistically significant. This study suggests that the various factors associated with the causes of varying categories of the homeless did correspond to the spatial distribution of residential origins of the homeless. The spatial distribution of the prior addresses can be a new characteristic that distinguishes between one type of the homeless and other type of the homeless.

This study also shows similar pattern of the spatial distribution of prior addresses of homeless women to those of homeless women-dominated categories including homeless family, homeless without ADM problem and non-chronic homeless. The prior addresses of these homeless categories are less tied to neighborhoods of high poverty than those of homeless men and homeless men-dominated categories including homeless individuals, homeless with ADM problem and chronic homeless. This finding suggest the possibility that domestic violence as one of major causes of homelessness for women that is not confined strictly to neighborhoods of high poverty and other gender-based variables are variables that explain the differential distribution of prior addresses of homeless women and homeless women-dominated categories from homeless men and homeless men-dominated categories.

This study also reveals that areas that characterized by deprivation and high rate of unemployment, proportion of Blacks and female-headed households with young children are strongly and positively significant in producing more homeless of varying categories. Areas with deprivation are characterized by a low educational attainment of their residents, high concentration of households with public assistance income, poverty, lack of social networks and family relationship, transportation mismatch, high proportion of rental units, rental affordability problem and rental overcrowding. Such neighborhoods are also characterized by low median households income and low median contract rent.

CHAPTER 1

INTRODUCTION

1. Background

Most scholars state that the incidence of homelessness does not result from a single cause. The causes of homelessness are multifaceted factors. Generally speaking, the causes of homelessness include structural factors and individual factors. However, it is still arguable to determine whether structural factors or individual factors predominate as the main cause of homelessness. Some scholars argue that structural factors primarily contribute to homelessness rather than individual factors. Once structural factors have created the conditions for homelessness, individual factors can increase vulnerability of a person to becoming homeless. On the contrary, other scholars believe that the efforts of eradicating the homelessness problem should emphasize individual factors as the causes of homelessness rather than the structural problem.

Over two decades, many researchers have attempted to identify the factors that correspond to the spatial distribution of homelessness (Burt, 1992; Lee, Price-Spratlen, and Kanan, 2003; Tucker, 1987). Most commonly, they used data on intercity homelessness rates as the dependent variable and identified where people end up as homeless. Such studies could not reveal where the homeless come from and what process that contributes to the vulnerability of individuals on the brink of homelessness.

There are very few researches on contemporary homelessness investigating the homeless origin. The question of where to target the homelessness prevention program is of importance to be addressed. The study investigating where the homeless come from could address such a question and also identify the forces that have put these individuals at risk of homelessness.

The first study addressing the issue of where the homeless come from is a study conducted by Culhane, Lee and Wachter (1996). This study used the prior-address information reported by the homeless family in the New York City and Philadelphia shelter systems. Using the prior-address of the homeless, this study constructed the rate of homelessness by census tract and analyzed this distribution with the factors related to demographic, economic and housing and neighborhood quality. This study is also the first study on homelessness to use an intracity data.

Culhane, Lee and Wachter's (1996) study identified communities with high risk of homelessness and examined socio-economic and demographic characteristics that are associated with the risk. They found that there were a number of demographic and socio-economic factors significantly contributing to the rate of family shelter admission. These factors include female-headed households with young children, persons of African-American descent, housing overcrowding, residence in subfamilies, poverty, unemployment, rent burden and poor neighborhood quality.

Another study that employed a similar method as the Culhane, Lee and Wachter's study is a study conducted by Wong and Hillier (2001). They used residential addresses of participants who received emergency assistance and case management services from the Community-Based Homelessness Prevention Program and the prior address of homeless family in the City of Philadelphia's centralized public shelter system to identify ways to improve the targeting of prevention services to communities.

Due to the data availability in the shelter system in the City of Philadelphia and the City of New York, both studies used only the distribution of prior address of homeless family. They did not investigate the distribution of prior address of other categories of homeless. The varying causes of homelessness imply the heterogeneity of the homeless. The heterogeneity of the homeless is their most distinctive characteristic (Wright, Rubin and Devine, 1998: p. 7). Dozens of studies display a diversity of categories that is in line with diversity in social and demographic characteristics and diversity in length of time homeless and the number of episodes of homelessness.

There has been no such study to date to investigate the residential origin of the varying categories of homeless. This study attempts to identify where the varying categories of homeless come from and the factors that contribute to the vulnerability of individuals to become homeless. The spatial distribution of prior addresses for each type of the homeless is examined to identify whether the spread, concentration and density variation of prior addresses are different for each type of the homeless. This study also attempts to identify demographic, socioeconomic and housing factors that are associated with the rate of prior addresses for each type of the homeless.

The finding of this study should assist in addressing the question of where to target the homelessness prevention program for each type of homelessness and of how to effectively prevent the incidence of varying categories of homeless. The identified spatial distribution and the factors associated with the rate of the residential origins of the homeless could help to formulate effective homelessness prevention program.

2. Hypotheses and Research Questions

The purpose of this study is to seek the spatial distribution of prior addresses of different categories of the homeless and identify factors that are associated with the rate of prior addresses for each type of the homeless. Expanding the work of Culhane et. al. (1996) and Wong and Hillier (2001), this study uses three groups of variables that are associated with the risk of homelessness. These groups of variables include demographic, socioeconomic and housing. The complete list of variables is shown in the methodology chapter.

This study examines the spatial distribution of prior addresses for each type of the homeless. It hypothesizes that homeless people of varying types will have differential spatial distribution of their prior addresses. The study also investigates whether demographic, socioeconomic and housing factors have different impact on varying types of the homeless. Each type of homeless has different extent of experiencing those factors that force them into homelessness.

This study categorizes homeless people based on their social and demographic characteristics and their length of time and their number of episodes of being homeless. The social and demographic characteristics include gender, family status, veteran status, and the occurrence of alcohol, drug and mental health (hereinafter known as “ADM”) problem. The length of time and the number of episodes of being homeless categorize homeless population into two categories: chronic homeless and non-chronic homeless.

This study also hypothesizes that different demographic, socioeconomic and housing factors are associated with differential rate of the residential origins of homeless people. The spatial distribution of residential origins could be different for different homeless types. There has been no such study to date to explore the spatial distribution of various types of

homeless. This study is expected to be the first exploratory study that investigates the spatial distribution of different homeless types.

Specifically, this study seeks to address the following research questions:

1. Does the spatial distribution of prior addresses for *each* type of the homeless differ?
2. What demographic, socioeconomic, and housing factors are associated with the rate of prior addresses for each type of the homeless?

3. Significance of the Study

Numerous theories about homelessness have emerged since the early 1980s and they seek to explain features of the intractable homelessness problems. In varying degrees, they seek what causes people to become homeless or what has caused the number of homeless people to increase. Most of them used intercity data and identified where people end up as homeless. There have been two studies using intracity data and identified where the homeless come from. These studies are conducted by Culhane, et. al. (1996) in New York City and Philadelphia and by Wong and Hillier (2001) in Philadelphia.

This study is intended to replicate and expand the works of Culhane, et. al. (1996) and Wong and Hillier (2001). The replication of those studies in Miami-Dade County will significantly contribute to the homelessness literature. This study is conducted in a different region from the two previous studies. Both previous studies were conducted in the North-East region and this study will be conducted in the South-East region. In addition to the region difference, there are two other aspects that should be of interest in replicating such study in Miami-Dade County. These aspects are the proportion of Hispanic population and the climate.

The Hispanic population in Miami-Dade County makes up more than fifty-seven percent of the total population of the county. Both previous studies used the proportion of Hispanic as a variable associated with the risk of homelessness. Their case studies, New York City and Philadelphia, have Hispanic populations less than ten percent of the total population. The findings of how this variable applies in an area of high Hispanic population should be of importance in enriching homelessness literature.

Many scholars concluded that the climate is one of the significant determinants of homelessness (Lee, et. al. 2003; Quigley, Raphael, and Smolensky, 2001). A warm climate area will likely have a higher homeless population than a cold climate area. Previous studies used case studies in which the temperatures are severe cold during winter. On the contrary, Miami-Dade County lies in the subtropical climate area. The annual average temperature was 76.7 degrees and the annual average low temperature was 69.1 degrees. Replicating Culhane, et. al. and Wong and Hillier's study in Miami-Dade County will be important due to the climate differences in previous case studies, which were conducted in New York City and Philadelphia. Because of the warm weather during winter, Miami-Dade County is likely to attract more homeless people who originated from severe cold climate areas than New York City and Philadelphia.

This study is also intended to expand Culhane, et. al. and Wong and Hillier's study in regard to the homeless category. Due to the data availability, both previous studies only investigated the residential origins of homeless family. They did not examine the distribution of prior addresses of other homeless categories. This study investigates the distribution of prior addresses of five sets of homeless category.

The expected product of this study can identify where the varying categories of homeless come from. This finding can address the question of whether or not the spatial

distributions of prior addresses for each type of the homeless differ. The finding will contribute to knowledge of target area of the homelessness prevention program. The target area of the homelessness prevention program can be more specified by the category of homeless.

This study also identifies factors associated with the risk of homelessness. Specifically, this study investigates whether demographic, socioeconomic and housing factors have different impact on each type of the homeless. Using regression analysis, this study will show the factors associated with the risk of homelessness for each category of homeless. This finding can explain the social processes that contribute to the vulnerability of individuals to become homeless. These social processes can be specified for each category of homeless.

In summary, the findings of this proposed study should assist in formulating the homelessness prevention program. Specifically, this study will address the question of where to target the homelessness prevention program by various homeless categories and of how to effectively prevent the incidence of each category of homelessness.

4. Scope of the Study

This study examines the distribution of the spatial distribution of prior addresses of the homeless in Miami-Dade County, Florida. Data was obtained through a point-in-time homelessness survey organized by Miami-Dade County Homeless Trust on January 27, 2005. The study constructs a database of addresses aggregated by census tract. This data is then analyzed with a set of variables on demographic, socioeconomic and housing and neighborhood quality obtained from the US 2000 Census data.

Based on the 2000 Census Data, more than two million people live in Miami-Dade County, making it the most populous county in the state of Florida. The area of Miami-Dade County is 1,944.5 square miles with a total population of 2,253,362 in 2000. These residents live in thirty-two municipalities and an unincorporated area. **Figure 1.1** shows the administrative boundaries of the municipalities in Miami-Dade County. The total number of households in the area in 2000 is 776,774 households. Miami-Dade County has a distinctive ethnic diversity. The 2000 Census Data shows that the area consists of 23.7 percent White non-Hispanic, 20.3 percent Black and 57.3 percent Hispanic, making it one of the Hispanic population centers in the country (The Brooking Institute, 2005).

As other areas in the United States, Miami-Dade County also has been facing the homelessness problem. According to *Annual Report on Homeless Conditions in Florida in 2002-2003*, the estimated daily population of homeless people in 2003 in Miami-Dade County was 7,627 people. This number was an increase compared with the condition in 2002. The estimated daily population of homeless people in 2002 was 6,889. With regard to the homeless population, Miami-Dade County is the second largest county to Broward County.

Miami-Dade County Homeless Trust is a governing body composed of representatives of key stakeholders in the planning and delivery of homeless housing and services that emerges as the coordinator for homeless services and housing in Miami-Dade County. The Trust also serves as lead applicant and recipient for major funding request and cooperates with private sector to raise private sector funds.

Source: Department of Planning and Zoning (2003)

Figure 1.1: Commission Districts and Municipalities in Miami-Dade County

CHAPTER TWO

REVIEW OF THE LITERATURE

1. The Definition of Homelessness

Homelessness has been a significant social problem in the United States since the early 1980s. It has proven to be an intractable and highly visible social problem. Over two decades, many scholars and policymakers argued over the ways of eradicating the homelessness problem. In the late 1980s, policymakers had expected that they could end the homelessness problem quickly. The programs and services to eradicate homelessness problems were expanded considerably, but the number of homeless has yet to decrease (Burt, et al., 2002; Wright, Rubin, and Devine, 1998).

The concept of homelessness is difficult to define and measure (Blau, 1992; Erickson & Wilhelm, 1986). Burt (1996) argued that there was no right answer to define who is homeless. It is one of the hardest aspects of conducting a homelessness study. Most scholars would come to recognize that people typically are thought to be homeless if they have no permanent residence and occupy structures without permission. Wodon (1999) described homelessness into two components: literal homelessness, who lived on the street, and shelter homelessness, who lived in shelters. Yet Burt stated that there is less agreement regarding people in such circumstances as a young mother with children who has lived for some months with relatives or friends, a family or person who recently lost his house and has lived with relatives or friends without any contribution for paying rent, or a family or person who moved to a new town and lived with relatives or friends but had no income (Burt, 1996: 16).

Despite unclear definition of homelessness, the federal government legislation on homelessness, the Stewart B. McKinney Act has defined a homeless person as “an individual who lacks of fixed, regular, and adequate nighttime residence; and an individual who has a primary nighttime residence that is (a) supervised publicly or privately operated shelter designed to provide temporary living accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill); (b) an institution that provides a temporary residence for individuals intended to be institutionalized; or (c) a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings” (42 USCS 11302).

Definition of homeless is of importance from research and policy perspectives. A research perspective considers the definition of homeless with the intention of identifying who should be counted and described whereas a policy perspective considers it in order to identify who should be planned for and what policy will be needed (Burt, 2002).

Despite the political and scientific controversies over the exact size of the recent homeless population, there is evidence that homelessness has increased over the past three decades (Calsyn and Morse, 1990; Linblom, 1996; Quigley, et. al., 2001). Estimates of number of homeless people were broad because of the difficulty of counting persons living on the street (McFadden, 1997). Crook (1999) summarized a number of studies estimating the number of homeless people and came up with 250,000 to 3 million of estimated number of homeless people. She argued that it was difficult to estimate the number of homeless people because of underreporting and challenges in tracking homeless people due to their temporary living. Burt (2002) documented some studies showing that the number of

homeless in the past year could be as high as one percent of U.S. population. In the past five years, the number could reach as high as three percent of U.S population.

The various estimates of the size of the homeless population differ in methodology and definition. The interpretation is subject to political manipulation and statistical controversy (Quigley, et. al., 2001). Homelessness is impossible to measure with complete accuracy. However, the incidence of homelessness undoubtedly failed to decline.

2. Theories of Homelessness

Numerous theories about homelessness have emerged since the early 1980s and they seek to explain features of the intractable homelessness problems. In varying degrees, they seek what causes people to become homeless or what has caused the number of homeless people to increase. Baum and Burnes (1993) argued that the homeless are victims of larger social forces. Homeless people share the characteristics of nearly total alienation from society and its supporting institutions. They are fearful of enduring relationships with the society (Baum and Burnes, 1993).

Most socially integrated people have social networks. Family, friends and coworkers surround them. When they get evicted or can not find affordable housing, they will live with relatives or friends, thereby increasing the level of household doubling-up (Elliot and Krivo, 1991). They also can mobilize some resources of social networks to buffer the stress and to help prevent becoming homeless (Wallace and Bassuk, 1991). On the contrary, for those with lack of social networks, they will end up in street or shelter.

Baum and Burnes (1993) asserted that homelessness is an evidence of disaffiliation. Most of them have never been married or are divorced. They tend to have little communication with their family and friends. Homeless people seldom use the social benefits to which they are entitled. Accordingly, Main (1998) asserted that homelessness is a condition of detachment from larger society. This detachment is characterized by the absence of the bonds that link individuals to a network of social structures. Homelessness is also a condition in which individuals lack connections with social institutions. He argued that since disaffiliation was the cause of homelessness, the homelessness policy should focus on reconnecting them with the rest of society rather than on treatments programs for people with disabilities or ADM problems.

Hopper (2003) offers new perspective on theories of homelessness with two constructs: abeyance and liminality. The constructs of abeyance and liminality were developed from anthropology and historical sociology respectively. These constructs view the prevalence of homelessness from its underlying processes and its rarity. These reversing views suggest that we need to pay more attention to homelessness prevention.

The concept of abeyance perceives the prevalence of homelessness as a mismatch problem. The prevalence of homelessness is caused by a mismatch between the relatively scarce available resources in a society and the excessive supply of potential users (Hopper, 2003). The problem occurs when various mechanisms fail to accommodate surplus potential users.

Applying the concept of abeyance on the homelessness problem, Hopper (2003) argues that the decisive issues on homelessness are fourfold: (1) how homelessness will be solved, (2) how adequate resources will be determined, (3) how the relief and repression will be calculated for making a policy, (4) how some measure of discomfort will be held.

The concept of abeyance reframes homelessness as a problem of surplus people with insufficient resource to secure housing on the market. Hopper (2003) argues that “regular access to a conventional dwelling” may be better to be considered as work than residence.

Hopper (2003) offers the concept of liminality to underlie the processes of homelessness. He defined liminality as “various states of passage through which designated members of a culture travel at specified times of transition” (p. 20). He argues that this concept is relevant to homelessness to capture missing feature that keep vulnerable others housed as well as to revivify the ethnography corrective on homelessness.

Referring to the concept of liminality, homeless people are considered to be in transition away from ordinary social life particularly lifestyles of home and family. Homeless people are suspended between “the well-known roles they have left behind and the unknown demands of a new life” (Hopper, 2003: p. 20). There is a social and cultural limbo where the destination is unknown.

Hopper (2003) asserts three core elements in liminality states including “suspension of the rule of the commonplace; intermingling with unfamiliar others in strange settings, often mobile circumstances; and a heightened sense of uncertainty, of things being unfinished and in process” (p. 20). He argues that liminality is pertinent to homelessness when dislocations coincide with critical transitions.

Mental illness and substance abuse are of importance in explaining facets of homelessness problems. Many researchers argue that mental illness and substance abuse are indeed causally responsible for the rise of the homelessness problems (Blau, 1992; Burt, 2002; Jencks, 1994; Wright, Rubin and Devine, 1998). Jencks (1994) downplayed the role of housing affordability in connection with the incidence of homelessness and placed greater emphasis on deinstitutionalization and the devastating impacts of increased drug usage.

Baum and Burnes (1993) believed that factors of mental illness and substance abuse are the most important factor to explain the increasing number of homeless people, rather than consequence of increased poverty or decreased affordable housing. They asserted that alcoholism, drug addiction and mental illness are primary and direct causes of homelessness. Eighty three percent of the homeless population suffers from ADM problem (p. 144).

3. Period Prevalence of Homelessness vs. Point Prevalence of Homelessness

In order to comprehend the magnitude of the homelessness problem, it is of importance to realize the turnover in the homeless population. Many people experience homelessness more than once. Many people enter and leave homelessness during a year. Scholars and policy makers have classified those who experience homelessness frequently as either episodically homeless or chronically homeless. Episodically homeless experience homelessness more than one period but usually for short period. Chronically homeless experience more than one spell of homelessness and for longer period. Specifically, HUD defines chronically homeless as “being disabled and either continuously being homeless for a year or more, or having had at least four episodes of homelessness during the last three years” (HUD, 2004:2).

To capture the turnover in the homeless population, some scholars estimated the size of homeless population based on the period prevalence of homelessness. Link, et. al. (1994) conducted a national household survey and found that 3.2 percent of a random sample of households with telephones reported a prior episode of homelessness in the previous five years. This study estimated the size of homeless population at 26 millions over a period of five years. Cousineau (2001) conducted a telephone survey of the general adult

population in Los Angeles County. This study revealed that an estimated 370,000 adults or 5.7% of the adult population have experienced homelessness within the past five years.

Most estimation of the homeless population based on the point prevalence of homelessness. Most researchers attempted to measure the magnitude of the homelessness problem and identify the characteristics of homeless people through studies based on samples obtained on a given day. Studies on homelessness applying the point prevalence of homelessness estimated the U.S. homeless population at between 0.1 percent and 0.5 percent of urban populations (Burt and Cohen, 1989; Culhane and Kuhn, 1998). A research based on administrative databases of public shelters in New York City and Philadelphia conducted by Culhane and Kuhn (1998) revealed that both cities had point prevalence rates of homelessness between 0.2 percent and 0.3 percent in 1992.

4. Intercity Measures of Homeless Prevalence

Most researches on homelessness used intercity data in their analysis. They used the rate of homelessness across cities as dependent variable. This study identifies five intercity data that have been widely used by researchers. These intercity data include the HUD's 1984 Report to the Secretary on the Homeless and Emergency Shelter, the 1990 Shelter and Street Night Enumeration, the 1990 Urban Institute's Homelessness Survey, the 1996 National Survey of Homeless Assistance Providers and Clients (NSHAPC) and the 2000 Census of Emergency and Transitional Shelter Population.

HUD's 1984 Report

The HUD's 1984 data was collected from the HUD survey of homelessness in 60 metropolitan areas in 1984. HUD conducted a random sample of 20 areas in each of three sizes of areas including small area of 50,000 to 250,000 populations, medium area of 250,000 to one million populations and large area of over 1 million populations. The units of analysis of this survey are Rand McNally Commercial Marketing Areas (RMAs). RMAs defined by combining townships and localities.

The estimation of the rate of homelessness size on HUD's 1984 Report was based on the opinions of local officials involved with the homelessness problem such as local government representatives, individuals from nonprofit agencies, and researchers of the homeless (Elliot and Krivo, 1991). HUD interviewed three to twelve local officials for each locality. This number varied based on the size of the localities. They were asked for their estimates of literal homeless including homeless living on street and homeless staying in shelter in their areas on a single night not for any other period of time. The survey was conducted in December 1983 through January 1984.

Rossi (1989) provided a critical evaluation of this attempt to estimate the number of homeless persons. Some of these local officials might have overstated the homelessness problems in their jurisdictions to obtain more funds for addressing it (Early and Olsen, 2002; Rossi, 1989). Elliot and Krivo (1991) acknowledged the difficulty of using this measure when they matched the unit of analysis of homelessness intercity data and with a corresponding Standard Consolidated Statistical Area, Metropolitan Statistical Area or Urbanized Area.

S-Night Enumeration

The Shelter and Street Night Enumeration that was also publicly known as S-Night was a part of the 1990 Census to enumerate the homeless population not covered by regular Census Bureau procedures for households or persons in group quarters. The enumeration

was conducted nationwide and placed greater emphasis in urban places with populations in excess of 50,000 where the homeless tend to be found (Quigley, et. al., 2001; Taeuber, 1991).

The S-Night enumeration counted persons and collected data in three steps. The first step, they collected data at a predesignated list of shelters including emergency shelters, shelters for abused women, shelters for runaway and neglected youth, and low cost motel costing \$12.00 or less on March 20, 1990 between 6 p.m. to midnight. The second step, the census enumerators counted homeless people on the streets at locations designated by local officials as known places of congregating for the homeless. This step of enumeration was conducted on March 21, 1990 between 2 a.m. and 4 a.m. The last step, the census enumerators attempted to count all individuals leaving from abandoned buildings (Lee and Price-Spratlen, 2000; Quigley, et. al., 2001; Taeuber, 1991).

It is widely acknowledged that S-Night was not intended to be a census of the homeless population and therefore the counted numbers were not a complete count of the homeless population. Edin (1992), Cousineau and Ward (1992), Hopper (1992), and Spark (1992) evaluated the S-Night enumeration of the homeless in Phoenix, Chicago, New York and Los Angeles, respectively. Those studies found that S-Night undercounted the size of the homeless population.

Quigley, et. al. (2001) argued that this undercount was possibly caused by such factors as the lists of shelters and street locations were incomplete, the census enumerators failed to visit many of the listed street locations and shelters or they did not follow the protocol in counting the homeless population. The qualitative interviews conducted by Edin (1992) in Chicago revealed that only five of 18 homeless persons believed they had been counted. Similarly, in Spark's study (1992) in Phoenix, interviews with twelve of the sheltered homeless found all had been enumerated, but only two of 10 the street homeless believed they had been counted.

Based on 60-day housing histories from a sample of homeless substance abusers in New Orleans, Wright and Devine (1995) asserted that homeless people spend relatively few nights in locations that would make them potentially countable regardless of the enumeration procedure. Their finding explains the reason why the undercount of homeless people on the streets occurs.

The Burt Survey

The 1990 Urban Institute's Homelessness Survey or also known as The Burt Survey was part of a study conducted by The Urban Institute in 1990 to examine probable causes of homelessness during 1980s. The survey attempted to estimate the size of the homeless population in 182 U.S. cities that had populations of 100,000 or more in 1986. They selected cities as the unit of analysis for two reasons. First, using cities allow them to have large sample size and could be large enough for more complex analysis. Secondly, cities were considered to provide accurate counts of shelters for both 1989 and 1981.

They attempted to establish the number of shelter beds that were available for the homeless in two years: 1989 and 1981. They obtained the lists of shelters operating in 1989 from the person responsible for the local Comprehensive Homeless Assistance Plan prior to receipt of HUD's McKinney Act funding and from local coalitions or coordinators of services for the homeless. They called virtually every shelter providers and completed the information of shelter bed capacities in 1989 and 1981.

Burt (1997) acknowledged the flaws of this measure. She asserted that many homeless people on any given night did not stay in shelters, so the shelter bed count will undercount the exact size of homeless population. Another problem was that the official bed

count for a facility may be an inaccurate reflection of the size of the homeless served for the facility itself. It was because the shelter may be operated at overcapacity or less than full capacity most of the time.

Culhane, et. al. (1996) and Quigley, et. al. (2001) also identified the shortcomings of this measure. The measure of shelter capacity reflects a public-policy response to homelessness rather than homelessness itself. The measures of the homelessness across localities would be confounded by the different responses of those localities to the homelessness problem. The size of the sheltered homeless population is supply and policy-driven (Culhane, et. al., 1996).

The level of homelessness problem undoubtedly affects the supply of shelter beds, but also more factors possibly contribute to the shelter capacities and these may bias cross-sectional inferences on the homelessness drawn from these data. Furthermore, Quigley, et. al. (2001) asserted that the changes in housing assistance for the poor may affect the size of the sheltered homeless population. Additionally, Early and Olsen (2002) argued that the use of shelter beds as a proxy for the number of homeless could preclude estimating the effect of additional shelter beds on the level of the homelessness.

NSHAPC

The National Survey of Homeless Assistance Providers and Clients (NSHAPC) was conducted in 1996 and sponsored by twelve federal agencies including the U.S. Department of Housing and Urban Development, Health and Human Services, Veteran Services, Agriculture, Commerce, Education, Energy, Justice, Labor and Transportation, the Social Security Administration, and the Federal Emergency Management Administration. The Urban Institute directed by Martha Burt designed the survey and analyzed the NSHAPC data and write up the reports (Burt, et. al., 2001).

The NSHAPC study was designed to a larger and more systematic survey of homeless assistance providers and clients. There were 76 primary sampling areas including 28 largest metropolitan statistical areas, 24 small and medium-sized metropolitan statistical areas, and 24 rural areas. The small and medium-sized metropolitan statistical areas were randomly selected by geographical regions (northeast, south, Midwest, west) and size. The rural areas were randomly selected by a sampling frame defined as the catchment areas of Community Action agencies and geographical regions.

The data collection methods of the NSHAPC include telephone interviews and mail survey with representatives of homeless assistance programs, and interviews with client who used a homeless assistance program regardless of their homelessness status. This survey include sixteen types of homeless assistance programs: emergency shelters, transitional housing programs, permanent housing programs, program distributing vouchers to obtain emergency accommodations, program accepting vouchers in exchange for giving emergency accommodation, food pantries, soup kitchens, mobile food programs, physical health care programs, mental health programs, alcohol/drug programs, HIV/AIDS programs, outreach programs, drop-in centers, migrant labor camps used to provide emergency shelter for homeless people and other programs.

The NSHAPC's study was designed to collect information about the characteristics of homeless assistance programs and their clients. The study did not primarily focus on counting the size of the homeless population. Burt, et. al. (2001) acknowledged that this study had missed some homeless people and any estimate made from the NSHAPC data should be considered as a lower-bound estimate. The findings were expected to help policy

makers design more effective programs and service delivery strategy to alleviate the problem of homelessness.

The study did not use a geographical unit as the units of analysis. Instead, they used three types of unit of analysis including program contacts, clients/households, and homeless individuals. The study's sophisticated sample design and wealth of data across the nation allow it to be a good data sources for any study on homelessness using geographical units as the units of analysis. Algood and Warren (2003) have used the NSHAPC data for their analysis to investigate the determinants of the duration of homelessness. Similarly, Early (2004) have used the NSHAPC data for investigating the determinants of homelessness and simulating the effects of the removal of housing subsidies. Both studies used homeless individuals as the units of analysis.

2000 Census of Emergency and Transitional Shelter Population

In 2000 Census, the U.S. Census Bureau developed separate operations to enumerate people living in emergency and transitional shelters. The emergency shelters include emergency shelters for homeless people and shelters for runaways or neglected children. Transitional shelters include transitional shelters, hotels and motels used to provide shelter for homeless people. The enumeration excluded homeless people living in shelter for abused women who are victims of domestic violence, transitional housings and supportive permanent housing. Learning from the confusion and misinterpretation of the results from the S-Night Enumeration of the 1990 Census, the U.S. Census Bureau cautions data users that the results from the special enumeration of people living in emergency and transitional shelters would be inaccurate as a measure of the number of homeless people.

The census enumerators counted people living in emergency and transitional shelters on March 27, 2000. The enumeration report presents the basic demographic data for the people living in emergency and transitional shelters on that day. The report also presents the total number of people living in emergency and transitional shelters for each metropolitan areas of 100,000 or more population that have 100 or more people living in emergency and transitional shelters.

The enumeration counted 170,706 people living emergency and transitional shelters. Most of them are male (sixty-one percent) and 18 years of age or older (seventy-four percent). The proportion of female was 49 percent for those under 18 years of age and 35 percent for those 18 years of age and over. By race, forty-one percent of people living in emergency and transitional shelters were White alone and forty percent of them were Black or African American alone. There were about twenty percent of people living in emergency and transitional shelters reported that they were Hispanics or Latino origins. People who reported that they were White alone and not Hispanics accounted for thirty-three percent of the people living in emergency and transitional shelters.

The number of people living in emergency and transitional shelters by cities shows that the most people living in emergency and transitional shelters were in New York City (27,132 people). The other cities that have high number of people living in emergency and transitional shelters include Los Angeles (6,430 people), Chicago (3,799 people), Seattle (2,458 people), Philadelphia (2,324 people) and Boston (2,303 people). According to this enumeration, City of Miami had 822 people living in emergency and transitional shelters.

The U.S. Census Bureau indicated that the counted number would be inaccurate in counting the people living in emergency and transitional shelters. The enumerations were only conducted in emergency and transitional shelters that were open on the enumeration day. If the shelter was not open on that day, it was excluded in the census universe as an

eligible service for census purposes. Some shelters were also excluded because they were not in the list of shelters developed by the Census Bureau in consultation with local experts. In addition, the enumeration was only a “snap shot” of the population using emergency and transitional shelters and it excluded those who were turned away on the enumeration day. The U.S. Census Bureau also indicated that some people in the shelters might have avoided the enumeration thus reducing the number of people who normally would have lived at the shelters.

Critiques of Intercity Measures

As described in previous section, intercity measures were based on the point prevalence of homelessness. Culhane, et. al. (1996) argued that researches based on intercity data have limitations. The limitation of such researches using the point prevalence of homelessness includes the reliability and validity of the size of the homeless population across cities. The point prevalence measures are difficult to obtain reliably from city to city. They argued “even if estimates were reliably obtained across jurisdictions, their validity as comparable measures of the extent of homelessness across locales would be confounded by the highly variant response of those locales to the problem of homelessness” (Culhane, et. al., 1996: 329).

The shortcomings of the intercity point prevalence measures have led Culhane, et. al. (1996) to construct an intracity prevalence measures of homelessness. They used the residential origins of the homeless people admitted to the New York and Philadelphia shelter systems and constructed an intracity index for the rate of homelessness was that based on the distribution of the residential origins of the homeless people by census tract. They assert that an intracity measure allows researchers to assess spatial variation and processes that contribute to the incidence of homelessness within a jurisdiction having the same policy and regulation.

Culhane, et. al. (1996) argue that the intracity measure has methodological advantages over the intercity measure as follows: “(1) in general, it is concerned not with the exactness of a count for a given day but with identifying a representative sample of persons from whom prior-address information can be obtained over a given period of time; and (2) it is not confounded by local policies and regulations that affect shelter supply and stay patterns because those factors would presumably have a similar impact across a city’s jurisdiction” (Culhane, et. al., 1996: 331-332).

5. Determinants of the Spatial Distribution of Homelessness

The following section describes the findings from various studies on the determinant of spatial distribution of homelessness using the HUD’s 1984 Report, S-Night Enumeration, the Burt Survey and the combinations of those intercity data.

Table 2.1.
Intercity Measures of Homeless Prevalence

No. Intercity Measure	Year	Unit of Analysis	Methodology	Critiques
1. HUD's 1984 Report	1984	<ul style="list-style-type: none"> - 20 areas with population of 50,000 to 250,000 - 20 areas with population of 250,000 to one million - 20 areas with population of one million or more 	<ul style="list-style-type: none"> - Estimates of homeless based on opinions of local officials - Interviews with three to twelve local officials 	<ul style="list-style-type: none"> - Some officials overstated the homeless problems to obtain more funds - Difficult to match the unit of analysis with corresponding SCSEA, MSA or urbanized area. - Estimates were not based on a systematic count
2. S-Night Enumeration	1990	<ul style="list-style-type: none"> - Nationwide - Enumeration was emphasized in urban areas with population of more than 50,000 	<ul style="list-style-type: none"> - First step, enumeration at predesignated list of shelters - Second step, enumeration on the streets designated by officials - Last step, enumeration of all individuals leaving from abandoned buildings 	<ul style="list-style-type: none"> - Undercounted the size of homeless population - Lists of shelters and street locations were incomplete - Undercounted the street homeless
3. The Burt Survey	1986	182 cities with population of 100,000 or more	<ul style="list-style-type: none"> - Obtained lists of shelters from local officials - Phone interviews with shelter providers and completed the information of shelter bed capacity 	<ul style="list-style-type: none"> - Shelter bed count undercounts the exact size of homeless population - Inaccurate reflection because the shelter may be overcapacity or less - Shelter capacity reflects public-policy response to homelessness rather than homelessness itself. - Biased cross-sectional inferences on the homelessness

Table 2.1. Continued

No. Intercity Measure	Year	Unit of Analysis	Methodology	Critiques
4. NSHAPC	1996	<ul style="list-style-type: none"> - 28 largest MSA - 24 small and medium-sized MSA - 24 rural areas 	<ul style="list-style-type: none"> - The study areas were randomly selected by regions and size - Phone interviews and mail survey with local officials - Interviews with homeless program Clients 	<ul style="list-style-type: none"> - Missed some homeless people - Estimates should be considered as a lower-bound estimate
5. 2000 Census	2000	<ul style="list-style-type: none"> - Nationwide - Enumeration was emphasized in urban areas with population of more than 100,000 	<ul style="list-style-type: none"> - Enumerate people living in emergency shelter, shelter for runaway or neglected children, shelter for abused women, transitional shelters, and hotel and motel used to provide shelter for homeless 	<ul style="list-style-type: none"> - Inaccurate measure of homeless population - Excluded homeless people in transitional housings - Lists of shelters were incomplete

HUD's 1984 Report

Many researchers have used the HUD's 1984 report to identify factors that correspond to the spatial distribution of homelessness. They investigated the determinant of homelessness by using data on intercity homelessness rates from the HUD's 1984 as the dependent variable. Using homeless population in 35 cities as reported in the HUD's 1984 Report and homeless population in other 15 cities, Tucker (1987) identified rent control and vacancy rate as the significant factors for predicting homelessness. He argued that other factors including poverty, unemployment, public housing and weather have no significant correlation with the rate of homelessness.

Tucker's study was criticized by Applebaum, Dolny, Dreier, and Gilberbloom (1991) due to some methodological flaws in the study. Using 41 cities of the HUD's 1984 report and other 15 cities of Tucker's study and adding some more independent variables including median rent, population growth, and percentage of renters, Applebaum, et. al. (1991) showed that there is no evidence that rent control causes homelessness. Instead, they argued that homelessness is significantly associated with higher rates of unemployment, higher mean temperatures, higher percentages of renters, and lower vacancy rates. This finding can be interpreted that tight housing markets correspond to the intercity homelessness rate.

Using sixty cities of the HUD's 1984 data and a set of independent variables including the availability of affordable housing, poverty, economic conditions, mental health care, and demographic composition, Elliot and Krivo (1991) found that the lack of affordable housing and lower per capita expenditures on mental health care were statistically significant predictors on homelessness. They found that neither poverty nor unemployment have significant effects on homelessness rate.

Honig and Filer (1993) using the HUD's 1984 data attempted to assess the importance of such factors as tight housing markets, loose labor markets, decreases in public assistance benefits, tightening of public assistance eligibility, and non-institutionalization of the mentally ill in connection with the level of homelessness across cities in the U.S. This study constructed three dependent variables including homelessness per 100,000 population, crowding per 100,000 households and doubling-up per 100,000 households.

Honig and Filer's study (1993) revealed that the level of rents at the tenth percentile of the rental distribution had the largest impact on the rate of homelessness. This factor also affected the extent of crowding but not to doubling-up. According to this study, rent controls were not statistically significant predictors of either homelessness or crowding but were associated with decreased doubling-up. Meanwhile, the unemployment rate, the long-term unemployment rate and the ratio of employment to population had no impacts on the rate of homelessness.

They indicated that the level of expenditures by localities on AFDC and SSI benefits had any impact on homelessness. The stringency of public-assistance program was also associated with the incidence of homelessness. Their regression models also revealed that treatment of the mentally ill and the proportion of Black population were statistically associated with the rate of homelessness

S-Night Enumeration

Lee, Price-Spratlen, and Kanan (2003) used S-Night data for 335 metropolitan areas to investigate the determinants of homelessness examining some factors including housing market, economic conditions, demographic composition, the safety net, climate and community transience. They contended that their study provided a more comprehensive analysis of the determinants of homelessness in such ways as expanding the sample of urban

contexts, mining a more recent data source and expanding the range of independent variables. Their study indicated that rent level and one-person households were statistically significant predictors of the rate of homelessness in metropolitan areas. They also found that the rates of precipitation also are associated with the homelessness level.

Using S-Night data, Early and Olsen (2002) developed separate models for the sheltered, street, and total rate of homelessness. They argued that an explanatory variable might have different impacts on these rates. They differentiated these rates also for the purpose of policy evaluation. With regard to the undercount of the size of the homeless in S-Night, they constructed total homelessness based on the assumptions that a fifth and a tenth of the street homeless were counted.

Their regression models indicated that the extent of the undercount of the street homeless varied more than that of the sheltered homeless across metropolitan areas. The models showed that the price of housing was statistically significant predictor of the overall incidence of homelessness and the rates of sheltered and street homelessness. The March temperatures were also significant in the regression models explaining the overall rate of homelessness and in the regression model explaining street homelessness. This study found that the percent of subsidized units going to households with income less than \$5,000 was statistically significant in some regression models.

In an effort to further investigate the effect of rent control on the rate of the homeless population, Grimes and Chressanthi (1997) using S-Night data and the 1991 Report to Congress on Rent Control by HUD revealed that rent control was a positive but relatively small determinant of the homeless population. Using a number of independent variables including household income, housing prices, housing stock, public assistance and the demographic composition and two-stage regression model, they found that rent control is predicted to increase the sheltered homeless by .03% and the unsheltered homeless by .008%, *ceteris paribus*.

HUD's 1984 Report and S-Night Enumeration

Troutman, Jackson, and Ekelund, Jr. (1999) used intercity datasets from the HUD's 1984 and S-Night to examine the impact of public housing and other policies on the homelessness problem. They developed the dependent variables from these datasets by deflating the absolute number of homeless by city population. Their study found that rent control, federal housing assistance and expenditures on alcohol, drug and mental problems were statistically significant determinants of the size of homelessness.

The first two factors increased homelessness while the last factor decreased it. They argued that the rent control and federal housing assistance increase the rate of homelessness because of perverse incentives. With respect to this result, they asserted "homelessness is most likely a problem of the allocation of housing in large cities, not a national housing crisis *per se*" (Troutman, et. al., 1999: 206).

The Burt Survey

Burt (1992) of the Urban Institute conducted a study to analyze the factors that predicted 1989 homelessness rates in large U.S. cities. Data were collected from the 1990 Urban Institute's Homelessness Survey or also known as the Burt Survey. She used the ratio of shelter beds to population as an index of the rate of homelessness. Using regression analysis, the study identified three factors combine to explain more than half the variation in the rate of homelessness in high-growth cities. These factors include per capita income, the poverty rate and the ratio of single person households. The study found that lower vacancy

rates, higher poverty rates and higher per capita income associated with increased homelessness in low-growth cities.

HUD's 1984 Report and the Burt Survey

Quigley, Raphael and Smolensky (2001) used intercity datasets from the HUD's 1984 and the Burt Survey to assess the relationship between homelessness and measures of housing availability and labor market conditions. These two national-level intercity datasets were then combined with two state-level datasets (California's the Continuum-of-Care Reports and Administrative Data from the AFDC-HAP program in California) to complement each other in many respects.

Using the four measures of homelessness as dependent variables from four datasets, Quigley, et. al. (2001) found that tighter housing markets were positively associated with higher levels of the incidence of homelessness. They also found that weather conditions had a statistically significant negative effect on the levels of homelessness. With regard to the effect of deinstitutionalization, they found mixed results among the datasets they used. They also suggested that relatively small changes in housing market conditions including vacancy rate and average monthly rent-to-income ratios can have substantial effects upon levels of homelessness.

6. Determinants of the Risk of Homelessness

In a seminal study on homelessness origins, Culhane, et. al. (1996) have attempted to identify factors that are associated with the risk of homelessness. Using the prior addresses of families admitted to public shelters in New York City and Philadelphia, aggregated by census tract, they identify communities with high risk of homelessness. This study used administrative data of the shelter admission process in both cities. They recorded data in the Philadelphia database from December 21, 1989 to April 1, 1994 including records for 9,160 families. In New York City, they recorded database from April 1, 1987 to April 1, 1994 including records for 71, 035 families. The investigators have applied three groups of variables that are associated with the rate of family shelter admission by census tract. These variables include demographic compositions, economic factors and housing and neighborhood characteristics

Using the OLS Regression model, the study indicated that among the demographic variables, the ratio of Black people in the most important predictor of the rate of shelter admission in both cities. The second strongest predictor among demographic variables is the ratio of female-headed households with young children. Other demographic variables that are significantly associated with the risk of homelessness include the ratio of persons without a high school diploma, the ratio of subfamilies and the ratio of Hispanic households.

Culhane, et. al. (1996) study also reveals the significant predictor among economic variables including the ratio of poor households, as the strongest predictor, and the rate of persons working under 18 hours per week. Among the housing and neighborhood characteristic variables, they found that rent income ratio the most important factor. Other variables including the vacancy rate, the ratio of boarded-up buildings, and the ratio of overcrowded households are positively associated with the risk of homelessness.

Wong and Hillier (2001) employing similar method as Culhane, et. al.'s study attempted to assess the service use patterns in the community-based homelessness prevention and to identify ways of improving the prevention services to communities with a high risk of homelessness. This study used databases from the management information

system of the Community-Based Homelessness Prevention Program (CHPP) and the public shelter system in the City of Philadelphia. The investigators recorded data from December 1, 1997 through November 30, 1998 including 1,943 households receiving services from CHPP and 9,156 households seeking the public shelter.

Using twelve out of twenty four variables used by Culhane et. al.'s study and adding two new variables, Wong and Hillier (2001) employed principal component analysis to group the fourteen variables. Principal component analysis resulted in three factors explaining seventy eight percent of variance. They labeled these factors as social and economic distress, instability and Hispanic overcrowded.

Eight of the fourteen variables were loaded on social and economic distress factor including the proportion of Blacks, female-headed households with young children, households with public assistance income, poor households, households with subfamilies, unemployed persons, rates of boarded-up and vacant housing units. The instability factor includes ratio of one-person households, ratio of households that recently moved, ratio of rental units, and rent-income ratio. The Hispanic overcrowded factor comprises ratio of Hispanic persons and overcrowded households.

Their study showed that the correlation between the risk of homelessness within a census tract and social and economic distress factor is very high. On the contrary, they found small relationship between the rate of shelter use and instability factor and between the rate of shelter use and the Hispanic-overcrowded factor.

7. Demographic, Socioeconomic and Housing Problems and the Incidence of Homelessness

Based on Culhane et. al. (1996)'s and Wong and Hillier (2001) works, this study developed a model to analyze the spatial distribution of the prior addresses of varying categories of the homeless. The model explains the factors that are associated with the risk of homelessness. These factors include demographic composition, socioeconomic and housing. To support the model, this study builds a literature review on demographic, socioeconomic and housing problem in relation to the risk of homelessness. Many scholars argue that homelessness is a consequence of a combination of demographic composition problems, poverty, and housing and that have significantly increased the possibility of individuals to becoming homeless.

Demographic Composition

Demographic composition of the homeless population has always been of interest. Burt (2001) stated that the demographic characteristics such as sex, age, family status and race of the homeless population appears to be very different from those of the housed population even from those of most poor people. Furthermore, she noted "because these differences are so dramatic, demographic characteristics are overinterpreted as representing the reasons for homelessness" (Burt, 2001: 737).

Takahashi (1996) asserted that the massive demographic change over the past few decades played an important role as a primary cause of the intractable homelessness problem. Substantial changes in the family structure have been significantly linked to the increasing vulnerability of individuals on the brink of homelessness to becoming homeless. The increasing proportions of female-headed households, and of female-headed household with young children have put such individuals at the risk of becoming homeless. Using data

from NSHAPC, Early (2005) indicated that female-headed households and household with children were likely to be homeless

Takahashi (1996) also argued that age played substantial role in increasing the risk of homelessness. The ageing of the baby boom generation has created a tight labor market and increased unemployment. The increased risk of homelessness was also indicated by the increasing size of the elderly population. Based on 2000 Census Data, more than thirty-five percent of the single-person households were over 65 years of age, indicating a significant population of elderly persons who are at risk of homelessness.

Given the overrepresentation of Blacks among homeless people, a metropolitan's Black population can be considered an at-risk group (Burt, 2001). Many studies show that Blacks and Hispanics are more likely than White to experience discrimination in housing market. Turner, et. al. (2002) found that when Blacks and Hispanics inquire about the availability of advertised homes and apartments, they are more likely to receive less information and less favorable treatment than White customers.

One of principal causes of discrimination in housing market is residential segregation (Yinger, 2003). Segregated residential patterns in most metropolitan areas in America were established many years ago. Despite the 1988 Fair Housing Amendments Act, the residential segregation patterns still occur in most metropolitan areas. Yinger (2003) indicated the act might fail because it is likely to have little impact on residential segregation.

Boehm and Ihlanfeldt (1991) explored the perceived quality of neighborhood in segregated neighborhoods. They found Black neighborhoods were more likely to have a worse-perceived quality of neighborhood than white neighborhoods. They indicated that the differences in satisfaction of their quality of neighborhoods were based on crime rates, the amount of litter, trash, and junk, the quality of buildings and the number of abandoned buildings (Boehm and Ihlanfeldt, 1991).

The continuing high level of residential segregation increases the proportion of Black households living in bad "geography of opportunity" (Ihlanfeldt, 1999). Ihlanfeldt argued that "where individuals live affects their opportunities and life outcomes". The bad neighborhood offers less available jobs, poor quality schools, and negative neighborhood effects (p. 213). The differences in the quality of "geography of opportunity" between Black neighborhoods and White neighborhoods lead to growing gap in real median family income and differences in educational opportunities between those segregated neighborhoods (Ihlanfeldt, 1999). Because of segregated neighborhood, the prospects of blacks are worse than whites.

Altshuler, et. al. (1999) and Ihlanfeldt (1999) assert the concept of "neighborhood effect" that is defined as a mechanism that links the neighborhood environments to individual behaviors and opportunities. Individuals living in concentrated poverty neighborhoods may receive neighborhood effect that affects their employment prospects. Altshuler, et. al. (1999) assert that youths growing in poor neighborhoods may be affected by the values of their peers that are not well related to workplace success. Residence in high poverty neighborhoods imposes neighborhood effects on inhabitants particularly Blacks. They may have external costs that would not be present if the individual lived elsewhere.

Rosenbaum (1995) examined the Gautreaux program, a residential integration program, in which low-income Blacks are moved to middle-income white suburbs or low-income black urban areas. He found that the program could improve employment, education, and social integration of low-income Blacks. This study indicated that segregation discourages educational attainments and employments in particular for low-income blacks.

Segregated residential patterns in most metropolitan America lead to high poverty. High segregation can be linked to increased crime in both black and white communities throughout a metropolitan area. Segregated residential pattern will result in unemployment and low education opportunities in particular for blacks and other minorities. The disadvantages encountered by Blacks and Hispanic with regard to segregated residential increase their vulnerability to homelessness (Lee, et. al., 2003).

Lee, et. al. (2003) also argued that Blacks suffer skill and spatial mismatches in job market that can increase their susceptibility to homelessness. Kain (1968) developed a notion of spatial mismatch hypothesis describing a broad set of geographical barriers to employment for Blacks who lived in the inner city. He identified that Blacks have fewer job opportunities than whites because of the limited transportation opportunities afforded to them to reach suburban jobs and Blacks suffer from racial segregation in the housing market that results in fewer accessible job opportunities outside of the inner city.

Single-person households due to their lack of protection offered by a second wage earner when crises occur are also at risk of homelessness (Lee, et. al., 2003). Such households also affect the rate of homelessness by tightening the affordable housing market due to their rapidly growing number.

With regard to Hispanic population, Burt, et. al. (2001) asserted that they are not vulnerable to homelessness as a group based on their proportional representation unlike Black population. Lee, et. al. (2003) identified that Hispanics are more likely than Blacks to double-up with family or friends and other housing arrangements to stay off the streets. On the other hand, Culhane, et. al. (1996) argued that Hispanics may also be vulnerable to homelessness because of poverty, limited labor market access, and residential segregation.

Susser, et. al. (1993) analyzed four homelessness studies in Chicago, New York, Los Angeles and Ohio and compared demographic characteristics of homeless populations and general populations for each locality. They indicated that the risk of homelessness is higher in non-high school graduates than in high school graduates. Similarly, Bassuk, et. al. (1997) found that housed mothers are more likely to have graduated from high school than homeless mothers.

Caton, et. al. (2000) identified risk factors for homelessness among indigent single adults without psychotic illness. They indicated that education attainment of never homeless and that of homeless are different. A difference in non-high school graduates versus high school graduates was significant in men but only a trend in women.

Socioeconomic

One of the structural problems underlying homelessness is poor economic condition. Such economic condition that has resulted from globalization, deindustrialization, restructuring, and technological change led to high unemployment (Lee, et. al., 2003). Low rates of economic growth in cyclical downturns do not create enough employment for a willing workforce. The populations at the greatest risk for homelessness are those who find themselves in precarious positions, such as the unemployed. The uncertainty of unskilled or low-wage work impacts work tenure and undermines economic self-sufficiency.

Economic restructuring resulting in an expanding service sector with temporary and contractual employment opportunities and a reduction in income of the lowest-skilled labors may have led to higher levels of homelessness (Elliot and Krivo, 1991; Takahashi, 1991). There was an increase of competition among low-skilled labors for fewer and lesser paid jobs. Such increase gradually led to decreasing steady attachment to the labor force for many low-skilled labors.

The ravaging unemployment and increasing competition among low-skilled labors put more people in poverty since the early 1980s (Takahashi, 1991). Burt (1992) indicated that persistent poverty and racial inequalities were structural factors of the cause of homelessness in the 1980s. Lee, et. al.(2003) argued that the extent of unemployment and poverty should have impact on the incidence of homelessness across metropolitan. Segments of population with the highest poverty rates are most likely to become homeless (Shinn and Gillespie, 1994). Most homeless people come from backgrounds of poverty (Rossi, 1989).

Many metropolitan areas in the U.S. show the increasing geographic separation between jobs and low-skilled labors (Alam, 2005; Ong and Miller, 2005). The low-skilled labors remained stayed in poor neighborhoods while jobs have decentralized into the suburbs. This phenomenon is asserted on the spatial mismatch hypothesis (SMH), first developed by John Kain in 1964 (Kain, 1992). The SMH postulates that the increasing decentralized jobs to suburbs accompanied by lack of transportation access for the low-skilled labors living in the central-city who have remained welfare dependent and highly unemployed (Alam, 2005).

In a recent article, Ong and Miller (2005) examine the impact of spatial mismatch and transportation mismatch on unemployment rates in Los Angeles. They found that transportation mismatch defined as the lack of access to car ownership is more important than spatial mismatch in generating poor neighborhoods. Their study indicated that the lack of car ownership is associated with the increases in the unemployment rate.

Social network and family relationship are relevant to understanding the process by which people become homeless (Baum and Burnes, 1993; Wright, Rubin and Devine, 1998). People with a lack of social network are more likely to end up in street or shelter when they get evicted or have lost their homes. On the contrary, people with social networks will exhaust their social networks with their family, friends and coworkers before turning to shelters or streets.

Social network plays an important role in preventing homelessness (Wallace and Bassuk, 1991). Most of them who are surrounded by families, friends and coworkers can mobilize some resources of social networks to prevent becoming homeless. Jenck (1994) asserted that married couples hardly become homeless. On the contrary, homelessness is an evidence of disaffiliation and most of them have never been married or are divorced (Baum and Burnes, 1993; Wright, Rubin and Devine, 1998). They are more likely to have lack of communication with their family and friends than people with social networks (Bassuk, et. al., 1997).

Housing

Most scholars clearly state that homelessness is a housing problem (Burt, 1992; Burt, 2002; Dolbeare, 1996; Wright, Rubin and Devine, 1998). Burt argues that the homelessness primarily caused by structural factors, personal factors and public policy (1992: 6). Among those causes, the most important cause is poverty that is associated with housing affordability. If housing were inexpensive, there would be more poor individuals affording housing and very few individuals would become homeless. With regard to personal factors such as mental illness, alcohol or drug abuse, low levels of education and too-early childbearing, she explains that these factors could increase a person's vulnerability to becoming homeless since poverty and housing affordability have created the conditions for homelessness.

Wright, Rubin and Devine (1998) point to some facts that homeless people entail such characteristics as extreme poverty, high rates of personal disability, and high levels of familial and social estrangement. They argue that these facts explain why homelessness is a housing problem rather than a poverty problem, disability problem, and an estrangement problem. They also mention the importance of specifying the kind of housing problems for homeless with disabilities problem.

Based on a research on the growth of homelessness in the 1980s, Burt developed a model and described that structural and individual factors along with safety net program affect the housing affordability and therefore influence the probability of being homeless. Burt (2002) undoubtedly mentions that housing affordability is “the immediate cause of homelessness” (8).

Similarly, Rossi (1989) argues that homelessness is in large part an outcome of the shortage of affordable housing. He recorded some cities experiencing the decline of affordable housing stock that rents for 40 percent or less of poverty-level income. This declining stock began in the 1970s and has accelerated in the 1980s such as occurs in New York and Los Angeles. The declines are more even precipitous for the rental housing that primarily is occupied by low-income, unattached individuals such as occurs in Chicago, Seattle and Boston (31-32). The loss of affordable housing pushes more low-income households into carrying a high rent burden. They spend up 50 percent to 70 percent or more of the monthly income on housing expenditures. These high proportions of their incomes on housing mean that many tenants live on the brink of homelessness. When some out-of-the ordinary expenses occurs, many tenants resort to the street. He argues that for long term, the solution of homelessness will be policies that compensate for the failure and inadequacies of the housing and labor market and social welfare system (51).

Friedrichs (1988) clearly points to housing shortage as the cause of increasing number of homelessness in several advanced industrialized societies such as the United States, France, Britain, Germany, the Netherlands, and Sweden. He concludes that if a society cannot provide affordable housing, the number of homeless people will increase.

Regarding the connection between poverty and housing affordability, Wright, Rubin and Devine (1998) note that poverty would not lead to increasing number of homeless people if the supply and cost of affordable housing could accommodate the increasing number of poor people. In fact, they found that the affordable housing trend was in precisely the opposite direction. The poor people who could not afford housing are actually on the brink of being homeless.

Dolbeare (1996) argue that the homelessness is rooted in the rental affordability gap. The gap was caused by a combination of rising housing costs and decreasing incomes of renter households. This gap is also exacerbated by the loss of low-rent housing either by abandonment or conversion to other uses. Demolition, urban renewal and gentrification also contributed to the loss of low-rent housing (Koegel, Burnam, and Baumohl, 1996; Wright, Rubin and Devine, 1998).

Another important issue in exploring the connection between housing affordability and homelessness is the issue of Single Room Occupation (SRO). Some scholars point to the loss of SRO as the cause of the emergence of homelessness in the early 1980s (Burt, 1992; Dolbeare, 1996; Jencks, 1994; and Wright, Rubin and Devine, 1998). Jencks mentions that the loss of SRO had forced single adults who once lived in SRO to live in shelters and bus stations.

Furthermore, Dolbeare (1996) estimated that at least one million SRO units were torn down during the periods of 1970 and mid 1980s. On the other hand, HUD moderate

rehabilitation program for SRO units subsidized fewer than 7,000 units between 1988 and 1991 (38). The losses of SRO were considered as the victims of urban renewal, gentrification, and the downtown revitalization (Wright, Rubin and Devine, 1998). Between 1975 and 1981, there was an overall 60% loss of SRO in New York City. In San Francisco, SRO units were destroyed as many as 18% of existing units in a period of four-year in the 1970s (85). The loss of SRO units was described as “a nation-wide trend in the late 1970s” (86).

Using data from NSHAPC, Early (2005) found that the incidence of homelessness is higher in areas where the rent needed to occupy the lowest level of housing available is high. Early and Olsen (1998) using data from the American Housing Survey (AHS) for 1985 through 1988 and the 1990 Urban Institute Homelessness Survey investigated more precisely the effect of rent control on homelessness. They indicated that the rent control increases homelessness by decreasing the rental vacancy rate and increasing the rental price of housing in the uncontrolled areas.

Another issue concerning housing and homelessness is doubling-up. Millions of homeless people stay off the streets and homeless shelters because they double-up with their friends and relatives (Marin and Vacha, 1994; Rossi, 1989; Wright, 1989). Several homelessness studies show that most of the doubled-up homeless population stay with members of other poor households (Marin and Vacha, 1994; Wright, 1989). Most homeless people do not turn to shelters and streets until they have exhausted their social networks.

Caton, et. al. (2000) conducted a matched case-control study of 200 newly homeless with no psychotic illness and 200 poor people with no history of homelessness and psychotic illness. They found that the homeless were more likely than the housed people to have been living with friends and relatives and were less likely to have lived in their own apartments before homelessness.

Using the data of American Housing Survey during period of 1973 and 1989, Jencks (1994) found that vacancy rates were higher in unsubsidized low-rent units, whereas homelessness was most common at that period of time. He argues that “alleged shortage of low-rent housing is a myth” because of this persistently high vacancy rates in cheap housing (84). He explained such a phenomenon was caused by rising tenant’s expectations about the physical quality of housing. Tenants no longer wanted to live in low-rent units with very low physical quality.

Similarly with Jencks’ findings, Baum and Barnes (1993) conclude that the lack of affordable housing is not the primary cause of homelessness. The homelessness results from other social ills rather than from lack of housing units. Using the New York City Commission on the Homeless’ study in 1992, they show that “fully half of all homeless families placed in permanent housings returned to the shelter system” (137). They argue that without help for their disabilities, most of the homeless will be unable to maintain themselves in permanent housing. Additionally, they note that in the 1980s there had been no significant deterioration of the national housing affordability. Using many measures, the housing conditions appeared to have improved (136).

8. Categories of Homeless

In the beginning discussion on homelessness in the early 1980s, homeless persons typically are pictured as single men on skid row (Crook, 1999; Crystal, 1984). Homeless persons are mostly considered as crazy people who are mentally ill or substance abusers who were incapable of caring for themselves (Baumohl, 1996; Wright, Rubin and Devine, 1998).

The stereotype leads to only a partial understanding of the complexity of the intractable homeless problem. Homeless who have mental illness and do substance abuse account for the majority of the homeless population. Yet there are still other categories of homeless with distinctive characteristics. Dozens of studies display a diversity of categories that is in line with diversity in social and demographic characteristics and diversity in length of time homeless and the number of episodes of homelessness

Social and Demographic Characteristics

In terms of the social and demographic characteristics, other than homeless who have either mental illness or substance abuse; other categories of homeless persons include homeless family, homeless women, homeless veterans, and homeless children. Dozens of studies report descriptions of those categories of homeless. They find that homeless persons are not a homogenous group. It is important to recognize the heterogeneity of homeless persons and to formulate different policy for each category of homeless.

Homeless with Alcohol, Drug, and Mental Health (ADM) Problem

Homeless with problems of ADM are considered to have a potential of becoming homeless in the future due to conditions of individuals on which to lay responsibility for causes, rather than larger social causes. Koegel, Burham and Baumohl (1996) indicate that about half of the homeless have had problems with alcohol, about one-third have had problems with drugs, and between one-fifth and one-third have had mental illness. Since 1987, the majority of federal and local funds have been allocated to develop and provide services for homeless persons with ADM problems (Burt, 2002). The United States Conference of Mayors estimated that about 45% of the homeless have serious substance abuse problems and about 23% of the homeless have mental illness (Joseph and Paone, 1997).

With regard to homeless persons with ADM problems, homelessness is substantially caused by the process of deinstitutionalization and society's treatment of mental illness (Wright, Rubin, and Devine, 1993: 105). Jencks (1996) noted that a quarter of the homeless persons have spent time in a mental hospital and the impact of deinstitutionalization had increased the number of homeless people. Additionally, Jencks mentioned that alcoholism had been a significant cause of homelessness and it became common during the 1980s.

Using administrative data on public shelters in New York City and Philadelphia, Culhane and Kuhn (1998) found that the homeless with ADM problems were less likely to exit shelters than the homeless without ADM problems. They argued that their lesser employability, lower income, episodic hospitalization, and poorer social support systems contribute to their long episodes of shelter use.

Schutt and Garrett (1992) based on their homelessness study in a large Boston shelter found that several factors were associated with indications of alcoholism including age, gender, race and drug use. Younger homeless persons, homeless women, Nonwhites were less likely to have problems with alcohol. Drug abusers were more common in the homeless with alcohol problems.

The most current survey on homelessness at the national level, the 1996 National Survey of Homeless Assistance Providers and Clients (NSHAPC), revealed that problems with alcohol and drugs were very common among homeless in all subgroups, but especially among homeless men. More than one in four homeless people in the NSHAPC study began drinking to get drunk or using drugs regularly before the age of eighteen and more than one

in ten did so before the age of fourteen. Compared with low-income housed adults, the frequencies of early use by homeless people are significantly higher (Burt, 2001).

Using a sample of 402 formerly homeless and 2518 currently homeless individuals from the NSHAPC data, Allgood and Warren (2003) attempted to determine the determinants of the length of time of being homeless. They found that homeless with alcohol and drug problems were less likely to exit homelessness than homeless without history of alcohol and drug abuse.

Shore and Cohen (1992) identified major clinical conditions that lead to chronic mental illness and homelessness including particularly schizophrenia, chronic depression or mania and disturbing character problem. Persons with schizophrenia are unable to maintain social relationships because they are occupied by delusions and hallucinations. An acute schizophrenia is marked by disturbing behavior including violence and suicide attempts (Shore and Cohen, 1992).

Sullivan, Burnan and Koegel (2000) conducted a study to compare and contrast groups of mentally ill homeless persons, non-mentally ill homeless persons, and housed mentally ill persons drawn from a sample of 1,563 adults in Los Angeles County. Demographically, they found that the homeless with mental illness are more similar to the homeless without mental illness than they are to the housed persons with mental illness. Sullivan, et. al. (2000) found that either the homeless with mental illness or the housed persons with mental illness are at very high risk for substance abuse. Furthermore, the homeless with mental illness have nearly twice the prevalence of alcohol dependence and six times the prevalence of drug abuse compared to the housed persons with mental illness.

Their study revealed that homeless with mental illness significantly experienced more family and home instability than did homeless without mental illness. More than half of the homeless with mental illness had mentally or physically disabled primary caregiver. One out of four of homeless with mental illness were placed at least once in an institution or foster care. Homeless with mental illness were also more likely than homeless without mental illness to have lived in a household in which violence or abuse regularly occurred.

Sullivan, et. al. (2000) found that among the homeless with mental illness, those who became homeless prior to becoming ill may have experienced extreme cases of childhood disadvantage and disruption, and those who became homeless after becoming ill may have experienced high levels of recent alcohol dependence.

Homeless Family

Homeless family is the fastest growing category of the homeless population (Blau, 1992; Wright, Rubin, and Devine, 1993). Parents in homeless families are considered to be different from homeless adults who are not part of family units (Shinn and Weitzman, 1994). Most of homeless families are actually single women with children, not husband-wife pairs and the majority of family members are preschoolers (Bassuk, 1992; Wright, Rubin and Devine, 1993).

McChesney (1992) identified four different types of homeless family based on her study of mothers with her minor children in five family shelters in Los Angeles County. These four types of homeless family include unemployed couples, mothers leaving relationships, Aid to Families with Dependent Children (AFDC) mothers, and mothers who had been homeless teenagers. She classified them based on the income source before homelessness and on the characteristics of the primary earner.

Unemployed couples are those who had become unemployed and those who had migrated to find a job. The husband of such a family functions as the head of household and

supports the family, whereas the wife functions as the caregiver for the children. Mothers leaving relationships are single mothers with her minor children regardless of the marital status who previously had lived with male partners who had been supporting the family and then they left or were forced to leave the relationship. They had not been poor and entered homelessness suddenly and simultaneously with the separation from their partners (McChesney, 1992).

AFDC mothers are those whose primary income source had been AFDC. Their male partner had not had a job and had relied on AFDC for supporting their lives. These families had been long-term AFDC recipients due to their lack of education, of job skills and of work experience. Mothers who had been homeless teenagers are young mothers with her minor children particularly an infant. They had lived with a history of severe abuse in their families of origin that resulted in foster homes. They then ran away from foster homes and entered homelessness.

In homeless families, there is a small proportion of homeless persons with ADM problems. Shinn and Gillespie (1994) asserted that adult family members are less likely to have mental illness or ADM problems than single adults. There were about a quarter of homeless adults have experienced mental hospitalization. On the other hand, adult family members had rates of prior mental hospitalization of less than ten percent.

Shinn and Weitzman (1994) argued that the principal reasons for becoming homeless families are the increase in poverty and decrease in affordable housing. Homeless families were unable to afford housing in a market of skyrocketing housing prices and declining subsidies for the poor (Baum and Barnes, 1993).

Another important characteristic of such homeless category is that homeless family has serious consequences for children such as emotional and behavioral problems. Baum and Barnes (1993) and Blau (1992) asserted that single female predominantly as the caretaker in the homeless composed of family. Homeless family experience homelessness for the shortest period of time, but are also likely to have more than one episode of homelessness (Baum and Barnes, 1993).

Using data from the NSHAPC, Burt (2001) reported homeless men with children comprised only 2.3 percent and homeless women with children comprised 12.2 percent of whole sample. The NSHAPC defined homeless family as those who reported that at least one of their own minor children was staying with them. She revealed “the greater tendency of women to stay connected and maintain responsibility for children and the greater tendency of men for separation” (Burt, 2001: 745).

Burt (2001) asserted that homeless family either men or women were more likely than homeless individual either men or women to be in a first homeless spell lasting less than six months. With regard to reasons for leaving the last residence, the most frequently given reason for homeless family was “couldn’t pay the rent”. Only for women, either homeless family or homeless individual, the reason of “I or my children were abused, beaten, an/or I was afraid of the violence in the household” was among the top four reasons of becoming homeless. Burt (2001) reported that homeless families are more likely to use shelters or transitional housing and less likely to have spent any time in places not meant for habitation than homeless individuals.

Using a sample of 162 homeless adults in the Central Florida area, Zugazaga (2004) found that homeless women with children experienced significantly less stressful life events than homeless women individuals. She also reported that homeless women with children were more likely than homeless women individuals to have ever been evicted. Homeless

women with children were less likely than homeless women individuals to report histories of domestic violence, psychiatric hospitalization, and sexual violence over the age of eighteen.

Homeless Women

Homeless women tend to be among the least visible of the homeless population. They are unlikely to live openly on the street. They are more likely to be living in shelters or transitional housing, moving among temporary living arrangements, or living out of sight in abandoned cars, or squatter housing. "Many of these women have been caught up in a cycle of drug dependency. Young women who ran away from home or were kicked out of their homes have enlarged the homeless community" (McFadden, 1997: 432). In a study of homelessness in Ohio, Roth et al. found that women were twice as likely as men to be homeless because of family conflict and dissolution (Crook, 1999).

Women homelessness has resulted from a variety of causes, such as loss of home and job, spousal abuse, drug or alcohol addiction, and health care problems. A number of women had little education or had few skills to succeed at a job. Even when they found jobs, they earned insufficient incomes to support themselves; if they had no other network to which to turn, they eventually became homeless. A study completed in the late 1980's shows a majority of women had lived with spouses, children, or parents before becoming homeless (McFadden, 1997). In addition, Crook (1999) argued that homeless women are victims of crisis that pushes them into poverty. They are also vulnerable because of family dissolution, family violence, lack of affordable housing and low wage status.

Given their precarious economic situation and low wage status they are particularly vulnerable in the event of family dissolution or domestic violence. Women generally have less education and fewer opportunities to develop job skills than men. When they are employed, they are more likely to earn insufficient income to support themselves. For those without support networks, these factors put women at a higher risk for homelessness. A study completed in the late 1980s showed that while a majority of women had lived with spouses, children, or parents before becoming homeless, economic disadvantage may increase their likelihood of finding themselves without stable accommodation (McFadden, 1997). Bassuk (1993) found that there are wage discrepancies and job discrimination in the workplace based on gender. Wage discrepancies and job discrimination in the workplace are likely to cause women to become homeless.

Brunette and Drake (1998) found that homeless women reported having more total social contacts than men. In the absence of social contacts, of course, it is impossible for homeless men to access the care they may need. Morris (1998) conducted a survey with 230 homeless adults in Florida to compare levels of social affiliation among homeless women with children, homeless women without children, and homeless men without children. The survey found that homeless women maintained more affiliative ties than did men, and that homeless women with children maintained the greatest number of ties -- suggesting that the presence of children could be the most salient characteristic in preserving social networks. Homeless women without children were more likely than homeless men without children to have jobs and less likely to have been unemployed for an extended period of time (Morris, 1998: 246).

Ritchey, Gory and Mullis (1991) found that homeless women are also more vulnerable to domestic violence than are men. They found that women had a higher rate of physical and sexual abuse prior to becoming homeless. Maurin, Russell and Memmott (1989: 317-318) found that spousal abuse had been experienced by nearly twenty percent of the homeless women in the previous year, and nearly sixty percent of female single parents.

These findings suggest that even with secure housing the threat of violence affects women disproportionately. Illustrating how the perceived causes of homelessness among women is tied to gendered experiences of violence, women without children were more likely to cite abuse by a spouse or family member as a reason for their homelessness (Morris 1998). Indeed, two of the main reasons for homelessness given by women were eviction and abuse (249). Brunette and Drake (1998: 623-636) found that homeless women were more likely than men to report a history of rape.

The impact of violence in the home highlights the interrelated causes of homelessness while underscoring the intractable nature of the problem. The victims of assault by intimate male partners, for example, are at greater risk of requesting shelter and health care. They could experience emotional reactions to domestic violence which may include fear, anger, and feelings of shame or powerlessness. While such effects should be addressed properly and immediately, the shelter system remains a physically and emotionally unsafe environment which could exacerbate emotional problems.

Homeless Veteran

Referring to surveys conducted in the 1980s, half of homeless veterans are those who served during Vietnam era. Blau (1992) asserted that veterans make up about one-third of the homeless male population. Scholars suggested that their major reason for becoming homeless is combat-related post-traumatic stress disorder (PTSD) (Rosenheck, et. al, 1996). Rosenheck, et al. (1996) mentioned that male veteran were 1.4 times more likely to be homeless than nonveteran men. Most homeless veterans were recruited during the period of 1970 and 1979. At that period of time, the government recruited less well-adjusted men. In contrast, during the 1980s the government recruited military personnel with higher recruitment standards and an attractive military employment. Compared with the number of homeless veteran who were recruited during period of 1970 and 1979, the military personnel who were recruited in the 1980s were less in the population of homeless veterans. It reflects that the causes of becoming homeless veterans are the declining supply of affordable housing and low-income American was away from redistribution of wealth (103).

Using a sample of 305 homeless veterans and 485 homeless non-veterans in Ohio, Roth (1992) attempted to compare and contrast homeless veteran and homeless non-veteran as regards several aspects such as demographic characteristics, patterns of homelessness and the use of social services. She reported that veterans comprised 39 percent of the homeless population in Ohio. Nearly three-quarters of the homeless veterans were white and their median age was 42. The proportion of white and the median age of the homeless veteran were higher than that of the homeless non-veterans.

Roth (1992) revealed that the homeless veterans were better educated than the homeless non-veterans. A third of the homeless veterans were never married, meanwhile nearly sixty percent of the homeless non-veterans were never married. With regard to patterns of homelessness, both homeless categories had similar median of the length of time of being homeless. She found that there were slight differences between homeless veterans and non-veterans with regard to the causes of homelessness. Both categories cited economic factors as their primary reason for homelessness (52.8% of veterans and 47.4% of non-veterans). The homeless veterans cited family problems as their second largest reason for homelessness (16.4%), in contrast to other reason as the second largest reason for the homeless non-veterans (20.0%). Roth (1992) reported that thirty percent of the homeless veterans had alcohol problems, in contrast to only twenty-one percents of the homeless non-

veterans. The homeless veterans were also found to be more likely to report having physical health problems.

Using dataset from the NSHAPC study, Allgood and Warren (2003) found that homeless veterans and homeless non-veterans had the same expected duration of homelessness. They found that the determinants of the duration of homelessness include age, gender and behavioral histories such as previous incarceration and drug and alcohol abuse.

Homeless Youth

Homeless children and youth are the most vulnerable among homeless population. They are more likely to have high rates of both acute and chronic health problems. They also experience developmental delays and emotional and behavioral difficulties. Such difficulties are associated with their mother's emotional distress (Burt, 2002). Homeless children are at greater risk of becoming homeless adults because of their childhood homelessness and its accompanying vulnerabilities (137). Cauce, et. al. (2000) noted that between 1 and 1.3 million youth had spent some period of time in shelters or on the streets in any given year. Blau (1992) asserted that unaccompanied children make up three percent of the total homeless population.

The problem of homeless youth are distinctive from that of homeless adults. Robertson (1992) noted, "Adolescence is a developmental stage in which a major task is to separate from the family and to establish independent existence. Many of the young people who are homeless have not completed this process successfully" (Robertson, 1992: 287). They lived either on the streets or in shelters without external source of support from their parents and families.

Robertson and Toro (1999) reported the 1993 survey of U.S. adolescents interviewing a sample of 6,496 youth that the annual prevalence of literal homelessness among the age group of 12 to 17 years old was estimated at 7.6 percent or more than 1 million youth in a given year. This survey revealed that a history of recent homelessness among housed youth was found across the nation including urban, suburban and rural areas. With regard to gender, boys were significantly more likely than girls to experience recent homelessness.

Robertson and Toro (1999) noted that youth who experience homelessness were more likely to come from less impoverished background than homeless adults. Youth who had lived with families in poverty were not more likely than other youth to have entered homelessness in the previous year. On the contrary, adults who lived with lower socioeconomic status were more likely to become homeless than youth in the previous five years.

Robertson (1992) reported that service providers in Los Angeles County estimated that half of the homeless youth in Los Angeles County had physical, sexual and verbal abuse, neglect and parental alcoholism in their families of origins. Half of the homeless youth had lived either in a foster care, or another childcare placement. This situation represented a picture of residential instability and serious behavioral problems (Robertson, 1992).

Robertson (1992) also reported that the homeless youth had school problems including being expelled from school, repeating a grade, and low score on the Reading Accuracy Test of the Wide Range Achievement Test. Homeless youth also experience high levels of anxiety and depression, lack of self-acceptance, and lack of self-confidence. Homeless boys were more likely to have antisocial behavior and homeless girls were more likely to have depressive and suicidal symptoms than their housed peers. Homeless youth's

health were generally poor including infections, malnourishment, AIDS and broken bones (Robertson, 1992).

Using a sample of 364 homeless youth ranging from 13 to 21 years of age in Seattle, Bremerton, and Everett, Washington, Cauce, et. al. (2000) attempted to assess the psychosocial characteristics and mental health of a heterogeneous population of homeless youth using such instruments as The Diagnostic Interview Schedule for Children-Revised, Youth Self-Report Form, Reynolds Adolescent Depression Scale, Children's Manifest Anxiety Scale Revised, and Rosenberg Self-Esteem Scale.

They classified the sample into three categories by their ages including early youth (13-15 years of age), middle youth (16-17 years of age) and late youth (18-21 years of age). They contended that these three categories entail distinct developmental characteristics. They reported that the sample's mean age was 16.4 years and they consisted of 63% White, 14% Black, 6% native American, 5% Latino and 3% Asian or Pacific Islanders. Two-third of the sample had dropped out of school and fifty-five percent of the sample reported that their mothers had a substance abuse problem.

More than one-third of the sample acknowledged that the decision of leaving home was theirs and more than half of them reported that they had been psychically or sexually abused prior to leaving home. Not surprisingly, given the instability, stress and trauma the homeless youth experienced during childhood and continued to experience as youth, over two-thirds of the homeless youth in Cauce, et. al.'s study (2000) had mental health problems.

Length of Time and the Number of Episodes

Many studies on homelessness indicated the variety of homeless persons in terms of length of time and the number of episodes of homelessness (Kuhn and Culhane, 1998; Sosin, Piliavin, and Westerfelt, 1990; Wright, Rubin and Devine, 1998). The recognition of this categorizing aspect gained more attention when the U.S. Department of Housing and Development announced *the 2003 Annual Performance Plan*. In this document, HUD made effectively challenging homelessness a strategic goal. Having realized that chronic homelessness is very expensive to Federal, State and local government and chronically homeless people use approximately half of shelter resources, HUD is committed to ending chronic homelessness in 10 years.

Prior to HUD's strategic goal in ending chronic homelessness, some scholars have attempted to develop a model that breaks homeless population into transitionally, episodically, and chronically homeless population (Baum and Burnes, 1993; Kuhn and Culhane, 1998; Sosin, Piliavin, and Westerfelt, 1990). This model classifies homeless population into such categories based on the length of time and the number of spells of being homeless.

Transitionally Homeless

The transitionally or temporarily homeless people are those who experience only one episode of homelessness and usually short. Such persons are likely not seen again by the homeless assistance system. Kuhn and Culhane (1998) and Sosin, et. al. (1990) asserted that they became homeless because of some catastrophic event such as unemployment, separation, fire, death of householder or utility disconnection and may have already had no option of staying with friends or relatives. A single catastrophic event could cause this type of homelessness (Baum and Burnes, 1993). Wright, Rubin and Devine (1998) estimated the size of the transitional homeless at a quarter of the homeless population.

Using administrative data on public shelter use in New York City (1988-1995) and Philadelphia (1991-1995) and applying cluster analysis, Kuhn and Culhane (1998) identified that the average number of episodes of transitionally homeless people in New York was 1.36 episodes and the average number of days of being homeless was 57.6 days. Meanwhile, the transitionally homeless people in Philadelphia have the average number of homelessness spell of 1.19 and the average of days of becoming homeless of 20.4 days.

Episodically Homeless

The episodically homeless people are those who experience an episode of homelessness frequently but usually for short periods. They are likely to account for fewer of the homeless over time than transitional homeless people (Culhane and Kuhn, 1998). The episodically homeless people have tenuous ability to retain themselves in stable housing (Baum and Barness, 1993). Such persons are often chronically unemployed and experience medical, mental health, and substance abuse problems.

The episodically homeless people often enroll in detoxification centers and many spend time in jail and mental hospitals, then they only return to either streets or shelters. This category of homeless becomes homeless from time-to-time in response to short-time changes. These short-term changes include social, psychological, or economic circumstances. (Wright, Rubin, and Devine, 1998). They differ from chronic homeless people since episodically homeless people frequently quit from hospitals, detoxification centers or penal institutions (Kuhn and Culhane, 1998).

Allgood and Warren (2003) attempted to determine the determinants of the length of time of being homeless. They found that the homeless people with behavioral histories such as previous incarceration and drug and alcohol abuse were more likely to have a longer period of being homeless. Older homeless and homeless men were also more likely than other homeless categories to have a longer period of homelessness.

Based on Kuhn and Culhane (1998)'s study, the average number of homelessness spells of episodically homeless people in New York was 4.87 spells and the average number of days of becoming homeless was 263.5 days. The episodically homeless people in Philadelphia have the average number of episodes of 3.85 and the average of days of being homeless of 73.1 days. Wright, Rubin and Devine (1998) estimated the size of the episodically homeless at a half of the homeless population.

Chronically Homeless

The chronically homeless people are those whose episodes of homelessness are both frequent and long. Such persons are for whom shelters are more like long-term housing than an emergency shelter. They are likely to be older than other homeless categories, and often suffering from disabilities and substance abuse problems (Sosin, et. al., 1990). Baum and Barness (1993) argued that almost half of the homeless people have severe disabilities. They found that the chronically homeless people, particularly those with long histories of alcohol and health problems have been homeless for up to fifty years. The U. S. Department of Housing and Urban Development (HUD) defines chronically homeless as "an unaccompanied homeless individual with a disabling condition who has either been continuously homeless for a year or more, or has had at least four episodes of homelessness in the past three years" (HUD, 2004).

Wright, Rubin and Devine (1998) estimated the size of the chronically homeless at a quarter to a third of the homeless population. The chronically homeless would be considered homeless at some points in their lives and then remain being homeless. Kuhn and Culhane

(1998)'s study shows that the average number of homelessness spells of chronically homeless people in New York was 2.26 spells and the average number of days of becoming homeless was 632.5 days. The chronically homeless people in Philadelphia have the average number of homelessness spell of 1.52 and the average of days of becoming homeless of 252.4 days.

9. Homelessness in Miami-Dade County

Miami-Dade County Community Homeless Plan

Homelessness has been a social problem in Miami-Dade County for years. A variety of programs and services to alleviate homelessness problems have been expanded significantly. In 1992, the Governor of Florida created a Task Force on Homelessness. The purpose of this agency was to identify strategies for addressing the growing homeless crisis in Miami-Dade.

Through the efforts of the Task Force on Homelessness, local business leaders and elected officials, in 1993, the State legislature allowed the County to levy a one-percent food and beverage tax at all restaurants grossing more than \$400,000 a year and had a liquor license. The tax has been collected since October 1993 and generates revenues of approximately \$6.8 million per year (Miami-Dade County Homeless Trust, 2004). The amount of the collected tax is steadily increasing every year. They collected over \$9 million in 2004 and \$10.2 million in 2005.

The tax also resulted in the development of a local plan for the use of the tax –the Miami-Dade County Community Homeless Plan. This continuum of care plan called for the creation of a coordinating body to ensure the implementation of the plan. Subsequently, the Miami-Dade County Homeless Trust was established in 1993 built upon the representatives of key stakeholders in the planning and delivery of homeless housing and services in the county.

The plan develops a comprehensive strategy for the delivery and coordination of homeless housing and services for the entire county jurisdictions. The continuum of care plan is comprised of emergency housing for up to sixty days, transitional housing with intensive case management services for six to nine months and permanent supported housing providing long-term permanent housing such as church assisted housing, SRO's, voucher-based program, etc. Services and housing can be accessed through a coordinated, county wide outreach process and connected through an MIS system (Miami-Dade County Homeless Trust, 2004).

Miami-Dade County Homeless Census

In order to uniformly enumerate homeless people and families on the streets and those staying in homeless programs at a point-in-time throughout Miami-Dade County, the Miami-Dade County Homeless Trust organizes homeless census. This census has been conducted regularly twice a year. The number of homeless people in Miami-Dade County fluctuated throughout the years as can be seen in **Table 2.2**.

The enumeration of homeless people and families on the streets before 2005 used multiplier of two. This multiplier was eliminated in the 2005 Homeless Census. Prior to each Census, the Homeless Trust provided census training for census participants including outreach providers and other agencies. The sites, encampments, and knowledge of the whereabouts of the homeless population in each area were identified by each respective outreach team.

Table 2.2.
Number of Homeless in Miami-Dade County

No. Month/Year	Number of Homeless
1. April 2000	5567
2. November 2000	6990
3. June 2001	8258
4. November 2001	6875
5. April 2002	7100
6. November 2002	6889
7. April 2003	7420
8. December 2003	7627
9. April 2004	7057
10. January 2005	5160

Source: The 2005 Homeless Census in Miami-Dade County and www.camillushouse.org/camillus_resources/homeless-in-miami.php (retrieved June 20, 2005)

The 2005 Homeless Census was conducted on January 27, 2005 and commenced at 10:00 p.m. and finished at 5:00 a.m. on January 28, 2005. The weather conditions were partly cloudy and lows in the 60's. The enumeration of homeless on the streets was conducted by a total of 29 teams consisting of 66 volunteers, 18 police officers, and 43 outreach workers. One of the sixty-six volunteers was the author. The recruitment of law enforcement assistance in the teams was to insure uniformity.

In accordance with the service areas of four outreach agencies in Miami-Dade County, the twenty-nine teams were divided into four areas: City of Miami, City of Miami Beach, Camillus House of South Dade and Miami-Dade County. A total number of 1,989 non-sheltered homeless persons were identified by the teams.

The 2005 Homeless Census also identified 3,173 sheltered homeless consisting of 1,348; 1,803 and 20 homeless persons in emergency shelters, transitional housing programs and hotel/motel respectively. The total number of homeless persons in Miami-Dade County identified by the 2005 Homeless Census was 5,160. This number was 0.22 percent of the population of Miami-Dade County in 2003. A detailed result of the 2005 Homeless Census in Miami-Dade County is presented in **Table 2.3**.

10. Summary

The above review of the literature on homelessness reveals that homelessness is an intractable social problem. Since the early 1980s, homelessness has been the subject of debate among scholars and policymakers. Definition and measurement of homelessness is still contentious discussion among scholars. Scholars from various disciplines have been trying to explain features of the homelessness problem. Numerous theories about homelessness have extensively expanded in the last two decades. The complexity of homelessness problem and the heterogeneity of homeless population complicate the scholars to construct the theories of homelessness.

Table 2.3.
The Results of the 2005 Homeless Census in Miami-Dade County

No. Homeless Category	Number of Homeless
<i>Non-sheltered Homeless</i>	
1. City of Miami	759
2. City of Miami Beach	239
3. South Dade South of Kendall Dr. to SW 280 th St.	106
4. Unincorporated Miami-Dade County, including South of 280 th St to Monroe County line	885
<i>Sheltered Homeless</i>	
1. Emergency Shelters	1,348
2. Transitional Housing Programs	1,803
3. Hotel/Motel	20
Total	5,160

Source: The 2005 Homeless Census in Miami-Dade County

Scholars and policymakers of homelessness have developed methods to capture the magnitude of the homelessness problem. They distinguish between period prevalence of homelessness and point prevalence of homelessness. The former is intended to capture the turnover in the homeless population. The studies of homelessness employing period prevalence of homelessness reported that the number of people who have experienced homelessness range from three to five percent of the population. On the other hand, the number of homeless people based on point prevalence survey ranges between 0.1 percent and 0.5 percent of population.

Another issue raised by homelessness scholars concerning methodology is the unit of analysis for measuring homeless population. Most data on homelessness and used by most researchers are intercity measures of homeless prevalence. The researchers who used such data compare the rate of homelessness across cities as their dependent variables. There are five intercity measures of homeless prevalence including the HUD's 1984 Report to the Secretary on the Homeless and Emergency Shelter, the 1990 Shelter and Street Night Enumeration, the 1990 Urban Institute's Homelessness Survey, the 1996 National Survey of Homeless Assistance Providers and Clients (NSHAPC) and the 2000 Census of Emergency and Transitional Shelter Population. The reliability and validity of the intercity data was criticized by Culhane, et. al. (1996). They argued that the measures of the homelessness across locales would be compounded by the considerably different response of those locales to the homelessness problem. The shortcomings of the intercity data led Culhane, et. al. (1996) to construct an intracity prevalence measures of homelessness in their study in New York City and Philadelphia. They assert that intracity measure allows researchers to assess spatial variation and processes associated with homelessness within a jurisdiction having the same policy and regulation.

Using various intercity data, numerous studies have been conducted to investigate the factors that correspond to the spatial distribution of homelessness. A number of factors were identified including unemployment, temperatures, percentages of renter, vacancy rate, proportion of one-person households, rent control, federal housing assistance and

expenditure on alcohol, drug and mental problems, poverty rate, per capita income and housing market.

The literature review on demographic, socioeconomic and housing problem in relation to the risk of homelessness clearly reveals that homelessness is a consequence of a combination of demographic composition problems, poverty and housing and that have considerably increased the risk of individuals to become homeless. The demographic composition, poverty and housing problem have been considerably linked to the increasing vulnerability of individuals on the brink of homelessness to becoming homeless.

Another important issue on homelessness raised by the above review of the literature is the fact that homeless population is not a homogeneous population. The heterogeneity of homeless population is their most distinctive characteristics. The stereotype of homeless people leads to only a partial understanding of the complexity of homelessness problem. Dozens studies present a diversity of categories of homeless people by social and demographic characteristics and by length of time and the number of episodes of homelessness.

The studies show that homeless people with ADM problem differ from homeless people without ADM problem in many respects. In addition to the occurrence of ADM problem, the two homeless types differ in causes of homelessness, shelter use, social support systems, employability, length of homelessness, and childhood history. The studies also display that homeless categorization by family status shows substantial differences between homeless family and homeless individuals. The differences include the occurrence of ADM problem, reasons of becoming homeless, homelessness spell, shelter use, and history of stressful life events.

Gender perspective on homelessness presents considerable differences between homeless men and homeless women in many respects. Dozens of studies on homeless women and homeless men show that the two homeless types differ in many respects including reasons of becoming homeless, perceived needs, the occurrence of ADM problem, family and social relationship, victimization, legal involvement and work history.

The studies on homelessness also reveal that homeless veteran and homeless youth are different from homeless non-veteran and homeless adults respectively. A study comparing homeless veteran and homeless non-veteran in Ohio reveals that the proportion of White and the median age of the homeless veteran were higher than that of the homeless non-veterans. The education attainments of homeless veterans were better than homeless non-veterans. With regard to homeless youth, the studies show that they are more likely to have high rates of acute and chronic health problems than homeless adults. They also experience physical, sexual and verbal abuse, high level of anxiety and depression, lack of self-acceptance and lack of self-confidence.

This current study attempts to compare the spatial distributions of residential origins of varying homeless types. It hypothesizes that homeless people of varying types will have differential spatial distribution of their residential origins. The finding is expected to enrich new dimension of comparing various types of homeless population. The intracity data of residential origins of each type of the homeless are developed. The data then are linked with the demographic, socioeconomic, and housing characteristics of the neighborhood that the homeless come from to identify factors associated with the rate of residential origins for each type of the homeless.

CHAPTER THREE

RESEARCH METHODOLOGY

1. Introduction

There have been some studies investigating the factors associated with the spatial distribution of homelessness. Most of them used intercity homelessness rates as the dependent variable and identified where people end up as homeless. They did not identify the origin of homeless people and the process contributing to the susceptibility of individuals to becoming homeless.

The first study addressing the issue of where the homeless come from is a study conducted by Culhane, Lee and Wachter (1996). Other study that employed a similar method with their study is a study conducted by Wong and Hillier (2001). Due to the data availability, both studies only used the distribution of prior address of homeless families. They did not investigate the distribution of prior addresses of other categories of homeless.

It is clear that homeless persons are not a homogenous group. The varying causes of homelessness imply the heterogeneity of the homeless. The heterogeneity of the homeless is their most distinctive characteristic (Wright, Rubin and Devine, 1998). Homeless people vary in various aspects including social and demographic characteristics, length of time and the number of episodes of being homeless.

There has been no such study to date to investigate the residential origin of the varying categories of homeless. This study hypothesizes that homeless people of varying types will have differential spatial distribution of their prior addresses. It attempts to identify where the varying categories of homeless come from and the demographic, socioeconomic, and housing factors that are associated with the rate of prior addresses for the homeless of varying types. This study also hypothesizes that different demographic, socioeconomic, and housing factors are associated with differential rate of the prior addresses of homeless people.

Using data from a point-in-time homelessness survey in Miami-Dade County conducted on January 27, 2005, this study is able to identify the residential origins of varying categories of homeless people. These homeless categories include homeless women, homeless men, homeless families, homeless individuals, homeless with and without ADM problem, chronic homeless, non-chronic homeless and homeless veteran and homeless non-veteran. This study attempts to replicate and expand Culhane, et. al. and Wong and Hillier's study with regard to the homeless category in Miami-Dade County.

2. Description of Data Collection Methods

Data Sources

There are two data sources used in this study. They include the data on homeless population and the data on characteristics of the residential origins of the homeless. The data on neighborhood characteristics of the residential origin of the homeless are obtained from the U.S. 2000 Census data. The data were retrieved from the official website of the U.S. 2000 Census data. This study uses three groups of variables: demographic compositions, socioeconomic, and housing. These variables are obtained from Census 2000 Summary File 1 (SF-1) and Summary File 3 (SF-3). Summary File 1 presents counts and information collected from all people and housing units on the enumeration day. Summary File 3

presents detailed population and housing data collected from a 1-in-6 sample and weighted to represent the total population.

The data on homeless population was collected through a point-in-time homelessness survey organized by Miami-Dade County Homeless Trust on January 27, 2005. Prior to the survey, Miami-Dade Homeless Trust asked all homeless programs in Miami-Dade County of their willingness to participate in the survey. There were 50 programs within 18 agencies in Miami-Dade County that participated in the survey. The list of agencies and programs participating in the 2005 point-in-time homelessness survey in Miami-Dade County is presented in **Table 3.1**.

Table 3.1.
Agencies and Programs Participating in the 2005 Point-in-time
Homelessness Survey in Miami-Dade County

No.	Agency	Program
1.	Bayview Center for Mental Health, Inc.	Crossroads
2.	Betterway of Miami, Inc.	Residential
3.	Camillus House	Beckham Hall Emergency Shelter for Men
4.	Camillus House	Camillus Health Concern
5.	Camillus House	Outreach
6.	Camillus House	16-Bed Non-Treatment
7.	Camillus House	34-Bed Non-Treatment
8.	Camillus House	Beach Workout
9.	Camillus House	Courtyards 35-Bed Families
10.	Camillus House	Airbase Singles
11.	Camillus House	Airbase Families
12.	Camillus House	SRO/Villas
13.	Carrfour Supportive Housing	Transition to Affordable Housing (TAHP)
14.	Carrfour Supportive Housing	Transition to Homeownership (THOP)
15.	Citrus Health Network, Inc.	Outreach
16.	Citrus Health Network, Inc.	Kiva Saven Haven
17.	Citrus Health Network, Inc.	Crisis Outpatient Bed (COB)
18.	Citrus Health Network, Inc.	Shaman Transitional Residence
19.	City of Miami Homeless Assistance Program	Outreach
20.	City of Miami Beach Office of Community Services	Outreach
21.	Community Partnership for the Homeless	Homeless Assistance Center (HAC) I
22.	Community Partnership for the Homeless	Homeless Assistance Center (HAC) II
23.	Douglas Gardens Community Mental Health Center	Mayfair Transitional Housing
24.	Douglas Gardens Community Mental Health Center	Successful Investment
25.	Fellowship House	Naranja Safe Haven
26.	Fellowship House	Homeless Primary Care Services
27.	James E. Scott Community Association, Inc.	Transition and Stabilization
28.	Jewish Community Services of South Florida, Inc.	Homeless Employment Services (HESS)
29.	Jewish Community Services of South Florida, Inc.	Homeless Outreach Program for Employment (HOPE)
30.	Legal Services of Greater Miami	Homeless Legal Assistance
31.	Lutheran Services Florida	Esperanza
32.	Lutheran Services Florida	New Beginnings
33.	Lutheran Services Florida	New Day
34.	Lutheran Services Florida	Passageways to Independence (PIN) North
35.	Lutheran Services Florida	Passageways to Independence (PIN) South
36.	Miami-Dade County Department of Human Services	Outreach

Table 3.1. Continued

No.	Agency	Program
37.	Miami-Dade County Department of Human Services	Inn Transition South
38.	Miami-Dade County Department of Human Services	Housing Employment Program
39.	New Hope Corps	New Hope Residential
40.	New Horizons	Primary Care
41.	New Horizons	Bloom Center
42.	The Salvation Army	City of Miami Beach (CMB)
43.	The Salvation Army	Detainee
44.	The Salvation Army	Federal Emergency Management Agency (FEMA)
45.	The Salvation Army	Jackson Memorial Hospital (JMH)
46.	The Salvation Army	South Florida AIDS Network (SFAN)
47.	The Salvation Army	Homeless Trust Fund (HTF) Women and Family
48.	The Salvation Army	Homeless Trust Fund (HTF) Men
49.	The Salvation Army	Here's Hope
50.	The Salvation Army	Chronically Homeless Program (CHP)

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County

The programs that participated in the survey provide various services for the homeless in Miami-Dade County including emergency housing, transitional housing, permanent housing, job training/employment, outpatient substance abuse treatment, outpatient mental health care, homeless prevention, life skills training, and outreach program. A more detailed description of these programs can be seen in **Appendix A**. The locations of these programs are scattered in Miami, North Miami, Miami Beach, Naranja, Hialeah and Homestead. The spatial distribution of the programs can be seen in **Figure 3.1**. This figure shows that none of the participating supportive service program located in Southern part of Miami-Dade. Meanwhile, the participating transitional housing programs are scattered throughout Miami-Dade.

The information of these programs was obtained through phone interviews with either director or case manager of those programs during period of April 2005 to May 2005. The questions that were asked of them include the characteristics of their clients, the facility and supportive services provided to their clients, the location of the facility, the contribution of the clients to the program and how they conducted the survey whether interviewing the clients or self-administered survey by the clients.

Sampling Method

The survey was conducted by each participating program to their respective clients. Most programs employed their staffs to interview the clients. The other programs asked the clients to do self-administered survey. Most of them conducted the survey from 8:00 a.m. to 5:00 p.m. on January 27, 2005. The Outreach Program of the City of Miami Homeless Assistance Program also conducted the survey around 7:00 p.m. when some non-sheltered homeless people were congregating for a street feeding provided by churches in the city of Miami.

The participating emergency shelter programs, transitional housing programs and supportive service programs asked all of their clients whether or not they would like to participate in the survey. The clients were informed that the survey was voluntary and the participants were rewarded with two-dollar voucher from McDonalds. The samples from the participating emergency shelter programs, transitional housing programs and supportive service programs that were used in this study are based on the voluntary basis drawn from

Figure 3.1: Distribution of Participating Supportive Services, Emergency Shelter and Transitional Housing Programs

the homeless population of those programs on January 27, 2005. The samples were not randomly selected.

At same time, the participating outreach programs found the samples from the streets and asked them whether or not they would like to participate in the survey. Unlike the emergency shelter programs, transitional housing programs and supportive service programs, the participating outreach program did not find all non-sheltered homeless population and asked them to participate in the survey. They just found some of them and asked them whether or not they were willing to participate in the survey. They employed a purposive sampling and selected the samples from the available subjects. Barbie (2004) asserts that such sampling method is commonly used in an exploratory research especially when studying population, i.e. non-sheltered homeless, is difficult to reach. Purposive sampling method identifies and selects cases to fit a particular purpose.

The people surveyed were informed that the information they provide would help to better understand the need of people who are homeless in Miami-Dade County. The participant may choose not to answer any questions. The participants also may stop answering at any time. They also were informed that their answers would not affect the service available to them or their family even they do not answer at all. The questions include gender, age, race/ethnicity, veteran status, marital and family status, residential status, address of their last residence, length of time and the number of episodes of being homeless, physical and mental health problem, services needed, and causes of homelessness.

Survey Instruments

Miami-Dade County Homeless Trust organized the survey and made three forms of survey instrument: Outreach and Supportive Services, Emergency Housing and Transitional Housing. The survey instruments used in the 2005 homelessness survey in Miami-Dade County can be seen in **Appendix B**. These forms differ in the question of services needed. These differences are to factor the collecting duplicated needs for the same level of care. For instance, an individual in an emergency housing will not be asked if they require emergency housing, rather what other services they require.

The survey instruments were adopted from a standardized core survey instrument developed by the state of Florida's Office on Homelessness and the Florida Coalition for the Homeless. The purpose of the standardized core survey instrument is to promote more uniformity of information on homelessness in Florida. However, the standardized survey instrument has not been tested in terms of validity and reliability. For instance, the occurrence of mental health or emotional problems was merely based on the self-reported responses from one or two questions concerning mental health or emotional problems. There is no valid and reliable instrument to measure the mental health or emotional problems of the respondents in this statewide-standardized survey instrument. An example of valid and reliable instrument of psychological symptoms is the MSCI (Modified version of the Colorado Symptom Index) scale. This instrument has been founded to be a reliable and valid measure of psychological symptom in a national study of homeless people with severe mental illness and/or substance abuse disorders (Conrad, et. al., 2001).

The survey instruments used for the current study have no identifying questions such as name, date of birth or social security number. Instead, the survey instruments asked the respondents of their initials and ages. The respondents were asked where they stayed last night whether they stayed in shelter, transitional housing, permanent housing for persons who have been homeless, treatment facilities, hospital, jail or prison, their own place, friend's

or relative's home, hotel or motel, foster care, street or woods, car, boat, or other vehicle or in other place.

The survey inquired the respondents' prior addresses by asking them of "what was the address of the last house or apartment you lived in?" followed by street address, city, state, zip code and country. The notion of country was also asked in order to anticipate individuals who came from outside the United States. It is reasonable since Miami is an international city and many people from other countries particularly from Caribbean and Central America migrated to Miami.

The question of respondent's prior address is the most critical question in this study. The study cannot be further analyzed unless the respondents answered such a question. An incomplete street address also will create a problem because it cannot be geocoded into census tract. This study requires a complete street address including building number and street name to be used in the analysis.

The survey asked the respondents whether they have any family members staying with them. Subsequently, they were asked to list their family members including their gender, age, and veteran status.

With regard to experience of being homeless, this survey asked the respondents of how many separate periods of time in the past three years have been homeless whether once, two to three times or four or more times. Then, the survey asked the respondent of the length of time since they last had a regular place to stay whether a week or less, more than a week but less than a month, between one and six month, more than six month but less than a year or a year or more. These two questions allow this study to categorize homeless by their chronicity.

The survey asked the respondents if they have such problems as physical or medical problems (besides HIV/AIDS), HIV/AIDS, mental health or emotional problems, drug or alcohol problems, developmental disability and other problem. They may choose more than one problem if they have more than one problem.

The survey also listed seventeen services that may be really needed by respondents at the time of survey conducted. The services include emergency shelter, transitional housing, permanent housing, education/job training, health care, alcohol/drug treatment, mental health treatment, drop-in center such as shower, rest rooms, mailing address, storage and phone, financial assistance, food or meals, job placement, domestic violence services, HIV services, legal service, immigration services, clothing assistance, and child care. The respondent may choose all services that apply to their needs.

The last question in this survey is the causes of becoming homeless. The respondents were asked to indicate the most important cause of being homeless. There were thirteen options of cause and an open-ended option of cause. The respondents were asked to pick one of them that was considered to be the most important. The causes of being homeless that listed in this survey include unemployment/lost job, not enough income to meet basic need, welfare benefit ended, they have no one to watch their children, evicted, released from jail/prison or hospital, left shelter or other program, physical/medical problems, mental health or emotional problems, alcohol or drug problems, HIV/AIDS, break-up, divorce or separation, and domestic violence.

Categorization of Samples

The expected contribution of this study on the homelessness literature is to expand the previous studies on prior addresses of homeless by including different categories of the homeless. A variety of questions in the 2005 point-in-time homelessness survey in Miami-

Dade County allows this study to categorize the diversity of homeless population into several sets of homeless category by gender, family status, the occurrence of ADM problem, chronicity, and veteran status. The sets of homeless category in this study are as follows:

- Homeless men – Homeless women
- Homeless family – Homeless individual
- Homeless with ADM problem – Homeless without ADM problem
- Chronic homeless – Non-chronic homeless
- Homeless veteran – Homeless non-veteran

In order to categorize homeless by gender, this study uses question 6. Using this question, the respondents are categorized into homeless women or homeless men. This study uses question 11 to categorize the respondent whether they are homeless family or homeless individual. Question 11 indicates the respondent if they have any family members staying with them at the time of survey conducted.

In order to categorize homeless by the occurrence of ADM problem, this study uses question 22a. This question asks the respondents if they have mental health or emotional problem and drug or alcohol problems. The respondents are categorized as homeless with ADM problem if they have either mental health/emotional problem or drug/alcohol problem or both problems. It should be noted that the responses were based on the self-reported of the respondents. In the survey, there were no valid and reliable instrument to determine the occurrence of ADM problem. It may be a threat to validity of this homeless categorization.

To assure that the occurrence of ADM problem was accurately reported by the respondent, this study also uses questions 23f and 23g and the program from which the respondents come. The question 23f and 23g ask the respondents whether at the time of survey they need alcohol/drug treatment and mental health treatment respectively. Respondents are categorized as homeless with ADM problem if they have ADM problem and/or they need alcohol/drug treatment and/or mental health treatment. If the respondent reported that they do not have mental health/emotional problem or drug/alcohol problem and they do not need alcohol/drug treatment or mental health treatment, they then will be categorized as homeless without ADM problem. This categorization was also confirmed with the program from which the respondents come.

With regard to the homeless categorization by chronicity, this study refers to HUD's definition of chronic homeless. HUD defines chronic homeless as "an unaccompanied homeless individual with a disabling condition who has either been continuously homeless for a year or more, or has had at least four episodes of homelessness in the past three years" (HUD, 2004). This study categorized the respondents as chronic homeless if they had 4 or more times periods of homelessness and had a disabling condition or had a year or more of current homelessness spell and had a disabling condition.

The respondents were categorized into homeless veteran or homeless non-veteran based on their answers to question 9. This question asked the respondents if they have ever served on active duty in the U.S. military.

Response Rate

The fifty participating homelessness programs in Miami-Dade County conducted the survey on January 27, 2005 to their respective clients and returned the completed surveys to the Miami-Dade Homeless Trust. In order to check for the duplication, The Miami-Dade Homeless Trust checked for the responses of the respondents to the first question in the

survey instruments. This question asked the respondents whether or not they have completed the survey earlier. In case of the respondents replied that they have completed the survey earlier, the survey was then terminated at that point because it indicated duplication. The author received the completed and unduplicated surveys from the Miami-Dade Homeless Trust. In order to re-check for the duplication, the author sorted the completed surveys by their initials. There were found several cases with the same initials but they are not the same person since their age, gender, and/or last addresses were different.

The total number of completed and unduplicated surveys was 1,201. All of these 1,201 respondents were homeless. None of the respondents was staying in their own place as their regular place to stay on the night of January 26, 2005. Some respondents responded that they had a regular place to stay but it was either shelter, transitional housing or treatment facility. Their regular place to stay was not their own place.

Compared with the homeless population on January 27, 2005 as reported by Miami-Dade County Homeless Trust Census, the total completed survey was 23.3 percent of the homeless population in Miami-Dade County. As described in previous section, the census reported that there were a total of 5,160 homeless persons including 1,989 non-sheltered homeless and 3,171 sheltered homeless. In other words, there were 3,959 homeless people enumerated in the Miami-Dade Homelessness Census on January 27, 2005 who were not included in the survey.

These completed surveys were collected through various programs. As described in **Appendix A**, the participating programs vary in many respects including services, clients and locations. The participating programs can be classified into four categories: outreach program, emergency shelter program, transitional housing program and supportive services program.

Out of fifty participating programs, there were five outreach programs, five supportive services programs, twelve emergency shelter programs and twenty-eight transitional housing programs. All Miami-Dade County jurisdictions are served by four outreach programs: Camillus House's Outreach, City of Miami's Outreach, City of Miami Beach's Outreach and Miami-Dade County's Outreach. Another outreach program –Citrus Health Network's Outreach- is specifically designed to provide outreach services for homeless with mental illness problem.

The five outreach programs employ mobile outreach teams who go into the street to find homeless persons and assist them with accessing homelessness services countywide. They could reach non-sheltered homeless population that mostly excluded by most studies on homelessness. This would be another advantage of this study.

The five supportive services programs include two programs providing mental health treatment, two programs providing employment assistance and one program providing legal services. These programs were specifically designed to serve homeless population in Miami-Dade County.

The participating emergency shelter and transitional housing programs vary in many ways including characteristics of their clients, total available beds, type of provided services, allowed length of stay for the clients, program fees, and location. These programs were run by several agencies located in Miami-Dade County jurisdictions.

The total number of respondents from outreach program, emergency shelter program, transitional housing program and supportive service program are 270, 361, 490 and 80 respectively. Compared with the report from Miami-Dade County Homeless Trust Census that was conducted on January 27, 2005, the number of respondents from outreach programs was only 13.6 percent of the non-sheltered homeless population. On the other

hand, the number of respondents from emergency shelter programs was 26.8 percent of the homeless population in emergency shelter. Similarly, the number of respondents from transitional housing programs was 27.2 percent of the homeless population in transitional housing programs. The number of respondents by program can be seen in **Table 3.2**.

With regard to characteristics of clients, some emergency shelter programs and transitional housing programs have designated particular requirement for homeless persons to be accepted in their program. The requirements to be accepted in the program vary in many ways including gender, family status, veteran status, health status, the occurrence of ADM problem, and chronicity status.

Total available beds in the twelve emergency shelter programs and the twenty-eight transitional housing programs were 1038 and 1261 respectively. The characteristics of clients and total available beds for each emergency shelter program and transitional housing program are also presented in **Table 3.2**.

Table 3.2.
Number of Respondents by Program and Number of Available Beds
and Characteristics of Clients

No. Program	Number of Respondents	Number of Available Beds	Characteristics of Clients
<i>Outreach Program (n=270)*</i>			
1. Camillus House	25	N/A	M/F, Sgl/Fam
2. Citrus Health Network	33	N/A	M/F, Sgl/Fam, MH, SA
3. City of Miami	101	N/A	M/F, Sgl/Fam
4. City of Miami Beach	53	N/A	M/F, Sgl/Fam
5. Miami-Dade	58	N/A	M/F, Sgl/Fam
<i>Emergency Shelter Program (n=361)**</i>			
6. Beckham Hall	35	100	M, Sgl
7. HAC I	111	402	M/F, Sgl/Fam
8. HAC II	118	300	M/F, Sgl/Fam
9. CMB	8	26	M/F, Sgl
10. Detainee	3	7	M/F, Sgl
11. FEMA	2	30	M/F, Sgl
12. JMH	7	10	M/F, Sgl
13. SFAN	23	28	M/F, Sgl, AIDS
14. HTF Women and Family	8	30	F, Fam
15. HTF Men	12	30	M, Sgl
16. Here's Hope	27	45	M/F, Sgl/Fam, AIDS
17. CHP	7	30	M/F, Sgl, Chr
<i>Transitional Housing Program (n=490)***</i>			
18. Residential	32	55	M/F, Sin, SA
19. 16-Bed Non-Treatment	15	16	M, Sgl
20. 34-Bed Non-Treatment	33	34	F, Sgl
21. Beach Workout	15	16	M/F, Sgl
22. Courtyards 35-Bed Families	9	35	M/F, Fam
23. Airbase Singles	19	28	M, Sgl, Vet
24. Airbase Families	29	160	M/F, Fam
25. SRO/Villas	48	45	M/F, Sgl
26. TAHP	21	67	M/F, Fam

Table 3.2. Continued

No. Program	Number of Respondents	Number of Available Beds	Characteristics of Clients
27. THOP	31	127	M/F, Fam
28. Kiva Saven Haven	12	14	M/F, Sgl, MH
29. COB	19	22	M/F, Sgl, MH
30. Shaman Transitional Residence	17	24	M/F, Sgl, MH
31. Mayfair Transitional Housing	19	42	M/F, Sgl, MH
32. Successful Investment	12	42	F, Sin/Fam
33. Naranja Safe Haven	10	14	M/F, Sgl
34. Homeless Primary Care Services	12	12	M/F, Sgl, MH
35. Transition and Stabilization	27	35	M, Sgl, SA
36. Esperanza	12	45	M/F, Fam
37. New Beginnings	6	48	M/F, Fam
38. New Day	5	20	M/F, Fam
39. PIN North	8	25	M/F, Fam
40. PIN South	5	25	M/F, Fam
41. Inn Transition South	25	250	F, Sgl/Fam
42. Housing Employment Program	3	10	M/F, Sgl
43. New Hope Residential	20	24	M, Sgl, MH, SA
44. Primary Care	20	20	M/F, Sgl, MH, SA
45. Bloom Center	6	6	F, Sgl/Fam, SA
<i>Supportive Service Program (n=80)</i>			
46. Crossroads	16	N/A	M/F, Sgl/Fam, MH, SA
47. Camillus Health Concern	19	N/A	M/F, Sgl/Fam
48. HESS	10	N/A	M/F, Sgl/Fam
49. HOPE	32	N/A	M/F, Sgl/Fam
50. Homeless Legal Assistance	3	N/A	M/F, Sgl/Fam
TOTAL	1201	2299	

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County, Phone Interviews

Note:

* - 13.6% of total non-sheltered homeless population of the 2005 Homeless Census

** - 26.8% of total homeless population in emergency shelter programs of the 2005 Homeless Census

*** - 27.2% of total homeless population in transitional housing programs of the 2005 Homeless Census

M – Male ; F – Female

Sgl – Single ; Fam – Family

MH – Mental Health ; SA – Substance Abuse ; Vet – Veteran ; Chr – Chronically homeless

Comparison with Previous Studies

The purpose of this study is to seek the spatial distribution of prior addresses of homeless people of varying types. This study hypothesizes that varying homeless types will have differential spatial distribution of their prior addresses. The data on various types of homeless persons are of paramount importance to accomplish the purpose of this study. The fifty different programs that participated in the 2005 point-in-time homelessness in Miami-Dade County vary in many respects including the types of homeless as their clients. The use of the 2005 point-in-time homelessness survey would allow this study to capture the diversity of homeless types.

With regard to data collection methods, this study has some differences compared with the studies conducted by Culhane and his colleagues (1997) and Wong and Hillier

(2001). First, the previous studies collected data from databases in the city's centralized public shelter system. They collected data neither from private emergency shelters, transitional housing programs nor outreach programs. The available data of prior addresses of homeless from the centralized public shelter system was only those of homeless families. The system did not have data of the prior addresses of homeless singles. As described in previous section, the current study uses data not only from public emergency shelter programs but also from outreach program, transitional housing programs, and supportive service programs. The collected data from various programs allows this current study to be more likely to capture the diversity of homeless type than the previous studies.

Second, the collected data in the previous studies were for multiple years. Culhane, et. al. (1997) used four year administrative data from Philadelphia's public shelters and seven year administrative data from New York City's public shelters. They collected 9,160 and 71,035 records in Philadelphia and New York City respectively. Wong and Hillier (2001) used one year administrative data from Philadelphia's public shelters and collected 9,156 records. These records were geocoded and aggregated by census tracts. Culhane and colleagues (1997) found that 474 out of 2,148 census tracts (22%) in New York City and 229 out of 349 census tracts (66%) in Philadelphia did not have prior addresses of homeless. Such a data was not presented in Wong and Hillier (2001) study. However, from a phone interview with one of the authors, Dr. Irene Wong, there were a lot of census tracts without prior addresses of homeless in their study. According to her, most prior addresses of homeless were concentrated in several census tracts as shown in a map in their study.

The current study collected data from a point-in-time survey that was conducted in January 27, 2005. The survey collected 1,201 records. Point prevalence of homelessness may not capture the turnover in the homeless population as well as period prevalence of homeless.

3. Demographic Profiles of the Samples

As mentioned earlier, the total number of samples that were collected from a point-in-time homelessness survey conducted on January 27, 2005 in Miami-Dade County is 1,201. This number represented 23.3 percent of the homeless population in Miami-Dade County on January 27, 2005. Compared with the total population of Miami- Dade County in 2000, the homeless population is about 0.2 percent of the total population. This percentage is about the same with the estimate of homeless population in urban areas based on samples obtained on a given day (Burt and Cohen, 1989; Culhane and Kuhn, 1998).

Gender

By gender, the samples of this study consisted of 796 homeless men (66%) and 396 homeless women (33%). There were 9 missing cases since the respondents did not answer the question of gender. The proportion of homeless women in the study (33%) is higher than the proportion of non-sheltered homeless women in the Homeless Census (19%). The Miami-Dade Homeless Trust that organized the homeless census could not provide the number of sheltered homeless by gender and other demographic characteristics because most of emergency shelters and transitional housing programs only provided aggregate number of homeless population in their respective programs. Meanwhile, the proportion of homeless women is much lower than that of female population in Miami-Dade County in 2000 (52%).

Hispanic or Latino Origins

As indicated earlier, one of the significances of this study is that the study was conducted in an area of high Hispanic population. Both previous studies on residential origins of the homeless used the proportion of Hispanics as one of their independent variables (Culhane, et. al., 1996; Wong and Hillier, 2001). Both studies were conducted in New York City and Philadelphia where the proportion of Hispanics were less than ten percent of the total population. The 2000 Census reports that the Hispanic population in Miami-Dade County makes up more than fifty-seven percent of total population.

Thirty-five percent of the samples reported that they were Hispanic or Latino origins. This number was slight higher that the proportion of Hispanic or Latino origins of the non-sheltered homeless in the Homeless Census (23%). Compared with the proportion of Hispanic or Latino origins of the total population of Miami-Dade County (57.3%), the proportion of Hispanic or Latino homeless in the samples was lower. These numbers display the under-representation of Hispanics or Latino origins in the homeless population in Miami-Dade County.

Race

By race, the samples of the study consisted of 572 Blacks, 502 White, 28 Haitian, 22 Native American, 7 Asian American, and 62 other races. Among other races, Black had the highest proportion of homeless both in the samples (48%) and in the non-sheltered homeless population (58%). On the other hand, the proportion of Black population in Miami-Dade County in 2000 was only 20 percent.

As homeless population in other municipalities in the U.S, the proportion of Black homeless in Miami-Dade County showed the overrepresentation of Black in the homeless population. The overrepresentation of Black in the samples and in the non-sheltered homeless population in Miami-Dade County supports the argument that metropolitan's Black population is considered an at-risk group.

Age

The age of the sample ranged from 82 years of age (a person) to 18 years of age (13 people). The survey did not interview anyone under the age of eighteen years old. However, this fact did not imply that there was no homeless people aged under 18 years of age. Many of homeless families in the samples were accompanied by their children aged under 18 years of age.

By age, the samples of the study comprised 245 people aged between 18 and 30 years of age (20%), 380 people aged between 31 and 40 years of age (32%), 360 people aged between 41 and 50 years of age (30%), and 214 people aged over 50 years of age (18%). Similarly, the most non-sheltered homeless in Miami-Dade County aged between 31 and 40 years of age (35%). On the other hand, this age cohort makes up only sixteen percent of total population of Miami-Dade County in 2000.

Family Status

Breaking down the homeless population in family status is of importance since the fastest growing category of the homeless population is homeless families (Blau, 1992). This study defined homeless family as those who have any family members staying with the respondents at the day of survey conducted. With regard to the family status, there were 9 missing cases because the respondents did not respond to question asking their family status.

By family status, the respondents of this study consist of 274 homeless families (23%) and 918 homeless individuals (77%).

A comparison with the population of non-sheltered homeless shows that the proportion of homeless families in the sample was much higher than that of the non-sheltered homeless population (1%). This fact can be interpreted that most homeless families in Miami-Dade County stayed either in emergency shelters or transitional housing programs. Compared with the proportion of families in the Miami-Dade County population (71%), the proportion of homeless families in the samples was still under-represented.

Table 3.3.
Demographics Profiles of the Samples, the Non-Sheltered Homeless Population
and the 2000 Miami-Dade Population

No. Demographic Profile	Proportion of the Sample (n=1,201)	Proportion of the the Non-Sheltered Homeless Population (n=1,989)*	Proportion of the 2000 Miami-Dade Population (n=2,253,362)
<i>Gender</i>			
1. Males	66%	80%	48%
2. Females	33%	19%	52%
<i>Race and Ethnicity</i>			
1. Black and African American	48%	58%	20%
2. White	42%	39%	70%
3. Hispanic	35%	23%	57%
<i>Age</i>			
1. 0-18 years old	0%	2%	25%
2. 19-30 years old	20%	23%	16%
3. 31-40 years old	32%	35%	16%
4. 41-50 years old	30%	25%	14%
5. 50 and over years old	18%	10%	28%
<i>Family Status</i>			
1. Family	23%	1%	71%
2. Single	77%	96%	29%

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County; the 2005 Homelessness Census in Miami-Dade County; the 2000 Census Data

Note: * Data was only for the Non-Sheltered Homeless Population. Data of the sheltered homeless population by gender, race and ethnicity, age, and family status were not available.

The Occurrence of ADM Problem

Homeless with ADM problems made up more than fifty-one percent of the sample (622 out of 1201 samples). This homeless category are considered to have a potential of becoming homeless in the future due to conditions of individuals on which to lay responsibility for causes, rather than structural factors.

The study defined the samples as homeless with ADM problems based on their self-reported response on the questions asking whether or not they have mental health or

emotional problem and drug or alcohol problems. The respondents were categorized as homeless with ADM problem if they had either mental health/emotional problem or drug/alcohol problem or both problems. To assure that the occurrence of ADM problem was accurately reported by the respondent, this study also used questions asking whether they need alcohol/drug treatment and mental health treatment respectively. Respondents were categorized as homeless with ADM problem if they had ADM problem and/or they need alcohol/drug treatment and/or mental health treatment. The answers were also confirmed with the program from which the respondents come. There were found seven missing cases since they did not answer the questions concerning the ADM problems.

Chronicity

As mentioned earlier, this study categorized the samples as chronically homeless person if they had 4 or more times periods of homelessness and had a disabling condition or had a year or more of current homelessness spell and had a disabling condition. Breaking down the homeless population in this categorization is of importance since chronically homeless is very expensive to Federal, State and local government and HUD is committed to ending chronic homelessness in ten years (HUD, 2004).

Thirty-one percent of the samples (364 out of 1201) were categorized as chronically homeless people. Additionally, a total of 11 missing cases were found on this categorization since they did not respond to the questions concerning their disability conditions and the length of homelessness.

Veteran Status

This study also categorized the samples based on their veteran status. The survey asked the respondents if they have ever served on active duty in the U.S. military. There were found 139 respondents with experience in the U.S. military (12%) and 1050 respondents without any experience in the U.S. military in the study (88%). In addition, there are 12 missing cases since the respondents did not respond to the question on the veteran status.

Table 3.4.
Number of Respondents by Homeless Types

No. Categories of Homeless	Number of Respondent	Percentage
1. <i>Gender</i>		
Homeless Men	796	66.3%
Homeless Women	396	33.0%
Missing	9	0.7%
2. <i>Family Status</i>		
Homeless Singles	918	76.5%
Homeless Families	274	22.8%
Missing	9	0.7%
3. <i>Occurrence of ADM Problem</i>		
Homeless with ADM problem	622	51.8%
Homeless without ADM problem	572	47.6%
Missing	7	0.6%

Table 3.4. Continued

No. Categories of Homeless	Number of Respondent	Percentage
4. <i>Chronicity</i>		
Chronic Homeless	364	30.3%
Non-chronic Homeless	826	68.8%
Missing	11	0.9%
5. <i>Veteran Status (n=1189)</i>		
Homeless Veteran	139	11.6%
Homeless Non-Veteran	1050	87.4%
Missing	12	1.0%

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County

4. Unit of Analysis

Following the methods used by Culhane, et. al. (1996) and Wong and Hillier (2001) the initial units of analysis of this study is census tracts. The census tract was chosen for two reasons. First, data on factors associated with the risk of homelessness such as demographic composition, economic and housing characteristics are provided at the census tract level and electronic maps of census tract boundaries are readily accessible and can be used for mapping purposes from Census 2000. Second, the number of households and the area of census tracts are appropriate for the analysis in this study. There are 347 census tracts in Miami-Dade County, of which 4 are primarily non-residential tracts that have less than 100 housing units. The map of census tracts in Miami-Dade County can be seen in **Figure 3.2**.

Compared with the studies conducted by Culhane and his colleagues (1996) and Wong and Hillier (2001), the number of cases in this study is much fewer. Alternatively, the units of analysis of this study are census tract groups. The U.S. Census numbered census tract i.e. 1.06, 1.08, 1.09, 2.01, 2.02, etc. Census tract group is a set of census tracts that have the same tract group number i.e. 1, 2, etc. Such a grouping yields 116 census track groups in Miami-Dade County.

One of studies using such a census tracts grouping is a study conducted by Archer, Gatzlaff and Ling (1996). Their study examines locational variation in house price changes in Miami-Dade County from 1971 to 1992. They geocoded the single-family home sales and an adequate number of sales did not occur within a large number of the census tracts. This fact did not allow them to perform their econometric analysis. Subsequently, they classified the census tracts by their track group number.

However, such a grouping produces wide discrepancy in the total population of each census tract group. For instance, census tract group 101 has total population of 436,136 or nearly one-fifth of the total population of Miami-Dade County. On the other hand, there are four census tract groups with total population of less than 2,000. Even, census tract group 48 has only 122 inhabitants. Such a grouping will not be able to show the variance of one-fifth of total population of Miami-Dade residing in census tract group 101.

In order to address this problem, the author created new census track grouping by merging some adjoining census tracts so as to reach a total population of roughly 20,000. The protocol that was used in such census tract grouping is selecting neighboring census tracts that have bordering line rather than bordering point. Such a grouping yields 111 census track groups as can be seen in **Figure 3.3**. The census tracts and total population for each census tract groups are shown in **Appendix C**.

Source: Department of Planning and Zoning (2005)

Figure 3.2: Census Tracts in Miami-Dade County

Figure 3.3: Census Tract Groups (Units of Analysis)

5. Prior Addresses of Homeless and Geocoding

The purpose of this study is to investigate the geographic distribution of prior addresses of different categories of the homeless and then analyze the distribution of prior addresses for each category of homeless with the factors related to demographic, economic and housing and neighborhood quality. With regard to this purpose, the prior address of homeless obtained from the survey is of paramount importance in this study.

The studies conducted by Culhane et. al. (1996) and Wong and Hillier (2001) indicated that the prior addresses were not easily identified. In Culhane et. al.'s study, of the 71,035 homeless family that had sought public shelter in New York, only 70 percent had an address that matched the New York's Department of City Planning geographic files. Meanwhile, of the 9,160 households seeking public shelter in the City of Philadelphia, there were 41 percent unmatched cases including rejected in-city addresses, in-state non-Philadelphia addresses, out-of-state addresses and largely composition of missing addresses. Similarly, Wong and Hillier's study found that of the 9,156 homeless families seeking public shelter in the city of Philadelphia, only 4,116 gave a residential origin that matched the City of Philadelphia's geographic files.

This study asked the respondents of "what was the address of the last house or apartment you lived in?" followed by street address, city, state, zip code and country. This study found relatively large portion of missing addresses (171 out of 1201), 55 in-state non-Miami-Dade addresses, 131 out-of-state addresses, and 8 out-of-country addresses. These facts support the findings of the previous studies of Culhane, Lee, and Wachter (1996) and Wong and Hillier (2001) that homelessness is not only generated by local factors but also by regional or even international factors. Homelessness in Miami-Dade County does not only come from within its county boundary but also from other counties in Florida, other states in the U.S or even out of the U.S.

There are 55 in-state non Miami-Dade addresses including 7 addresses in Jacksonville, 6 addresses in Hollywood, Broward County, and 5 addresses in Fort Lauderdale, Broward County. This study also indicated 131 out-of-state addresses from 34 states across the country. The state of New York is the most cited state in which the respondents formerly resided (15 addresses). Ohio and Georgia are the other states with the high number of addresses, 11 and 9 addresses respectively.

Not surprisingly, there are also eight homeless people whose residential origins are out-of-country. They include four addresses in Puerto Rico, two addresses in Virgin Islands, one address in Jamaica and one address in Hongkong. As one of international cities in the world, not only Miami does attract tourists to visit but also homeless people to survive. The residential origins of the homeless by states and municipalities in Florida can be found in **Table 3.5.** and **Table 3.6.** respectively.

Out of 891 respondents mentioning their last residential addresses in Florida, fifty-five respondents indicated addresses out of Miami-Dade County. Jacksonville is the most mentioned city in which they formerly resided (7 respondents). Hollywood, Broward County and Fort Lauderdale are other cities that have high number of last residential addresses, 6 and 5 addresses respectively.

Table 3.5.
The Residential Origins of the Respondents by States and Country

No. State/Country	Number of Respondents	Percentage
1. Florida	891	74.2%
<i>Other States (n=131)</i>		
2. New York	15	1.2%
3. Ohio	11	0.9%
4. Georgia	9	0.7%
5. Texas	8	0.6%
6. Virginia	8	0.6%
7. Michigan	6	0.5%
8. North Carolina	6	0.5%
9. California	5	0.4%
10. Illinois	5	0.4%
11. Maryland	5	0.4%
12. New Jersey	5	0.4%
13. Alabama	4	0.3%
14. Colorado	4	0.3%
15. Washington	4	0.3%
16. Indiana	3	0.2%
17. Kentucky	3	0.2%
18. Massachusetts	3	0.2%
19. Pennsylvania	3	0.2%
20. Wisconsin	3	0.2%
21. Arizona	2	0.1%
22. Connecticut	2	0.1%
23. Mississippi	2	0.1%
24. Nevada	2	0.1%
25. Oklahoma	2	0.1%
26. Tennessee	2	0.1%
27. Arkansas	1	0.0%
28. Kansas	1	0.0%
29. Maine	1	0.0%
30. Missouri	1	0.0%
31. Nebraska	1	0.0%
32. New Hampshire	1	0.0%
33. South Carolina	1	0.0%
34. West Virginia	1	0.0%
35. Wyoming	1	0.0%
<i>Out of Country (n=8)</i>		
36. Puerto Rico	4	0.3%
37. Virgin Islands	2	0.1%
38. Jamaica	1	0.0%
39. Hongkong	1	0.0%
<i>Missing Addresses</i>	171	14.2%
Total	1201	100.0%

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County

Table 3.6.
The Residential Origins of the Respondents by Municipalities in Florida

No. Municipality	Number of Respondents	Percentage
1. Miami-Dade County	836	93.8%
<i>Out of Miami-Dade County (n=55)</i>		
2. Jacksonville	7	0.8%
3. Hollywood, Broward	6	0.7%
4. Fort Lauderdale	5	0.6%
5. Ocala	4	0.4%
6. West Palm Beach	2	0.2%
7. Pompano Beach, Broward	2	0.2%
8. Plant City	2	0.2%
9. Pensacola	2	0.2%
10. Key West, Monroe	2	0.2%
11. Satellite Beach, Broward	1	0.1%
12. Miramar, Broward	1	0.2%
13. Margate, Broward	1	0.2%
14. Lauderhill, Broward	1	0.1%
15. Immokalee, Broward	1	0.1%
16. Coral Spring, Broward	1	0.1%
17. Marathon, Monroe	1	0.1%
18. Key Colony Beach, Monroe	1	0.1%
19. West Hollywood	1	0.1%
20. Tampa	1	0.1%
21. Tallahassee	1	0.1%
22. St. Petersburg	1	0.1%
23. Port St. Lucie	1	0.1%
24. Port Charlotte	1	0.1%
25. Palmbay	1	0.1%
26. North Ladeatal	1	0.1%
27. Naples	1	0.1%
28. Kissimmee	1	0.1%
29. Fort Myers	1	0.1%
30. Daytona	1	0.1%
31. Citrus Spring	1	0.1%
32. Unknown Cities	2	0.2%
Total	891	100.0%

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County

As other studies on residential origins of the homeless, this study also indicates relatively large number of missing addresses. There are 171 missing addresses including no answer, does not remember, N/A, prison/jail, on the street, none, unknown and never lived in a house/apartment. A detailed missing address is presented in **Table 3.7**.

This study hypothesizes that the missing addresses are caused by the inability of the respondents to retrieve their memory for their residential origins. The respondents may be unable to remember their residential origins because of their physical problems, HIV/AIDS, mental health or emotional problems, and/or drug or alcohol problems. The study also hypothesizes that the respondents could not remember their residential origins because they

had left their last residential origins for years and/or they had experienced homelessness more than once.

Table 3.7.
Number of Respondents with Missing Addresses

No. Missing Address	Number of Respondents
1. No answer	124
2. Does not remember	25
3. N/A	7
4. Prison/jail	5
5. On the street	4
6. None	3
7. Unknown	2
8. Never lived in a house/apartment	1
Total	171

Source: The 2005 Point-in-time Homelessness Survey in Miami-Dade County

Another issue concerning the missing addresses is that the survey was conducted on the voluntary basis. The respondent was free to not answer the questions. Interviewers conducted most of the surveys but some of the surveys were self-administered by the respondents. This study hypothesizes that the missing addresses were caused by the unwillingness of respondents to answer the question particularly for those who self-administered the surveys.

In order to identify the factors that are associated with the missing addresses, this study used cross-tabulation with chi-square analysis. The crosstabulations were then conducted between the missing addresses and the factors associated with the missing addresses. Some variables were tested for this purpose including the number of homelessness period, the length of being homeless, the occurrence of physical medical problems, HIV/AIDS, mental health or emotional problems, drug or alcohol problems, and the way of the survey conducted whether self-administered by the respondents or completed by interviewers. The results of the chi-square analysis are presented in **Table 3.8**.

The results of the chi-square analysis on missing addresses show that the number of homelessness period, the length of being homeless, the occurrence of physical medical problems, HIV/AIDS, mental health or emotional problems, drug or alcohol problems, and the way of the survey conducted are associated with the missing addresses in this study. Homeless persons with either physical medical problems, HIV/AIDS, mental health and emotional problems or drug and alcohol problem are more likely to have missing addresses. The method of interview also is important to avoid missing addresses. The method of self-administered survey is more likely to produce missing addresses than the method of interview.

Table 3.8.
Chi-Square Analysis on Missing Addresses

No. Variable	Pearson Chi-Square	Significance
1. Number of homelessness period	15.641 (df=1)	0.000
2. Length of being homeless	17.528 (df=1)	0.002
3. Occurrence of physical/medical problem	46.604 (df=1)	0.000
4. Occurrence of HIV/AIDS	50.373 (df=1)	0.000
5. Occurrence of mental health problem	42.446 (df=1)	0.000
6. Occurrence of drug or alcohol problem	46.257 (df=1)	0.000
7. Method of survey	30.481 (df=1)	0.000

Using similar procedure as the studies conducted by Culhane, Lee, and Wachter (1996) and Wong and Hillier (2001), this study transforms the prior addresses of homeless persons into the Geographic Information System (GIS) data. This study uses ArcGIS, a GIS software product created and developed by ESRI (Environmental Systems Research Institute).

This study is an intracity prevalence measure of homelessness study. This study uses an intracity prevalence measure of homelessness across Miami-Dade County that has same policies and regulations that affect homelessness. Therefore, this study only includes the prior addresses of the homeless in Miami-Dade County. This study excludes the prior addresses of the homeless outside Miami-Dade County.

This study identified 836 respondents mentioning their last residential addresses in Miami-Dade County. Out of 836 respondents mentioning their prior addresses in Miami-Dade County, there are 67 respondents indicated their prior addresses were located in homelessness programs in Miami-Dade County. These homelessness program addresses were included in this study since these addresses also tell us the residential origins of the homeless. The homelessness programs that cited by these respondents include New Hope Residential, HAC 1, HAC 2, Salvation Army, Camillus House, Mayfair Residential, and Courtyard 35-Bed. Out of the 67 respondents, there are 2 respondents from HAC 1 and 6 respondents from Mayfair Residential that mentioned their current homelessness program addresses. These eight addresses do not represent the residential origins of the homeless. Therefore these eight addresses were excluded from the geocoding procedure.

Using the geocoding tools within ArcGIS, the data of addresses were geo-coded in conjunction with the database of street file for Miami-Dade County. The database containing records representing the geometry of street segments between consecutive intersections, and the address ranges on each side of each segment in Miami-Dade County was obtained from FGDL (Florida Geographic Data Library, 2005). The prior addresses of the homeless were geocoded by finding the appropriate street segment record and estimating a location based on linear interpolation within the address range in the database of street file.

The records of prior residential addresses were then geocoded for each category of the homeless. This procedure created a point feature layer that matches the prior residential addresses for each category of the homeless. Since this study has five sets of homeless categories, the geocoding procedures create ten point-feature layers containing the prior addresses of each category of the homeless. These point-feature layers were then overlaid with a map of census tracts. This overlying procedure will produce a map containing the

geocoded prior addresses of the homeless and census tract group boundaries for each category of the homeless. Then, the geocoded prior addresses of each category of the homeless are counted for each census tract.

The geocoding procedure of this study results in 817 matched addresses and 11 unmatched addresses. The spatial distribution of the 817 matched addresses is shown in **Figure 3.4**. These matched addresses are located in 218 census tracts. In Miami-Dade County, there are 129 census tracts or 37% do not have prior addresses of homeless. Compared with other cities in Culhane, et. al.'s study (1996), this number is higher than that of New York City (22%) but is lower than that of Philadelphia (66%).

With regard to the units of analysis in this study, namely census tract groups, the 817 matched addresses are located in 97 census tract groups. Fourteen census tract groups do not have prior addresses of the homeless. The census tract group that has the most prior addresses of the homeless is census tract group 107 (65 addresses). Other census tract groups having high number of prior addresses of the homeless is census tract group 30, 32 and 108 (45 addresses, 37 addresses, and 32 addresses respectively).

Pertaining to the category of the homeless, the 817 matched prior addresses are distributed differently for each homeless category. The distribution of the matched prior addresses of the homeless by gender, family status, ADM status, chronicity and veteran status can be seen in **Table 3.9**.

Table 3.9.
Distribution of Matched Prior Addresses by Homeless Types

No. Categories of Homeless	Number of Respondent	Percentage
1. <i>Gender (n=817)</i>		
Homeless Men	510	62%
Homeless Women	307	38%
2. <i>Family Status (n=817)</i>		
Homeless Singles	586	72%
Homeless Families	231	28%
3. <i>Occurrence of ADM Problem (n=817)</i>		
Homeless with ADM problem	423	52%
Homeless without ADM problem	394	48%
4. <i>Chronicity (n=817)</i>		
Chronic Homeless	231	28%
Non-chronic Homeless	586	72%
5. <i>Veteran Status (n=817)</i>		
Homeless Veteran	71	9%
Homeless Non-Veteran	746	91%

Figure 3.4: Spatial Distributions of Prior Addresses of the Homeless

6. Description of Research Design

Babbie (2004) asserts that there are three most common and useful purposes of the social research: exploration, description and explanation. Each purpose has different implication for many aspects of research design. This section describes further the purpose of the study and the research design that is employed to meet the purpose of the study.

Cross Sectional Point-in-time Study

This study is an exploratory study that investigates the spatial distribution of residential origins of varying categories of the homeless and factors associated with the rate of residential origins for each type of the homeless. This exploratory study is a cross sectional point-in-time study that examines the spatial distribution of residential origins of the homeless that were captured in a point-in-time homelessness survey in Miami-Dade County on January 27, 2005.

The point-in-time homelessness survey was organized by Miami-Dade Homeless Trust and there were fifty homelessness programs within eighteen agencies that participated in the survey. The participating programs include emergency shelter programs, transitional housing programs, supportive service programs and outreach programs. The survey was conducted by each participating program to their respective clients on January 27, 2005 from 8:00 a.m. to 7:00 p.m.

Purposes and Research Questions

As noted earlier, the purpose of the study is twofold: to seek the spatial distribution of residential origins of varying categories of the homeless and to investigate factors associated with the rate of residential origins for each type of the homeless. This study categorizes homeless people based on gender, family status, veteran status, the occurrence of ADM problem and chronicity. Dozens of studies show that each homeless type has distinctive characteristics. It is very clear that homeless population is not a homogenous population.

This study attempts to investigate new dimension in differentiating homeless population, namely spatial distribution of residential origins of the homeless. The spatial distribution of prior addresses could be different for homeless people of varying types. There has been no such study to explore the spatial distribution of different types of homeless. This study is expected to be the first exploratory study that investigates the spatial distribution of varying categories of the homeless.

The research questions that this study is posing and attempting to answer are as follows:

- Research Question 1: Does the spatial distribution of prior addresses for each type of the homeless differ?
- Research Question 2: What demographic, socioeconomic, and housing factors are associated with the rate of prior addresses for each type of the homeless?

Hypotheses

In order to answer the research question 1, the study hypothesizes that homeless people of varying type will have differential spatial distribution of their prior addresses. This hypothesis leads to the question of how different the spatial distribution of prior addresses

for each type of homeless is. To address such a question, this study used different hypothesis for each homeless categorization, as follows:

- Hypothesis 1.1: Homeless women will report prior addresses that are more widely spread and less concentrated in poor neighborhoods than men.
Among the structural factors of the cause of homelessness, extreme poverty is the most common cause of homelessness (Burt, 1992; Wright, Rubin and Devine, 1998). Poverty that is associated with housing affordability has caused many people to become homeless. The residential origins of the homeless are highly concentrated in poor neighborhoods that are characterized by high proportion of people with extreme poverty. In addition to poverty or economic hardship, there is other important reason of becoming homeless namely domestic violence and family conflict. Domestic violence or family conflict is one of the most common reasons for a women becoming homeless (McClay, et. al., 2003). Using data from the NSHAPC, Burt (2001) reported that homeless women, regardless of their family status, cited domestic violence as one of four top reasons of becoming homeless. On the other hand, domestic violence is not main reasons of becoming homeless for homeless men. Using a sample of 162 homeless adults in the Central Florida area, Zugazuga (2004) indicated that homeless women individuals were more likely than homeless women with children to report histories of domestic violence and sexual violence over the age of eighteen. In a study of homelessness in Ohio, Roth, et. al. found that women were twice as likely as men to be homeless because of family conflict and dissolution (Crook, 1999). In a study of 230 homeless adults in Florida, Morris (1998) indicated that homeless women were more likely than men to cite abuse of victimization as their reason for becoming homeless. Women were also more likely than men to cite divorce/family problems as their reason for becoming homeless. Similarly, Tessler, et. al. (2001) found that interpersonal conflict as main reasons of being homeless is given more by homeless women than homeless men. Domestic violence and family conflict are not always associated with poverty. Those who cited domestic violence and family conflict as their main reason for becoming homeless rather than poverty may originate from neighborhood with less extreme poverty. In other words, homeless women are less likely than homeless men to have prior addresses in neighborhoods with extreme poverty.
- Hypothesis 1.2: Homeless families will report prior addresses that are more widely spread and less concentrated in poor neighborhoods than homeless individuals.
Most of homeless families are not husband-wife pairs. Homeless women with children is a subpopulation that mostly found in homeless families (Bassuk, 1992; Wright, Rubin and Devine, 1993). Morris (1998) indicated that homeless women with children is more likely than homeless single men and homeless single women to cite divorce/family problem as their main reason for becoming homeless. In 2000 the U.S. Conference of Mayors reported that domestic violence as one of primary causes of homeless families (Sherman and Redlener, 2003). Homeless families are more likely than homeless singles to cite family conflict or domestic violence as primary reason of being homeless. In other words, the residential origins of the homeless families may be less concentrated in neighborhoods with extreme poverty than homeless individuals.

- Hypothesis 1.3: Homeless people who report having Alcohol, Drug, and Mental Health problems (ADM) will tend to report prior addresses that are more concentrated in poor neighborhoods than homeless who do not report having ADM problem.

Prevalence rates of substance abuser are higher among males than females. Alcohols are used more frequently by males than females (Winick, 1997). In a study of homeless in a large Boston shelter, Schutt and Garrett (1992) found that homeless women were less likely to have problems with alcohol. Using data from the NSHAPC, Burt (2001) reported that problems with alcohol and drugs were very common among homeless men. By family status, Shinn and Gillespie (1994) indicated a small proportion of homeless persons with ADM problems among homeless families. They asserted that adult family members are less likely to have mental illness or ADM problems than single adults. As described earlier, homeless women and homeless families are less likely than homeless men and homeless singles to have prior addresses in neighborhoods with extreme poverty. Since most homeless without ADM problems are homeless women and homeless families, homeless without ADM problem are less likely than homeless with ADM problems to have prior addresses in neighborhoods with extreme poverty.

- Hypothesis 1.4: Chronically homeless people will tend to report prior addresses more concentrated in poor neighborhoods more than non-chronic homeless people

This study uses the HUD's definition of chronically homeless as "an unaccompanied homeless individuals with a disabling condition who has either been continuously homeless for a year or more, or has had at least four episodes of homelessness in the past three years" (HUD, 2004). Kuhn and Culhane (1998) and Sosin, et. al. (1990) asserted that catastrophic event such as separation, fire, or death of householder is less likely to be cause of homelessness for chronic homeless than non-chronic homeless. Non-chronic homeless is more likely than chronic homeless to originate from neighborhood with less extreme poverty. Sosin, et. al. (1990) asserted that chronically homeless are likely to be older than other non-chronic homeless and suffering from disabilities and substance abuse problems. Chronically homeless have long histories of alcohol and health problems (Baum and Barness, 1993). Chronically homeless are more likely than non-chronic homeless to have ADM problems. As previously explained, homeless with ADM problems are likely to have prior addresses in poor neighborhoods. In other words, chronically homeless are more likely than non-chronic homeless to have prior addresses in neighborhoods with extreme poverty.

- Hypothesis 1.5: Homeless people who are veterans will tend to report prior addresses that are not spatially different from homeless people who are not veterans.

Homeless veterans make up about one-third of the homeless male population and nearly half of them are those who served during Vietnam War (Blau, 1992; HUD User, 2005). Roth (1992) identified that there were similarity between homeless veterans and homeless non-veterans with regard to the causes of homelessness. Both homeless categories cited economic factors as their primary reason for homelessness. Allgood and Warren (2003) identified that homeless veterans and homeless non-veterans had the same duration of homelessness. Referring to the NSHAPC reports and Roth's study,

homeless veterans differs from homeless non-veteran with regard to their age and race. They found median ages of homeless veterans were older than that of homeless non-veteran and proportion of White were higher among homeless veterans than homeless non-veterans. There is no studies showing the spatial distribution of prior addresses of homeless veteran and of homeless non veteran are different.

To better visually comprehend the above hypotheses; I created a map showing the spatial distribution of poor neighborhoods in Miami-Dade County as shown in **Figure 3.5**. The figure shows the density variation of people living below 75% of poverty level. The density was derived from the ratio of the number of persons living below 75% of poverty to the area of census tract in which they live. The people living below 75% of poverty level include those living below 50% of poverty level and those living between 50% and 74% of poverty level.

The figure shows that most census tracts with high density of poor people are highly concentrated in the Northern part of Miami-Dade County. There are few census tracts with high density of poor people located in the Southern part of the county. The figure also shows several census tracts with very high density of poor people located in Miami Beach and Hialeah.

To answer the research question 2, this study hypothesizes that different factors are associated with differential rate of the prior addresses of homeless people. There are three groups of factor used in this study: demographic, socioeconomic, and housing. The specific hypothesis for each group of factor is as follows:

- Hypothesis 2.1: (*Demographic*) The rate of prior addresses of homeless females, homeless families, homeless without ADM and non-chronic homeless will tend to highly concentrate in neighborhoods with at-risk demographic characteristics.

Neighborhoods with at-risk demographic characteristics are those with high proportion of Blacks, high proportion of non high-school graduates, high proportion of female-headed households with young children, and high proportion of subfamilies. Lee, et. al. (2003) asserted that Black encounter the disadvantages because of segregated residential that increase their vulnerability to homelessness. The vulnerability is also worsened by poverty and limited labor market access (Culhane, et. al., 1996). Takahashi (1996) and Early (2005) asserted that female-headed households with young children are at-risk of homelessness. Female-headed household with young children are more likely to be homeless than other types of households. The proportion of subfamilies represents the extent of doubling-up. Millions of homeless people stay off the streets and homeless shelters because they double-up with friends and families. Homeless women and homeless families are more likely than homeless men and homeless singles to double-up with friends and families because they have better social contacts and social affiliation (Brunette and Drake, 1998; Morris, 1998).

- Hypothesis 2.2: (*Socioeconomic*) The rate of prior addresses of homeless males, homeless individuals, homeless with ADM problem and chronically homeless will tend to highly concentrate in poor neighborhoods.

As described in previous section, homeless females, homeless families, homeless without ADM problems and non-chronic homeless are less likely to have prior addresses in neighborhoods with extreme poverty. Family conflicts and domestic violence are among

top reasons of becoming homeless for those homeless categories. Homeless females, homeless families, homeless without ADM problems and non-chronically homeless are less likely than homeless males, homeless singles, homeless with ADM problem, and chronically homeless to cite poverty as primary cause of becoming homeless.

- Hypothesis 2.3: (*Housing*) The rate of prior addresses of homeless males, homeless individuals, homeless with ADM problem and chronically homeless will tend to highly concentrate in neighborhoods with housing problems.

Most scholars clearly assert that housing problem is one of main reasons of homelessness (Burt, 1992; Burt, 2002; Wright, Rubin and Devine, 1998). Housing problem that is associated with poverty is the most important cause of homelessness (Burt, 1992). As described in previous section, homeless females, homeless families, homeless without ADM problems and non-chronic homeless are more likely to cite family conflict and/or domestic violence as main reason of becoming homeless. They have also housing problem before becoming homeless but not as much as homeless males, homeless individuals, homeless with ADM problem and chronically homeless.

Dependent Variables and Independent Variables in the Study

As mentioned earlier, the research question 2 asks of what demographic, socioeconomic, and housing factors are associated with the rate of prior addresses for each type of the homeless. To address such question this study developed dependent variables and independent variables. This section describes in detail the dependent variables and the independent variables used in the study.

Dependent Variables

After having the number of prior addresses of each category of the homeless for each census tract group, then these numbers will be transformed into the location quotient (LQ). The LQ compares the rate of a certain subject of interest for a unit area for a larger area that encompasses it (Bendavid-Val, 1983). Culhane, Lee and Wachter (1996) stated, “the LQ refers to the ratio of the fractional share of the subject of interest at the local level to the same ratio at the regional level” (p. 234). The LQ will have a value more than zero. An area with an LQ value of more than 1.00 means has a higher concentration of the subject interest relative to the other areas in the regional level. In this study, census tract groups represent unit area and Miami-Dade County represents regional level.

This study will use the LQ to identify the proportionate distribution of prior addresses of the homeless by the number of population in a given census tract group with those in Miami-Dade County. The LQ is used to identify census tracts that contain a higher percentage share of the residential origins of each category of the homeless. In this study, let h_{ix} and n_x denote the number of prior addresses of the homeless category i and the total population of the census tract group x , respectively. Similarly, let h_i and n be the number of the prior addresses of the homeless category i and the total population of Miami-Dade County, respectively. The location quotient for the census tract group x is defined as

$$LQ_x = \frac{\frac{h_{ix}}{n_x}}{\frac{h_i}{n}}$$

Figure 3.5: Density of Persons below 75% of Poverty Level

The LQs of each category of the homeless by census tract group are the dependent variables of this study. The LQs represent the spatial distribution of each category of the homeless by census tract group in Miami-Dade County. All of the LQs were then examined for normality to meet the assumptions of the regression models. As found in New York City and Philadelphia (Culhane, et. al., 1996), the distributions of prior addresses of the homeless in Miami-Dade County are not normally distributed. All homeless categories have positively skewed LQs.

In order to meet the assumption of normality, all of the LQs were log transformed. These transformations are formulated as follows:

$$\text{LN}j = \text{LOG} (\text{LQ}j + 0.1)$$

$\text{Log} (\text{LQ}j + 0.1)$ denotes the logarithm of $(\text{LQ}j + 0.1)$, which takes the place of zero among power transformation. With regard to the homeless category, $j=\text{MEN}$ for homeless men; $j=\text{WOMEN}$ for homeless women; $j=\text{FAMILY}$ for homeless family; $j=\text{SINGLE}$ for homeless individual; $j=\text{ADM}$ for homeless with ADM problem; $j=\text{NONADM}$ for homeless without ADM problem; $j=\text{CHRONIC}$ for chronic homeless; $j=\text{NONCHRONIC}$ for non-chronic homeless; $j=\text{VET}$ for homeless veteran; $j=\text{NONVET}$ for homeless non-veteran. These transformations can reduce the skews significantly as shown in **Appendix D**. The models for homeless veteran and homeless non-veteran will be examined if the hypotheses of their spatial distributions are rejected. In other words, the homeless veteran and homeless non-veteran have differential spatial distribution of their prior addresses.

Independent Variables

The independent variables of this study consist of three groups including demographic composition, socioeconomic and housing factors. These variables are developed from the works of Culhane, et.al. (1996) and Wong and Hillier (2001). Their studies have identified the variables associated with the risk of homelessness at the census tract level.

Culhane, et. al.'s study (1996) and Wong and Hillier (2001) used 24 and 14 independent variables, respectively. This study combines and modifies these two studies and adds two new variables, namely proportion of households without cars and proportion of household below poverty level without telephone. The independent variables of this study compared with the two previous studies on prior addresses of the homeless are listed in **Table 3. 10**. These variables were obtained from the U.S. 2000 Census data.

Table 3. 10.
Independent Variables Used in the Studies of Prior Addresses of the Homeless

No. Independent Variables	Culhane, et.al (1996)	Wong& Hillier (2001)	Present Study (2006)
<i>Demographic Composition</i>			
1. Proportion of Blacks	Yes	Yes	Yes
2. Proportion of Hispanic	Yes	Yes	Yes
3. Proportion of persons under 18	Yes	No	No
4. Proportion of persons over 64	Yes	No	No
5. Proportion of persons without high school diploma	Yes	No	Yes
6. Proportion of female-headed household	Yes	No	No
7. Proportion of female-headed households with children under 6	Yes	Yes	Yes
8. Proportion of families with householders over 64 years old	Yes	No	No
9. Proportion of subfamilies	Yes	Yes	Yes
10. Proportion of one-person household	No	Yes	Yes
11. Proportion of noninstitutionalized persons in group quarters	Yes	No	No
12. Proportion of the foreign-born who immigrated after 1980	Yes	No	No
13. Proportion of households recently moved (1999-2000)	No	Yes	No
<i>Socioeconomic</i>			
14. Proportion of unemployment	Yes	Yes	Yes
15. Proportion of households with public assistance income	Yes	Yes	Yes
16. Median household income	Yes	No	Yes
17. Proportion of persons below 75% of poverty level	Yes	Yes	Yes
18. Proportion of persons not in labor force	Yes	No	No
19. Proportion of persons working under 18 hours per week	Yes	No	No
20. Proportion of households without cars	No	No	Yes
21. Proportion of households below poverty level without telephone	No	No	Yes
<i>Housing</i>			
22. Median property value	Yes	No	No
23. Median contract rent	Yes	No	Yes
24. Proportion of rental units	Yes	Yes	Yes
25. Proportion of median contract rent to median household income	Yes	Yes	Yes
26. Proportion of housing units with more than two persons / room	Yes	Yes	No
27. Proportion of rental units with more than two persons / room	No	No	Yes
28. Proportion of vacant units	Yes	Yes	No
29. Proportion of boarded-up housing units	Yes	Yes	No
Total Independent Variables	24	14	16

Demographic Composition Variables: The point-in-time survey and the homeless census conducted on January 27, 2005 in Miami-Dade County demonstrate clearly the overrepresentation of Blacks homeless in Miami-Dade County. Culhane, et. al. (1996) identified that areas with high concentrations of Blacks are strongly and positively related to the rate of the incidence of homelessness. Altshuler, et. al. (1999) assert that poverty rate for Blacks in metropolitan areas was 28 percent compared with 8 percent for non-Hispanic

whites. Per capita income of Blacks was roughly half that of non-Hispanic whites and unemployment rates were nearly 3 times greater for Blacks than for non-Hispanic whites.

The variable of proportion of Blacks is included in the study and is derived from the ratio of the number of people who self-identified themselves as one race of African American to the total population. In the 2000 Census, people may have chosen to provide two or more races and there are many possible combinations of African American with other races. In this study, the other combinations of African American are not used. This variable was obtained from SF-1 Table P3.

Hispanic and Black encounter the disadvantages because of segregated residential that increase their vulnerability to homelessness (Lee, et. al., 2003). In addition to residential segregation, Culhane, et. al. (1996) argue that Hispanics may also be vulnerable to homelessness because of poverty and limited labor market access. Similarly with Blacks, poverty rate for Hispanics in metropolitan areas was high (25%) and their per capita income was roughly half that of non-Hispanic whites. Slightly worse than Black, the unemployment rates for Hispanic were nearly 3.5 times greater than for non-Hispanic whites (Altshuler, 1999).

The variable of proportion of Hispanic persons is included in the study and is defined as the ratio of the number of people whom Hispanic origin to the total population. In Census 2000, the questions were to emphasize the distinct concepts of the Hispanic origins and the race. The sequence of the questions for Census 2000 differs from that in 1990. In Census 2000, the Hispanic origin question preceded the race question and there was an instruction that respondents should answer both the Hispanic origin and the race questions. Hispanic persons are defined as people whose origins are from Spain, the Spanish-speaking countries of Central or South America, the Dominican Republic, or people identifying themselves generally as Spanish, Spanish-American, Hispanic, Hispano, and Latino. This variable was obtained from SF-1 Table P4.

Four homelessness studies conducted in Chicago, New York, Los Angeles and Ohio indicated that the risk of homelessness is higher in non-high graduates than in high school graduates (Susser, et. al., 1993). Caton, et. al. (2000) indicated that education attainment of never homeless and that of homeless were significantly different.

The variable of proportion of persons without high school diploma is included in the study and is derived from the ratio of the number of population aged 18 years or over whose the highest educational attainment are 9th to 12th grade without diploma or less to the total population. This variable was obtained from SF-3 Table PCT25. This variable is composed of the educational attainment of less than 9th grade and of 9th to 12th grade without diploma.

Homeless family is the fastest growing category of the homeless population (Blau, 1992). Most of homeless families are single women with children (Bassuk, 1992). Takahashi (1996) and Early (2005) clearly indicated that female-headed households with young children are at-risk of homelessness. Culhane, et. al. (1996) identified that areas with high concentrations of female-headed households with young children are strongly and positively related to the rate of the incidence of homelessness.

The variable of female-headed households with young children is used in the study is derived from the ratio of the number of households headed by female with the presence of children aged less than six years to the total number of households. The children may include their own children and other children who are related to the householder. This variable was obtained from SF-1 Table P35.

Many studies on homelessness show that most homeless people do not turn to shelters and streets until they have exhausted their social networks. Rossi (1989) indicated

that millions of homeless people stay off the streets and homeless shelters because they double up with their friends and their families. Using census tracts data and the prior addresses of homeless families entering emergency shelters in New York City and Philadelphia, Culhane, et. al. (1996) found that homeless families come from areas with more subfamilies.

According to Census 2000, a families may includes a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. A family is always either a household or a part of a household. Yet, a household may not a family if it contains either a group of unrelated people or one person living alone. The doubled-up homeless population can be identified in the household with subfamilies.

The variable of proportion subfamilies is used in the study and is derived from the ratio of the number of households with one or more subfamilies to the total number of households. According to Census 2000, a subfamily may be either a couple with or without own children under 18 years old who are never-married or a single parent with one or more own never-married children under 18 years old. They live in a household where the householder is their family. This variable was obtained from SF-3 Table PCT6.

Many studies show that homeless single makes up about three-quarter of total homeless population (Burt, 2001). In addition to other individual factors, the lack of protection offered by a second wage earner when crises occur leads the one-person households to be at-risk of homelessness (Lee, et. al., 2003). One-person households also affect the rate of homelessness by tightening the affordable housing market due to their rapidly growing number.

The variable of proportion of one-person household is used in the study and is derived from the ratio of the number of household containing only one person either female householder or male householder to the total number of households. This variable was obtained from SF-1 Table P18.

This study excluded the variables concerning age of persons or age of householders because there were very few studies indicating age as significant predictor of homelessness. Early (1998) used age of the head of the household as one of variables in his study and found that age was insignificant predictor of homelessness.

Socioeconomic Variables: Most studies on homelessness clearly indicated that unemployment, poverty and homelessness are highly correlated. The devastating unemployment and increasing competition among low-skilled labors put more people in poverty. Many studies on homelessness revealed that unemployment was often cited as one of important reasons of becoming homeless (Burt, 1992; Roth, 1992). Persistent poverty is one of structural factors of the cause of homelessness (Burt, 1992). Segment of population with the highest poverty rates are most likely to become homeless.

The variable of proportion of unemployment is used in the study and is derived from the ratio of the number of population aged 16 years old and over who were unemployed to the total population aged 16 years old and over. This unemployment includes unemployed people classified as members of the labor force but excludes people who are not classified as members of the labor force. This variable was obtained from SF-3 Table P43.

The variable of proportion of persons below 75% of poverty level is used in the study to represent the extent of poverty in the neighborhoods. This variable is derived from the ratio of the number of persons living below 75% of poverty level to the total population. According to Census 2000, poverty status was determined for all people except such people as institutionalized people, people in military group quarters, people in college dormitories,

and unrelated individuals under 15 years old. They were excluded when calculating poverty rates. These people are considered neither "poor" nor "nonpoor." This variable was obtained from SF-3 Table P88. This variable includes persons who live below 50% of poverty line and 50% to 74% of poverty line.

The variable of proportion of households with public assistance income is used in the study because this variable also represents the extent of poverty in the neighborhoods. Households that are eligible for the public assistance income are those who earn income much less than median household income. This variable is derived from the ratio of the number of households with public assistance income to the total number of households. According to Census 2000, public assistance income includes general assistance and Temporary Assistance to Needy Families (TANF). This excludes Supplemental Security Income (SSI). This variable was obtained from SF-3 Table P64.

The variable of median household income is used in the study and is obtained from SF-3 Table P77. There were eight types of income reported in Census 2000 including wage or salary income, self-employment income, interest, dividends, or net rental income, social security income, Supplemental Security Income (SSI), public assistance income, retirement income, and all other income.

Transportation mismatch that is defined as the lack of access to car ownership is one of important predictor of generating poor neighborhoods (Ong and Miller, 2005). The study that was conducted in Los Angeles found that the lack of car ownership is associated with the increases in the unemployment rate in the neighborhoods. The variable of proportion of household without cars is used in the study and is derived from the ratio of the total occupied housing units without car ownership to the total occupied housing units. This variable was obtained from SF-3.

Wallace and Bassuk (1991) argued that social network plays an important role in preventing homelessness. People with social networks will exhaust their social networks with their family, friends and coworkers before ending up to shelters or streets. Families, friends and coworkers surround them. People with social networks can mobilize some resources of social networks to prevent becoming homeless. On the contrary, homeless people are those who are more likely to have lack of communication with their family and friends than people with social networks (Bassuk, et. al., 1997).

The variable of proportion of households below poverty level without telephone is used in this study to represent the extent of social networks and communication in the poor people. This variable is derived from the ratio of the total occupied housing units below poverty level without telephone to the total occupied housing units. This variable is intended to identify the social network among the poor. This variable was obtained from SF-3 Table HCT27.

Housing Variables: Most scholars agreed that homelessness is a housing problem. The increasing number of homelessness is associated with the shortage of affordable housing. Specifically, the decline of affordable rental housing units for poor people has led to the increase of homeless people (Rossi, 1989). Homelessness is rooted in the rental affordability gap. The gap was caused by a combination of rising housing costs and decreasing incomes of renter households (Dolbeare, 1996). Before ending up in shelters or street, most homeless people were renter households.

In order to capture the extent of rental housing problems in relation to the homelessness, this study uses four rental-housing related variables. These variables are median contract rent, proportion of rental units, proportion of median contract rent to

median household income and proportion of rental units with more than two persons per room.

The variable of median contract rent is derived from the median monthly rent in dollars for all renter-occupied housing units and renter-vacant housing units. According to Census 2000, contract rent is the monthly rent agreed to or contracted for, regardless of any furnishings, utilities, or services that may be included. For vacant units, it is the monthly rent asked for the rental unit at the time of enumeration. This variable was obtained from SF-3 Table H85.

The variable of proportion of rental units is derived from the ratio of the total number of rental units to the total number of housing units. The rental units include renter-occupied housing units, vacant housing units for rent, and rented or sold but not occupied housing units. This variable was obtained from SF-1 Table H3, H4 and H5.

The variable of proportion median contract rent to median household income was obtained from SF-3 Table H70. According to Census 2000, contract rent as a percentage of household income is a ratio of monthly gross rent to monthly household income or to total household income divided by 12. These computations were based on the household income in 1999. This variable is intended to provide a measure of housing affordability particularly for rental housing units. The conventional public housing indicator of housing affordability in the United States is the percentage of income spent on housing. Housing expenditures that exceed 30 percent of household income have historically been viewed as an indicator of a housing affordability problem.

The variable of proportion of rental units with more than two persons per room is derived from the ratio of the number of housing units with more than two occupants per room to the total number of occupied housing units. Census 2000 provides a measure of occupants per room that was computed by dividing occupants in housing units by the aggregate number of rooms. The figures show the number of occupied housing units having the specified ratio of people per room. This variable is intended to provide a measure of overcrowding in rental housing units. This variable was obtained from SF-1 Table H4 and H5.

The study excluded the variable of proportion of vacancy units because some scholars argued that vacancy rates are not associated with the increase of homelessness. Using data from the 1990 Census, Early and Olsen (2002) estimated the effect on the rate of homelessness of various potentially important determinants including vacancy rates. Their result suggested that vacancy rates were not significant predictor of homelessness. Similarly, Early (2004) used a combination data of the Survey of Income and Program Participation and the National Survey of Homeless Assistance Providers and Clients to investigate the determinants of homelessness. His study suggested that vacancy rate was not important predictor of homelessness. In addition, Jencks (1994) used the data of American Housing Survey during period of 1973 and 1989 and concluded that vacancy rate was not associated with the increase of homelessness at that period of time.

The variable of ratio of boarded-up housing units that was used in two previous studies on prior addresses of the homeless is intended to represent the neighborhood quality. The neighborhood with high proportion of boarded-up housing units can be considered as low-quality neighborhood. However, there is no such information in Census 2000 so that this study did not use this variable.

Conceptual Model

The conceptual model for addressing the research question 2 of what demographic, socioeconomic, and housing factors are associated with the rate of prior addresses for each type of the homeless is presented in **Figure 3.6**. The figure also shows the independent variables and dependent variables used in the study.

Figure 3.6: Conceptual Model

7. Methods of Analysis used in this Study

Spatial Distribution Statistics

Mean Center

The mean center is simply the mean of the latitude and longitude coordinates. It is also called a center of gravity. It is a pivot when all points are balanced on a plane (Levine, 2004). The mean is formulated as follows:

$$\bar{X} = \sum_{i=1}^N \frac{X_i}{N}$$
$$\bar{Y} = \sum_{i=1}^N \frac{Y_i}{N}$$

Where X_i is latitude coordinates of prior addresses of the homeless and Y_i is longitude coordinates of prior addresses of the homeless and N is the total number of prior addresses of the homeless.

Standard Deviation Ellipse

The standard deviation ellipse is a measure of the dispersion and the direction of that dispersion. It defines the standard deviation along the X and Y axes. In this study, the standard deviation ellipse is a measure of dispersion of the prior addresses of the homeless around the mean center in two dimensions. This measure is derived from the bivariate distribution and is formulated as follows (Levine, 2004):

$$Distribution = \sqrt{\frac{(\sigma^2_x + \sigma^2_y)}{2}}$$

The two standard deviations in the X and Y directions are orthogonal to each other and define an ellipse. Two standard deviations are calculated: one along the transformed X-axis and one along the transformed Y-axis. These standard deviations are formulated as follows (Levine, 2004):

$$S_x = \text{SQRT} \left[2 \cdot \frac{\sum \{(X_i - \bar{X}) \cos \theta - \sum (Y_i - \bar{Y}) \sin \theta\}^2}{N-2} \right]$$
$$S_y = \text{SQRT} \left[2 \cdot \frac{\sum \{(X_i - \bar{X}) \sin \theta + \sum (Y_i - \bar{Y}) \cos \theta\}^2}{N-2} \right]$$

This study uses 1X standard deviation ellipse which captures approximate 68% of the case if data are normally distributed (Levine, 2004).

Methods for Testing the Spatial Differences between Two Distributions

Levine (2004) provides methods for testing the spatial differences between two distributions. Differences in the mean center of two samples can be tested by the t-test of the difference between means. The first test is a test for equality of variance and formulated as follows:

$$F_X = \frac{S_{XA}^2}{S_{XB}^2}$$

$$F_Y = \frac{S_{YA}^2}{S_{YB}^2}$$

Then, if the variance are equal, the a t-test for two group means with unknown but equal variance is used and formulated as follows:

$$S_{XAB} = \text{SQRT} \left[\frac{\sum_{i=1}^{N(A)} (X_{Ai} - \bar{X}_A)^2 + \sum_{i=1}^{N(B)} (X_{Bi} - \bar{X}_B)^2}{(N_A + N_B - 2)} \right]$$

$$S_{YAB} = \text{SQRT} \left[\frac{\sum_{i=1}^{N(A)} (Y_{Ai} - \bar{Y}_A)^2 + \sum_{i=1}^{N(B)} (Y_{Bi} - \bar{Y}_B)^2}{(N_A + N_B - 2)} \right]$$

Otherwise, t-test for two group means with unknown and unequal variance is used and formulated as follows:

$$t_X = \frac{(\bar{X}_A - \bar{X}_B) - (\mu_{XA} - \mu_{XB})}{\text{SQRT} \left\{ \left[\frac{S_{XA}^2}{N_A} + \frac{S_{XB}^2}{N_B} \right] \right\}}$$

$$t_Y = \frac{(\bar{Y}_A - \bar{Y}_B) - (\mu_{YA} - \mu_{YB})}{\text{SQRT} \left\{ \left[\frac{S_{YA}^2}{N_A} + \frac{S_{YB}^2}{N_B} \right] \right\}}$$

The method for testing the differences in the standard deviations along the transformed X and Y axes is a F-test for equality of variance and formulated as follows:

$$F_{sx} = \frac{S_{x1}^2}{S_{x2}^2}$$

$$F_{sy} = \frac{S_{y1}^2}{S_{y2}^2}$$

Where S_X is variance of the latitude coordinates and S_Y is variance of the longitude coordinates. 1 and 2 represents homeless types, i.e. 1 represents homeless men and 2 represents homeless women. This test is done with the larger of the variances in the numerator.

Hot-spot Analysis

Neither dot mapping nor spatial distribution statistics is able to provide picture of concentration of the prior addresses of the homeless. They can not reveal density variation at small area level. This study utilizes a density-based spatial clustering technique called hot-spot analysis to analyze the concentration and density variation of the prior addresses of the homeless. This technique is able to analyze the spatial concentration patterns of the prior addresses of the homeless.

The first step in hot-spot analysis is to use the grid technique to divide a study area into small grid cells of equal size. The density of prior addresses of the homeless is then estimated. This study uses the density search algorithm of Single Kernel Density method to estimate the density of prior addresses of the homeless.

Kernel density estimation places a set of grid cells of equal size over prior addresses of the homeless, evaluates the distance from the point to a reference location based on a mathematical function and sums the value of all the surfaces for that reference location. This procedure is repeated until the calculations are completed for all of the cells (Levine, 2004).

Regression Analysis

Regression Model

Regression analysis is one of the most popular statistical methods in the social sciences. This method is to determine the specific function relating explanatory variables or independent variables and response variable or dependent variable (Berry and Feldman, 1985; Hamilton, 1992). One of the purposes of this study is to identify demographic, socioeconomic, and housing factors that are associated with the rate of prior addresses for each type of the homeless. This study hypothesizes that different demographic, socioeconomic, and housing factors are associated with differential rate of the prior addresses of homeless people

Adopting a model developed by Culhane, et. al. (1996), the regression model in this study can be denoted as follows:

$$Y_{ij} = a + b(X_{1ij}) + c(X_{2ij}) + d(X_{3ij}) + \varepsilon_{ij}$$

Where Y_{ij} is the rate of prior addresses of homeless category j in census tract group i ; X_{1ij} is the set of demographic variables in tract i for homeless category j ; X_{2ij} is the set of socioeconomic variables in tract group i for homeless category j ; X_{3ij} is the set of housing variables in tract group i for homeless category j ; a is intercept; b , c , and d are sets of the coefficients corresponding to the sets of the independent variables, X_1 , X_2 , and X_3 , respectively; and ε_{ij} is the errors in track i for homeless category

With regard to the homeless category, $j=1$ for homeless men; $j=2$ for homeless women; $j=3$ for homeless family; $j=4$ for homeless individual; $j=5$ for homeless with ADM problem; $j=6$ for homeless without ADM problem; $j=7$ for chronic homeless; $j=8$ for non-chronic homeless; $j=9$ for homeless veteran; $j=10$ for homeless non-veteran.

Regression Assumptions

Regression analysis requires certain assumptions that guide decisions at every step from model specification to interpretation of results (Hamilton, 1992). The necessary

conditions in the regression model are as follows (Hamilton, 1992; Berry, 1993; Berry and Feldman, 1985):

- (1). All independent variables (X) are quantitative or dichotomous. We could theoretically obtain many random samples, each with the same X values but different Y_i because of different ε_i values. The dependent variables are quantitative and continuous.
- (2). The mean value of the error term is zero. $E[\varepsilon_i] = 0$ for all i .
Both assumptions 1 and 2 ensure independence of errors and X variables.
- (3). All independent variables have nonzero variance.
- (4). Errors have constant variance (homoscedasticity)
- (5). Errors are normally distributed for all i .
- (6). There is no perfect multicollinearity.
- (7). Error terms for different observations are uncorrelated. Errors are uncorrelated with each other or no autocorrelation.

Multicollinearity exists when two or more independent variables are so highly correlated that an apparently large effect is not statistically significant. Regression model assumes the absence of perfect multicollinearity. Berry and Feldman (1985) defined perfect multicollinearity as “one of the independent variables in a regression equation is perfectly related to one or more of the other independent variables in the equation. Alternatively, the situation in which there is some independent variable X_i that when regressed on the other independent variables in the model yields an R^2 of precisely 1.00” (p. 37-38).

Wong and Hillier (2001) identified high multicollinearity in their model and they used principal components analysis to reduce the number of factors that were used in the analysis. The principal components analysis reduced the number of indicators in their study from fourteen factors to three factors. The three factors including so-called distress factor, instability factor, and Hispanic-overcrowded factor explained 42.8%, 21.8% and 12.9% of the variance in the model respectively. The use of principal components analysis in their study resulted in three uncorrelated factors.

The last test on the independent variables to satisfy the assumption of regression is to identify the existence of spatial autocorrelation. The discussion on this matter will be further described in the following section about spatial regression. This method is to address the existence of autocorrelation due to spatial effects in regression model.

Spatial Regression

In a seminal article on spatial regression, Anselin and Griffith (1988) attempted to address the issue of the extent to which spatial effects matter in regression analysis. They argue that the nature of space has effects on regression analysis in two ways: spatial dependence and spatial heterogeneity. Ignoring the effect of spatial dependence will lead to the biased estimation of error variance, t test significance levels, and R^2 . Ignoring the aspect of spatial heterogeneity will lead to biased parameter estimates, misleading significant levels, and suboptimal forecast.

They note that spatial dependence and spatial heterogeneity interact each other and can result in misleading impressions. Anselin and Griffith (1988) concluded that “ignoring spatial effects in applied regression analysis may lead to serious errors in the interpretation of

familiar regression diagnostics and misspecification tests” (p. 29). If the nature of spatial operates and is not accounted for, inference will be statistically inaccurate and estimates of the effects of independent variables may be biased (Baller, et. al, 2001).

Dubin (1998) asserted “regression error terms are likely to be spatially autocorrelated in any situation in which location matters” (p. 304). The precision of the estimates in a regression model can be improved by taking spatial autocorrelation into account. Anselin and Bera (1998) defined spatial autocorrelation as “the coincidence of value similarity with locational similarity” (p. 241). Spatial autocorrelation is likely to exist in any case in which location matters.

The concept of spatial autocorrelation is related to the Tobler’s First Law of Geography stating, “everything is related to everything else, but near things are more related than distant things” (Anselin and Bera, 1998). It is said to be spatially autocorrelated if there is any systematic pattern in the spatial distribution of a variable. This is positive spatial autocorrelation if neighboring areas are more alike. On the contrary, negative spatial autocorrelation describes patterns in which neighboring areas have dissimilar values.

Baller, et. al. (2001) described two primary types of spatial autocorrelation: spatial error and spatial lag. Spatial error refers to correlation across space in the error term. The latter explains that the dependent variable in area i is affected by the independent variables in area i as well as those in area j . **Figure 3.7** illustrates spatial error and spatial lag.

Source: Baller, et. al., 2001: 564)

Figure 3.7.
Types of Spatial Autocorrelation

Dubin (1998) noted that housing prices exemplify the presence of spatial autocorrelation. The location of the house affects its selling price. The locations factors are then called neighborhood effects. Any error in measuring neighborhood effects will cause their error terms to be correlated (Dubin, 1998).

The location and the nature of spatial and location matter in this study. A value observed at a census tract groups may depend on the values observed at neighboring census tract groups. The spatial autocorrelation is present so that the ordinary least square (OLS) regression model may not be suitable for this study. The assumption of independent observations of the OLS regression model is violated and it leads to biased estimates of the OLS parameters and their significance levels.

This study uses spatial regression to correct the estimates of the OLS parameters. In order to develop the spatial regression model, this study created a spatial adjacency matrix

W . This matrix is to quantify the nearness of census tract groups in Miami-Dade County. The spatial adjacency matrix W expresses spatial proximity or potential interaction between census tract groups. The spatial adjacency matrix W was created by determining the latitude and longitude coordinates of the centroid of the census tract groups. The coordinates of the centroid of the census tract groups were easily determined by using the ArcGIS software. The matrix was then taken into account in the spatial regression model that was run in S-PLUS software.

CHAPTER FOUR

SPATIAL DISTRIBUTION OF PRIOR ADDRESSES OF THE HOMELESS

One of the research questions of this study is whether the spatial distribution of prior addresses for each type of the homeless differs. This study hypothesizes that homeless people of varying types will have differential spatial distribution of their prior addresses. As noted earlier this study categorizes the homeless by gender, family status, ADM status, chronicity and veteran status. This chapter presents the findings of the spatial analyses of the distribution of prior addresses of the homeless by those five categorizations.

1. Homeless Men vs. Homeless Women

This study hypothesizes that homeless women will report prior addresses that are more widely spread and less concentrated in poor neighborhoods than men. As shown in **Figure 3.5**, most census tract groups with high density of poor people are highly concentrated in the Northern part of Miami-Dade County. There are few census tracts with high density of poor people located in the Southern part of the county.

The prior addresses of homeless men are hypothesized to be more highly concentrated in the Northern part of Miami-Dade County than in the Southern part of the county. On the other hand, the prior addresses of homeless women are hypothesized to be more widely spread and less concentrated in the Northern part of the county.

Distribution by Census Tract Groups and Spatial Statistics

As noted earlier this study has 817 matched-addresses in Miami-Dade County consisting of 510 prior addresses of homeless men and 307 prior addresses of homeless women. The detailed distribution of these addresses by census tract groups is presented in **Appendix E**. This study indicates there are 74 census tract groups having prior addresses of homeless women. On the other hand, prior addresses of homeless men are distributed in more census tract groups (93 census tract groups).

Nearly twelve percent of prior addresses of homeless women are located in one census tract group, namely census tract group 107. For homeless men, the prior addresses are relatively distributed more evenly among census tract groups. Census tract group having the most prior addresses of homeless men is census tract group 30 (6.9 percent of total prior addresses of homeless men).

The spatial distributions of matched prior addresses of homeless men and homeless women are shown in **Figure 4.1** and **Figure 4.2** respectively. The dot mappings as shown in both figures reveal true locations of prior addresses of the homeless. However, dots at same address overlap and hide high concentration areas. The overlapping of same addresses or neighboring addresses in these maps complicate the analyses of these two maps.

Dot mapping is simply to show spatial patterns graphically (Wang and Varady, 2005). Further spatial analysis can be performed by other methods such as spatial statistics and hot spot analysis. For the purpose of this study, spatial distribution statistics are used to compare and contrast the spatial distribution of prior addresses of varying categories of the homeless. Two spatial distribution statistics used in this study include mean center and standard deviational ellipse.

The spatial distribution statistics of homeless men and homeless women is presented in **Figure 4.3**. The figure shows the mean centers and standard deviational ellipses of the homeless men and the homeless women. The mean center of homeless men is located approximately at SW 24th Street and Granada Blvd Miami. The latitude and longitude coordinates of the mean center of homeless men are -80.268812 and 25.758811 respectively. Meanwhile, the mean center of homeless women is about three miles Southwest away of the mean center of homeless men. The latitude and longitude coordinates of the mean center of homeless women are -80.300884 and 25.719155 . This fact indicates that in the North parts and the East parts of Miami-Dade County contain more prior addresses of homeless men than those of homeless women. The standard deviational ellipses of homeless men and homeless women indicate that the prior addresses of homeless women are more equally distributed between the Northern part and the Southern parts of the study area than those of homeless men. More prior addresses of homeless men are located in the Northern part than in the Southern part of the study area.

The findings support for the hypothesis that the prior addresses of homeless men are highly concentrated in poor neighborhoods which are located in the Northern parts of the county and the prior addresses of homeless women are more widely spread and equally distributed in the Northern parts and the Southern parts of the county.

Statistical Tests for Differences

The locations of the mean centers of homeless men and homeless women are different. Similarly, the standard deviational ellipses of homeless men and homeless women look different. Are these differences statistically significant or not? To address such question, I used a protocol developed by Dr. Ned Levine for supporting his spatial statistics software of Crimestat.

To test statistical difference between the mean centers of homeless men and homeless women, first I conducted the F-test for testing the equality of variances of both the latitude and longitude coordinates. The F-test of equality of variances for latitude coordinates has a value of 1.148. The F-test of equality of variance for longitude coordinates results in value of 1.382 with $p \text{ value} \leq .01$. The differences in the variances for the latitude coordinates are insignificant while that for the longitude coordinates are significant. Consequently, the t-test for a difference in means with unequal variances was used.

The t-test of the means differences for the latitude coordinates has a value of 3.072 with $p \text{ value} \leq .005$. The t-test for the longitude coordinates has a value of 3.798 with $p \text{ value} \leq .005$. The results suggest that the differences in the mean centers are highly significant. Prior addresses of homeless men have a different mean or center of gravity than prior addresses of homeless women in Miami-Dade County.

To test statistical differences between standard deviational ellipses of homeless men and homeless women, I used F-test for testing the equality of variance of the standard deviations along the transformed X axes and variance of the standard deviations along the transformed Y axes. The standard deviation along the transformed X axes for homeless men is 8.73257 miles and that for homeless women is 3.84304 miles. The standard deviation along the transformed Y axes for homeless men is 8.73257 miles and that for homeless women is 3.84304 miles.

The F-test of equality of variances for the standard deviation along the transformed X axes has a value of 1.3594 with $p \text{ value} \leq .01$. Meanwhile, the F-test of equality of variance for the standard deviation along the transformed Y axes has a value of 1.2908 with $p \text{ value} \leq .05$. The results suggest that the standard deviational ellipses of prior addresses of

homeless men and homeless women are statistically different at the p value $\leq .01$ level for transformed X axes and at the p value $\leq .05$ level for transformed Y axes.

The results of the statistical tests for differences in mean centers and standard deviational ellipses of the prior addresses of homeless women and homeless men is presented in **Table 4.1**. The results of the statistical tests test for both mean center and standard deviational ellipse suggest that the distribution of prior addresses of homeless men and homeless women are statistically significant, at least at the p value $\leq .05$ level.

Table 4.1.
The Statistical Tests for Differences in Mean Centers and Standard Deviational Ellipses of the Prior Addresses of Homeless Women and Homeless Men

	Axis	Value	Significance Level
Mean Centers	X	3.072	$p \leq .005$
	Y	3.798	$p \leq .005$
Standard Deviational Ellipse	X	1.3594	$p \leq .01$
	Y	1.2908	$p \leq .05$

Concentration and Density Variation

Using a density-based spatial clustering technique called hot-spot analysis, this study is able to compare and contrast the spatial concentration patterns of the prior addresses of homeless men and homeless women. The concentrations and density variations of the prior addresses of homeless men and homeless women are presented in **Figure 4.4** and **Figure 4.5**.

The figures show the differences in the concentration and density of the prior addresses between homeless men and homeless women. The prior addresses of the homeless women are distributed more equally than homeless men across the study area. The prior addresses of homeless men were more concentrated in the Northern part than in the Southern part of the area study. On the other hand, the concentrations of the prior addresses of homeless women in the Southern part and in the Northern part are relatively equal.

The highest density of the prior addresses, called hot spots of homeless men and homeless women are located in several small areas in the downtown of Miami and Homestead. The hot spots of homeless men are more plentiful and larger than those of homeless women. The figures also show the clusters with lower level of prior addresses density, called secondary hot spots. Both homeless men and homeless women have one secondary hot spot in Perrine and North Miami. In Miami Beach there are two secondary hot spots of homeless men and none of homeless women. Homeless men also have concentration of prior addresses located in Sweetwater.

Figure 4.1: Dot Mapping of Prior Addresses of Homeless Men

Figure 4.2: Dot Mapping of Prior Addresses of Homeless Women

Figure 4.3: Spatial Distribution Statistics of Homeless Men and Homeless Women

Figure 4.4: Prior Addresses Density of Homeless Men

Figure 4.5: Prior Addresses Density of Homeless Women

2. Homeless Families vs. Homeless Individuals

As indicated in the chapter of methodology, this study hypothesizes that homeless families have prior addresses that are more widely spread and less concentrated in poor neighborhoods than homeless individuals. Similarly with homeless men, the prior addresses of homeless individuals are hypothesized to be highly concentrated in the Northern part of Miami-Dade County in which census tract groups with high density of poor people are highly concentrated. On the other hand, the prior addresses of homeless families are hypothesized to be less concentrated in the Northern part and more widely spread in other parts of the county.

Distribution by Census Tract Groups and Spatial Statistics

This study has 586 matched prior addresses of homeless individuals and 231 matched prior addresses of homeless families. The matched prior addresses of homeless individuals were located in 95 census tract groups. Meanwhile, the prior addresses of homeless families were only located in 62 census tract groups.

Similar with homeless women, a high portion of the prior addresses of homeless family was located in one census tract groups. Census tract group 107 has 16.5 percent of total prior addresses of homeless family. On the contrary, the distributions of prior addresses of homeless individuals are more even among the census tract groups. Census track groups having the most prior addresses of homeless individuals is census tract group 30 (6.8 percent of total prior addresses of homeless individuals). **Figure 4.6** and **Figure 4.7** show the spatial distributions of matched prior addresses of homeless family and those of homeless individuals respectively.

Figure 4.8 shows the spatial distribution statistics of homeless family and homeless individuals. The mean center of homeless individuals is approximately located at SW 8 Street and SW 42nd Ave Miami and is about six miles Northwest away of the mean center of homeless family. The latitude and longitude coordinates of the mean center of homeless individuals are -80.264945 and 25.763004 . Meanwhile, the latitude and longitude coordinates of the mean center of homeless families are -80.321244 and 25.695472 .

This fact indicates that more prior addresses of homeless family were located in Southern and Eastern parts of the area study than those of homeless individuals. The standard deviational ellipses of both homeless categories also support such indication. The findings support for the hypothesis that the prior addresses of homeless individuals are highly concentrated in poor neighborhoods which are located in the Northern parts of the study area and that the prior addresses of homeless families are equally distributed in the Northern parts and the Southern parts of Miami-Dade County.

Statistical Tests for Differences

The following section will present the statistical tests for differences of the mean centers and the standard deviational ellipses of homeless families and homeless individuals. The first statistical test is the F-test for testing the equality of variances of the mean center of homeless families and homeless individuals for both the latitude and longitude coordinates. The F-test of equality of variance for latitude coordinates has a value of 1.255 with p value $\leq .05$. The F-test of equality of variance for longitude coordinates has a value of 1.722 with p value $\leq .001$. These results indicate that the differences in the variances of prior addresses of homeless families and homeless individuals for both coordinates are statistically significant.

The t-test of the means differences with unequal variances was then used. The t-test of the means differences for the latitude coordinates has a value of 7.120 with p value $\leq .005$. The t-test for the longitude coordinates has a value of 5.656 with p value $\leq .005$. The results indicate that the differences in the mean centers between prior addresses of homeless families and homeless individuals are highly significant at the p value $\leq .005$ level.

The statistical differences between standard deviational ellipse of homeless families and homeless individuals were tested by using F-test for testing the equality of variance of the standard deviations along the transformed X axes and variance of the standard deviations along the transformed Y axes. The standard deviation along the transformed X axes for homeless families is 3.55972 miles and for homeless individuals is 4.36262 miles. The standard deviation along the transformed Y axes for homeless families is 18.15113 miles and for homeless individuals is 14.05326 miles.

The F-test of equality of variances for the standard deviation along the transformed X axes has a value of 1.502 with p value $\leq .001$. Meanwhile, the F-test of equality of variance for the standard deviation along the transformed Y axes has a value of 1.668 with p value $\leq .001$. The results suggest that the standard deviational ellipses of prior addresses of homeless families and homeless individuals are statistically different at the p value $\leq .001$ level for both transformed axes.

The results of the statistical tests for differences in mean centers and standard deviational ellipses of the prior addresses of homeless families and homeless individuals is presented in **Table 4.2**. The results of the statistical tests for both mean center and standard deviational ellipse suggest that the distribution of prior addresses of homeless families and homeless individuals are statistically significant, at least at the p value $\leq .001$ level for the standard deviational ellipse.

Table 4.2.
The Statistical Tests for Differences in Mean Centers and Standard Deviational Ellipses of the Prior Addresses of Homeless Families and Homeless Individuals

	Axis	Value	Significance Level
Mean Centers	X	7.120	$p \leq .005$
	Y	5.656	$p \leq .005$
Standard Deviational Ellipse	X	1.502	$p \leq .001$
	Y	1.668	$p \leq .001$

Concentration and Density Variation

In order to compare and contrast the spatial concentration patterns of the prior addresses of homeless families and homeless individuals, I used the hot-spot analysis. The analysis displays clearly the concentration and density variation of the prior addresses of homeless families and homeless individuals. **Figure 4.9** and **Figure 4.10** show the concentration and density variation of the prior addresses of the homeless family and those of homeless individuals respectively.

Similar to the prior addresses of homeless men, the prior addresses of homeless single were more concentrated in the Northern part than in the Southern part of the area study. On the contrary, the concentrations of the prior addresses of homeless family in the Southern part and in the Northern part are relatively same.

With regard to hot spots, homeless families have more and larger hot spots in the Southern part of the study area than homeless individuals. In the Northern part, homeless individuals have large hot spots located in Miami. Homeless families have also hot spots in Miami but smaller than those of homeless individuals. In North Miami, there is one hot spot of homeless family but none of homeless individuals. The figures also indicate that there are two secondary hot spots of homeless individuals in Miami Beach but none of homeless family. Additionally, homeless families have secondary hot spot in Perrine.

3. Homeless with ADM Problem vs. Homeless without ADM Problem

This study hypothesizes that homeless who report having alcohol, drug and mental health (ADM) problems will tend to report prior addresses that are more concentrated in poor neighborhoods than homeless who do not report having ADM problem. The prior addresses of homeless with ADM problems are hypothesized to be highly concentrated in the Northern part of Miami-Dade County in which census tract groups with high density of poor people are highly concentrated. Meanwhile, the prior addresses of homeless without ADM problems are hypothesized to be more equally distributed in the Northern part and the Southern part of the county.

Distribution by Census Tract Groups and Spatial Statistics

This study has 423 matched prior addresses of homeless with ADM problem and 394 matched prior addresses of homeless without ADM problem. This study indicates there are 89 census tract groups having prior addresses of homeless with ADM problem. Meanwhile, the prior addresses of homeless without ADM problem are only located in 62 census tract groups.

A high percentage of the prior addresses of homeless without ADM problem were located in one census tract group, namely census tract group 107 (11.9% of total prior addresses of homeless without ADM problem). On the other hand, most prior addresses of homeless with ADM status were located in census tract group 30 (8.7% of total prior addresses of homeless with ADM status). **Figure 4.11** and **Figure 4.12** show the spatial distributions of matched prior addresses of homeless with ADM problem and homeless without ADM problem respectively.

Figure 4.13 shows the spatial distribution statistics of homeless with ADM problem and homeless without ADM problem. The mean center of homeless with ADM problem is approximately located at SW 8th St and SW 42th Ave Miami and is about three miles Northeast away of the median center of homeless without ADM problem. The latitude and longitude coordinates of the mean center of homeless with ADM problems are -80.263666 and 25.765932. Meanwhile, the latitude and longitude coordinates of the mean center of homeless without ADM problems are -80.299326 and 25.720266.

Figure 4.6 Dot Mapping of Prior Addresses of Homeless Families

Figure 4.7: Dot Mapping of Prior Addresses of Homeless Individuals

Figure 4.8: Spatial Distribution Statistics of Homeless Family and Homeless Individuals

Figure 4.9: Prior Addresses Density of Homeless Family

Figure 4.10: Prior Addresses Density of Homeless Individuals

This fact indicates that more prior addresses of homeless with ADM problem were located in Western and Northern parts of the study area. The standard deviational ellipses of both homeless categories also support the evidence that the prior addresses of homeless with ADM are fewer distributed in Southern part of the area study than the prior addresses of homeless without ADM.

The findings support for the hypothesis that the prior addresses of homeless with ADM problem are highly concentrated in poor neighborhoods which are located in the Northern parts of the county and that the prior addresses of homeless without ADM problem are equally distributed in the Northern parts and the Southern parts of the county.

Statistical Tests for Differences

The previous section clearly indicates that the locations of the mean centers of homeless with ADM problems and homeless without ADM problems are different. Similarly, the standard deviational ellipses of homeless with ADM problems and homeless without ADM problems do not look similar. The following tests are to determine whether or not these differences statistically significant.

In order to test statistical difference between the mean centers of homeless with ADM problems and homeless without ADM problems, I conducted the F-test for testing the equality of variances of both the latitude and longitude coordinates. The F-test of equality of variances of homeless with ADM problems and homeless without ADM problems for latitude coordinates has a value of 1.325 with p value $\leq .01$. The F-test of equality of variance for longitude coordinates results in value of 1.623 with p value $\leq .001$. The differences in the variances for the latitude and longitude coordinates are statistically significant. Consequently, the t-test for a difference in means with unequal variances was used.

The t-test of the means differences of homeless with ADM problems and homeless without ADM problems for the latitude coordinates has a value of 5.142 with p value $\leq .005$. The t-test for the longitude coordinates has a value of 4.676 with p value $\leq .005$. The results indicate that the differences in the mean centers are highly significant. Prior addresses of homeless with ADM problems have a different mean or center of gravity than prior addresses of homeless without ADM problems in Miami-Dade County.

To test statistical differences between standard deviational ellipse of homeless with ADM problems and homeless without ADM problems, I used F-test for testing the equality of variance of the standard deviations along the transformed X axes and variance of the standard deviations along the transformed Y axes. The standard deviation along the transformed X axes for homeless with ADM problems is 4.47002 miles and for homeless without ADM problems is 7.68541 miles. The standard deviation along the transformed Y axes for homeless with ADM problems is 13.61451 miles and for homeless without ADM problem is 17.33333 miles.

The F-test of equality of variances for the standard deviation along the transformed X axes of homeless with ADM problems and homeless without ADM problems has a value of 1.3531 with p value $\leq .01$. Meanwhile, the F-test of equality of variance for the standard deviation along the transformed Y axes has a value of 1.6209 with p value $\leq .001$. The results suggest that the standard deviational ellipses of prior addresses of homeless with ADM problems and that of homeless without ADM problems are statistically different at the p value $\leq .01$ level for transformed X axes and at the p value $\leq .001$ level for transformed Y axes.

The results of t-test for both mean center and standard deviational ellipse suggest that the distribution of prior addresses of homeless with ADM problem and homeless without ADM problems are statistically different, at least at the $p \leq .01$ level. The results of the statistical tests for differences in mean centers and standard deviational ellipses of the prior addresses of homeless with ADM problem and homeless without ADM problem is presented in **Table 4.3**.

Table 4.3.
The Statistical Tests for Differences in Mean Centers and Standard Deviational Ellipses of the Prior Addresses of Homeless with ADM Problems and Homeless without ADM Problems

	Axis	Value	Significance Level
Mean Centers	X	5.142	$p \leq .005$
	Y	4.676	$p \leq .005$
Standard Deviational Ellipse	X	1.3531	$p \leq .01$
	Y	1.6209	$p \leq .001$

Concentration and Density Variation

The concentrations and density variations of the prior addresses of the homeless with ADM problem and homeless without ADM problem are presented in **Figure 4.14** and **Figure 4.15** respectively. The prior addresses of homeless with ADM are heavily more concentrated in the Northern parts than in the Southern parts of the area study. On the contrary, the concentrations of the prior addresses of homeless without ADM are relatively equal between the Northern part and the Southern part of the area study.

The location and the size of hot spots in the Southern part and in Miami are somewhat similar between those of homeless with ADM problem and those of homeless without ADM problem. Homeless with ADM problem have two secondary hot spots in Miami Beach, one in Perrine, one in Hialeah and none in North Miami. Meanwhile, homeless without ADM problem have one secondary hot spot in North Miami, two in Perrine and none in Miami Beach.

4. Chronic Homeless vs. Non-chronic Homeless

As indicated in the previous chapter, this study hypothesizes that chronic homeless have prior addresses that are more concentrated in poor neighborhoods than non-chronic homeless. Similarly with homeless men, homeless individuals and homeless with ADM problems, the prior addresses of chronic homeless are hypothesized to be highly concentrated in the Northern part of Miami-Dade County in which census tract groups with high density of poor people are clustered. On the other hand, the prior addresses of non-chronic homeless are hypothesized to be more equally distributed in the Northern part and the other parts of the county.

Figure 4.11: Dot Mapping of Prior Addresses of Homeless with ADM Problem

Figure 4.12: Dot Mapping of Prior Addresses of Homeless without ADM Problem

Figure 4.13: Spatial Distribution Statistics of Homeless with ADM Problem and Homeless without ADM Problem

Figure 4.14: Prior Addresses Density of Homeless with ADM Problem

Figure 4.15: Prior Addresses Density of Homeless without ADM Problem

Distribution by Census Tract Groups and Spatial Statistics

As mentioned earlier this study has 231 matched prior addresses of chronic homeless and 586 matched prior addresses of non-chronic homeless. This study indicates there are 64 census tract groups having prior addresses of chronic homeless. On the other hand, prior addresses of non-chronic homeless are distributed in more census tract groups (92 census tract groups).

Similar with homeless men, homeless individuals and homeless with ADM status, census tract group 30 is also the census tract group having most prior addresses for chronic homeless (10.0% of total prior addresses of chronic homeless). With regard to non-chronic homeless, census tract group having most prior addresses is census tract group 107 (8.9% of total prior addresses of non-chronic homeless). The spatial distributions of matched prior addresses of chronic homeless and non-chronic homeless are shown in **Figure 4.16** and **Figure 4.17** respectively.

The spatial distribution statistics of chronic homeless and non-chronic homeless is presented in **Figure 4.18**. The mean center of chronic homeless is located approximately at SW 8th Street and SW 42nd Ave Miami. The latitude and longitude coordinates of the mean center of chronic homeless are -80.263353 and 25.764856 . Meanwhile, the mean center of non-chronic homeless is only one and a half miles Southeast away of the mean center of chronic homeless. The latitude and longitude coordinates of the mean center of non-chronic homeless are -80.287766 and 25.735653 . The standard deviational ellipse of chronic homeless and that of non-chronic homeless indicates that the prior addresses of chronic homeless are more concentrated in Northern part of the study area than those of non-chronic homeless.

The findings support for the hypothesis that the prior addresses of chronic homeless are highly concentrated in poor neighborhoods which are located in the Northern parts of the study area and that the prior addresses of non-chronic homeless are equally distributed in the Northern parts and the Southern parts of Miami-Dade County.

Statistical Tests for Differences

The following section will present the statistical tests for differences of the mean centers and the standard deviational ellipses of chronic homeless and non-chronic homeless. The first statistical test is the F-test for testing the equality of variances of the mean center of chronic homeless and non-chronic homeless for both the latitude and longitude coordinates. The F-test of equality of variance for latitude coordinates has a value of 1.215. The F-test of equality of variance for longitude coordinates has a value of 1.551 with $p \text{ value} \leq .001$. These results indicate that the difference in the variances of prior addresses of chronic homeless and non-chronic homeless for the latitude coordinates is insignificant while that for the longitude coordinates is highly significant.

The t-test of the means differences with unequal variances was then used. The t-test of the means differences of chronic homeless and non-chronic homeless for the latitude coordinates has a value of 3.293 with $p \text{ value} \leq .005$. The t-test for the longitude coordinates has a value of 2.959 with $p \text{ value} \leq .005$. The results indicate that the differences in the mean centers between prior addresses of chronic homeless and those of non-chronic homeless is highly significant at the $p \text{ value} \leq .005$ level.

The statistical differences between standard deviational ellipse of chronic homeless and that of non-chronic homeless were tested by using F-test for testing the equality of variance of the standard deviations along the transformed X axes and variance of the standard deviations along the transformed Y axes. The standard deviation along the

transformed X axes for chronic homeless is 4.32853 miles and that for non-chronic homeless is 4.11347 miles. The standard deviation along the transformed Y axes for chronic homeless is 13.48064 miles and that for non-chronic homeless is 16.45751 miles.

The F-test of equality of variances for the standard deviation along the transformed X axes has a value of 1.107. Meanwhile, the F-test of equality of variance for the standard deviation along the transformed Y axes has a value of 1.490 with p value $\leq .001$. The results suggest that the standard deviational ellipses of prior addresses of chronic homeless and that of non-chronic homeless are statistically different.

The results of t-test for both mean center and standard deviational ellipse suggest that the distributions of prior addresses of chronic homeless and non-chronic homeless are statistically different. They are different at the p value $\leq .005$ level for the mean centers and at the p value $\leq .001$ level for the standard deviational ellipse. The results of the statistical tests for differences in mean centers and standard deviational ellipses of the prior addresses of chronic homeless and non-chronic homeless is presented in **Table 4.4**.

Table 4.4.
The Statistical Tests for Differences in Mean Centers and Standard Deviational Ellipses of the Prior Addresses of Chronic Homeless and Non-Chronic Homeless

	Axis	Value	Significance Level
Mean Centers	X	3.293	$p \leq .005$
	Y	2.959	$p \leq .005$
Standard Deviational Ellipse	X	1.107	Insignificant
	Y	1.490	$p \leq .001$

Concentration and Density Variation

The hot-spot analysis displays clearly the concentration and density variation of the prior addresses of chronic homeless and non-chronic homeless. **Figure 4.19** and **Figure 4.20** show the concentration and density variation of the prior addresses of chronic homeless and those of non-chronic homeless respectively. Both figures clearly show the differences between chronic homeless and non-chronic homeless with regard to the concentration and density variation of prior addresses. The prior addresses of chronic homeless are heavily concentrated in the Northern part of the study area. On the contrary, the prior addresses of non-chronic homeless are somewhat equal between the Northern part and the Southern part of the study area.

With regard to hot spot, chronic homeless have fewer hot spots than non-chronic homeless. The hot spots of chronic homeless are situated in Miami and Hialeah. On the other hand, the hot spots of non-chronic homeless are located in more areas both in the Northern part and the Southern part of the study area. There are at least four hot spots in the Southern part and four hot spot in the Northern part. One of these hot spots is large and situated in Miami.

In North Miami, there is one hot spot of chronic homeless but none of non-chronic homeless. The figures also indicate that there are one secondary hot spot of chronic homeless in the Northern part of Miami Beach and one secondary hot spot of non-chronic homeless in the Southern part of Miami Beach. .

Figure 4.16: Dot Mapping of Prior Addresses of Chronic Homeless

Figure 4.17: Dot Mapping of Prior Addresses of Non-Chronic Homeless

Figure 4.18: Spatial Distribution Statistics of Chronic Homeless and Non-Chronic Homeless

Figure 4.19: Prior Addresses Density of Chronic Homeless

Figure 4.20: Prior Addresses Density of Non-Chronic Homeless

5. Homeless Veteran vs. Homeless Non-veteran

This study hypothesizes that homeless who are veterans will tend to report prior addresses that are not spatially different from homeless people who are not veterans. The distribution of prior addresses of homeless veteran is hypothesized to be similar with the distribution of prior addresses of homeless non-veterans. Unlike other homeless categories, the reasons of being homeless for those who are veterans and those who are not veterans are identical.

Distribution by Census Tract Groups and Spatial Statistics

By veteran status, this study has 71 matched prior addresses of homeless veteran and 746 matched prior addresses of homeless non-veteran. The matched prior addresses of homeless veteran were located in 41 census tract groups. Meanwhile, the prior addresses of non-veteran homeless were only located in 94 census tract groups.

Census track groups having the most prior addresses of homeless veteran is census tract group 107 (9.9 percent of total prior addresses of homeless individuals). Similarly, census track groups having the most prior addresses of homeless non-veteran is also census tract group 107 (7.8 percent of total prior addresses of homeless individuals). **Figure 4.21** and **Figure 4.22** show the spatial distributions of matched prior addresses of homeless veteran and those of homeless non-veteran respectively.

Figure 4.23 shows the spatial distribution statistics of homeless veteran and homeless non-veteran. The mean center of homeless veteran is located approximately at SW 24th Street and Granada Blvd Miami. The latitude and longitude coordinates of the mean center of homeless veterans are -80.270783 and 25.757801. Meanwhile, the mean center of homeless non-veterans is about a mile Southwest away of the mean center of homeless veterans. The latitude and longitude coordinates of the mean center of homeless non-veterans are -80.281823 and 25.742588.

The standard deviational ellipses of homeless veteran and homeless non-veterans are not identical. Even though the shapes of both standard deviational ellipses look similar but their positions are slight different. Are these differences statistically significant or not? We can not accept or reject the hypothesis of the spatial distribution of homeless veteran and homeless non-veteran unless we answer such a question. The following section discusses the statistical tests for differences of spatial distribution of homeless veteran and homeless non-veteran.

Statistical Tests for Differences

In order to test statistical difference between the mean centers of homeless veteran and homeless non-veteran, I conducted the F-test for testing the equality of variances of both the latitude and longitude coordinates. The F-test of equality of variances of homeless veteran and homeless non-veteran for latitude coordinates has a value of 1.006. The F-test of equality of variance for longitude coordinates results in value of 1.038. The differences in the variances for the latitude and longitude coordinates are insignificant. Consequently, the t-test for a difference in means with equal variances was used.

The t-test of the means differences of homeless veteran and homeless non-veteran for the latitude coordinates has a value of 0.888. The t-test for the longitude coordinates has a value of 0.874. The results suggest that the differences in the mean centers of homeless veteran and homeless non-veteran are insignificant.

To test statistical differences between standard deviational ellipse of homeless veteran and that of homeless non-veteran, I used F-test for testing the equality of variance of the standard deviations along the transformed X axes and variance of the standard deviations along the transformed Y axes. The standard deviation along the transformed X axes for homeless veteran is 4.40505 miles and that for homeless non-veteran is 4.16824 miles. The standard deviation along the transformed Y axes for homeless veteran is 15.56793 miles and that for homeless non-veteran is 15.76392 miles.

The F-test of equality of variances for the standard deviation along the transformed X axes of homeless veteran and homeless non-veteran has a value of 1.1168. Meanwhile, the F-test of equality of variance for the standard deviation along the transformed Y axes has a value of 1.0253. The results suggest that the standard deviational ellipses of prior addresses of homeless veteran and that of homeless non-veteran are not statistically different.

The results of t-test for both mean center and standard deviational ellipse suggest that the distribution of prior addresses of homeless veteran and homeless non-veteran are not statistically different. The findings support for the hypothesis that the prior addresses of homeless veteran are not spatially different from the prior addresses of homeless non-veteran. The results of the statistical tests for differences in mean centers and standard deviational ellipses of the prior addresses of homeless veteran and homeless non-veteran is presented in **Table 4.5**.

Table 4.5.
The Statistical Tests for Differences in Mean Centers and Standard Deviational Ellipses of the Prior Addresses of Homeless Veteran and Homeless Non-Veteran

	Axis	Value	Significance Level
Mean Centers	X	0.888	Insignificant
	Y	0.874	Insignificant
Standard Deviational Ellipse	X	1.1168	Insignificant
	Y	1.0253	Insignificant

Concentration and Density Variation

The hot-spot analysis displays the concentration and density variation of the prior addresses of homeless veteran and homeless non-veteran. The concentrations and density variations of the prior addresses of the homeless veteran and homeless non-veteran are presented in **Figure 4.24** and **Figure 4.25** respectively. Both homeless categories have similar pattern in term of concentration of prior addresses. There are more concentrations of prior addresses in the Northern part than in the Southern part of the study area.

Homeless veteran have only one hot spot in Miami. On the contrary, homeless non-veteran have several hot spots. They are distributed in several areas including Homestead, Florida City, Miami, Hialeah, and Miami Beach. The largest hot spot is situated in Miami.

Figure 4.21: Dot Mapping of Prior Addresses of Homeless Veteran

Figure 4.22: Dot Mapping of Prior Addresses of Homeless Non-Veteran

Figure 4.23: Spatial Distribution Statistics of Homeless Veteran and Homeless Non-Veteran

Figure 4.24: Prior Addresses Density of Homeless Veteran

Figure 4.25: Prior Addresses Density of Homeless Non-Veteran

6. Discussion

The use of spatial distribution statistics and hot spot analyses as shown in previous section reveal the differences in the spatial distribution of the prior addresses of varying categories of the homeless including by gender, family status, the occurrence of ADM problem and chronicity. The t-test for the mean centers and standard deviational ellipses differences indicate that the differences are statistically significant. Meanwhile, this study indicates there is no statistically significant difference in spatial distribution of the prior addresses of homeless veteran and that of homeless non-veteran.

Some scholars have identified the differences between homeless women and homeless men with regard to their causes of being homeless (Crook, 1999; Crystal, 1984; Opler, et. al., 2001). However, there has no such study to date to identify where the residential origins of homeless women and homeless men. This study clearly indicates the differences in the spatial distribution of the residential origins of homeless men and those of homeless women. Assuming the differences in the causes of being homeless between homeless women and homeless men correspond to the spatial distribution of prior addresses of the homeless, the findings of this study should bring new dimension, namely spatial distribution of residential origins, to gender perspective on homelessness problem.

As noted earlier two previous studies on residential origins of the homeless (Culhane, et. al., 1996; Wong and Hillier, 2001) identified only the residential origins of homeless family. They did not identify the residential origins of other homeless categories because such data were not available. Culhane, et. al. (1996) identified factors contributing to being homeless family such as female-headed households with young children, persons of African-American descent and housing overcrowding. This study identifies the residential origins of both homeless family and homeless individuals. Obviously, this study expands the works of Culhane, et. al. (1996). Many studies show that homeless family which is the fastest category of the homeless population differ from homeless individuals with regard to many respects including the causes of being homeless (Bassuk, 1992; Shinn and Gillespie, 1994). This study clearly indicates the differences in the spatial distribution of the residential origins of homeless family and those of homeless individuals. Such findings should assist in identifying the areas with high risk of producing either homeless family or homeless individuals. The identification of such areas will lead to better formulate the homelessness prevention program.

One of the most researched homeless categories is homeless with ADM problem. Half of the homeless have had problems with alcohol, about one-third have had problems with drugs and more than one fifth have had mental illness problem (Koegel, et. al., 1996). Many studies show that homeless with ADM problem differ from those without ADM problem with respect to many aspects including the causes of being homeless (Allgood and Warren, 2003; Wright, et. al., 1993). Nevertheless, none of the study to date identifies the residential origins of the homeless with ADM problem. This study is the first exploratory study that investigates and compares the spatial distribution of residential origins of homeless with ADM problem and homeless without ADM problem. This study indicates clearly the differences in the spatial distribution of the residential origins of homeless with ADM problem and those of homeless without ADM problem. This finding should assist in identifying areas with high risk of producing homeless with ADM problem. Such area identification will lead to effectively target the homelessness prevention program for those with ADM problem.

Since the chronic homeless use approximately half of shelter resources and is very expensive to Federal, State and local government, it is essential to identify the residential origins of the chronic homeless for effectively formulating the homelessness prevention program. Many scholars have identified some aspects of how chronic homeless differs from non-chronic homeless including their ages, disability, substance abuse problem, alcohol and health problems (Sosin, et. al., 1990; Baum and Barnes, 1993). None of the studies identified and compared the prior addresses of chronic and those of non-chronic homeless. This study identifies them and clearly indicates the differences in the spatial distribution of the residential origins of chronic homeless and those of non-chronic homeless. The residential origins of the chronic homeless are more concentrated than those of the non-chronic homeless. The findings of this study should assist in identifying areas with the risk of producing chronic homeless and in formulating an effective homelessness prevention program for chronic homeless.

Homeless veterans make up about one-third of the homeless male population and nearly half of them are those who served during Vietnam War (Blau, 1992; HUD User, 2005). Roth (1992) identified that there were similarity between homeless veterans and homeless non-veterans with regard to the causes of homelessness. Both homeless categories cited economic factors as their primary reason for homelessness. Allgood and Warren (2003) identified that homeless veterans and homeless non-veterans had the same duration of homelessness. Referring to the NSHAPC reports and Roth's study, homeless veterans differs from homeless non-veteran with regard to their age and race. They found median ages of homeless veterans were older than that of homeless non-veteran and proportion of White were higher among homeless veterans than homeless non-veterans. None of the studies on homeless veterans identified the residential origins of homeless veteran. This study identifies them and indicates that there is no significant difference in the spatial distribution of the residential origins of homeless veteran and those of homeless non-veteran. The factors associated with the risk of being homeless corresponding to the spatial distribution of prior addresses of homeless veterans are not significantly different from those of homeless non-veterans. Other homeless categories by gender, family status, the occurrence of ADM status and chronicity show the differences of factors associated with the risk of being homeless between different homeless categories. Such differences are not found in the homeless category by veteran status. Not surprisingly, this fact leads to the similarity in the spatial distribution of prior addresses between homeless veteran and homeless non-veteran.

Not only does this study indicate the differences of the spatial distribution of prior addresses of homeless by gender, family status, the occurrence of ADM problem, and chronicity but also the similarity of the spatial distribution of prior addresses across different homeless categories. This study finds the similarities in the spatial distribution of prior addresses of homeless women, homeless family, homeless without ADM problem, and non-chronic homeless. They are similar with regard to the census tract group with most prior addresses of the homeless and the concentration sizes of prior addresses in the Northern and the Southern parts of the study area. To some extent, they are also similar in the density variation of the prior addresses both in the Northern and the Southern parts of the area study.

Similarly, this study also indicates the similarity in the spatial distribution of prior addresses of homeless men, homeless single, homeless with ADM problem, and chronic homeless. These facts seem that homeless men are also single, having ADM problem and chronic. Single men with ADM problem are conventional picture of homeless in the

beginning of 1980s. On the other hand, homeless women are also staying with children/ family, having no ADM problem and non-chronic. Homeless women with children and have no ADM problem are contemporary emerging picture of homeless since the late 1990s.

In the study, is homeless man identical with homeless single, homeless with ADM problem and chronic homeless? On other words, is homeless woman identical with homeless family, homeless without ADM problem and non-chronic homeless? To answer these questions, I conducted a crosstabulation analysis across the eight homeless categories. The crosstabulations of the samples by gender, family status, the occurrence of ADM problem and chronicity is presented in **Table 4.6**.

Table 4.6.
Cross Tabulations of the Homeless by Gender, Family Status,
the Occurrence of ADM Problem and Chronicity

	Men (n=510)	Women (n=307)	Single (n=586)	Family (n=231)	ADM (n=423)	Non ADM (n=394)	Chronic (n=231)	Non Chronic (n=586)
Men			80%	17%	74%	50%	72%	59%
Women			20%	83%	26%	50%	28%	41%
Single	92%	38%			88%	54%	86%	66%
Family	8%	62%			12%	46%	14%	34%
ADM	61%	36%	64%	21%			88%	38%
Non ADM	39%	64%	36%	79%			12%	62%
Chronic	33%	21%	34%	14%	48%	7%		
Non Chronic	67%	79%	66%	86%	52%	93%		

Referring to the table we can see that homeless categories by gender vary by family status, the occurrence of ADM problem and chronicity. Similarly, homeless categories by family status vary by the occurrence of ADM problem and chronicity; and homeless categories by the occurrence of ADM problem vary by chronicity.

The crosstabulations analysis indicates that there are high proportions of homeless men who are also homeless singles (92%). Among homeless with ADM problems, homeless men make up seventy-four percent of total population of homeless with ADM in the study. Similarly, with regard to chronically homeless, homeless men in the study make up seventy-two percent of total population of chronically homeless in the study.

On the other hand, the crosstabulations analysis also indicates that there are high proportions of homeless women who are also homeless families (62%) or who are also homeless without ADM problem (64%) or who are also non-chronic homeless (67%). With regard to homeless with ADM problems, homeless women make up only twenty-six percent of total population of homeless with ADM in the study. Similarly, with regard to chronically homeless, homeless women in the study only account for twenty-eight percent of total population of chronically homeless in the study.

The results of the crosstabulations analysis suggest that homeless men are substantially higher among homeless individuals, homeless with ADM problems, and chronically homeless. In other words, homeless women are substantially higher among

homeless families, homeless without ADM problems and non-chronic homeless. Such findings confirm the previous studies on homeless population (Bassuk, 1992; Burt, 2001; Schutt and Garrett, 1992; Shinn and Gillespie, 1994; Susser, 1993; Winnick, 1997).

The crosstabulation analysis also indicates that there are high proportions of chronically homeless who are also homeless with ADM problems (88%). Such findings confirm the previous studies on chronically homeless population that chronically homeless suffer from substance abuse problems and have long history of alcohol and health problems (Baum and Barnes, 1993; Sosin, 1990).

CHAPTER FIVE

FACTORS ASSOCIATED WITH THE RATE OF PRIOR ADDRESSES OF THE HOMELESS

Previous studies on prior addresses of the homeless (Culhane, et. al., 1996; Wong and Hillier, 2001) examined only the prior addresses of homeless family. By analyzing spatial distribution of prior addresses of homeless family entering public shelters in New York City and Philadelphia, Culhane, et. al. (1996) indicated that the incidence of homelessness is strongly associated with the concentration of poor, African-American, and female-headed households with young children in a neighborhood. Such areas have more housing crowding, more residence in subfamilies, higher rates of unemployment, higher rent burden and more abandonment.

This study attempts to expand previous studies on prior addresses of the homeless with regard to the homeless category. The previous chapter clearly shows the statistically significant differences in the spatial distribution of prior addresses of homeless by gender, family status, the occurrence of ADM problem and chronicity. The research question of what demographic, socioeconomic, and housing factors in communities are associated with the rate of prior addresses for each type of the homeless will be addressed in the following section. Not only will this study investigate the factors in communities associated with the rate of prior addresses of the homeless by family status but also the factors in communities associated with the rate of prior addresses of the homeless by gender, the occurrence of ADM problem and chronicity. This study will not investigate the factors in communities associated with the rate of prior addresses of the homeless by veteran status because the difference of the spatial distribution of prior addresses of homeless by veteran status is statistically insignificant.

1. Constructing Factors

As mentioned earlier this study develops sixteen census tract group variables that are hypothesized to be indicators of communities with high risk of homelessness. As indicated by Wong and Hillier (2001), the factors of potential risks are highly correlated. The correlation matrix of the sixteen variables which is presented in **Appendix F** shows that the sixteen variables are highly correlated.

In order to deal with the high correlations among the sixteen variables this study uses principal components analysis with varimax rotation to determine a fewer number of factors that then will be used in the analysis. Principal components analysis is a technique to transform a set of variables into a smaller set of uncorrelated variables that represents most of the information in the original set of variables (Dunteman, 1989).

Dunteman (1989) asserted principal components analysis can be used in regression analysis in several ways. First, if the independent variables are highly correlated, they can be transformed to principal components and then can be used as the independent variables. Second, indirectly the principal components can be used to improve the precision of the regression parameter estimates. Third, principal components can be used as a diagnostic tool to detect multicollinearities among the original set of independent variables. Fourth, principal components analysis can be used to select a number of independent variables from a larger set. This study uses principal components analysis and then uses them as the

independent variables for the regression to determine factors in communities associated with the risk of being homeless.

Table 5.1 shows the results of principal components analysis. This result suggests that three factors adequately summarize the data and explain 79.4% of the variance of the original set of independent variables.

Table 5. 1.
Results of Principal Components Analysis

No. Independent Variables	Mean	Standard Deviation	Depri- vation	Prop of Blacks, female-headed HH with young child and un- employment	Proportion One-person households
1. Proportion of Blacks	.2120	.26927	.093	.936	-.127
2. Proportion of Hispanic	.5639	.27059	.438	-.819	-.161
3. Proportion of persons without high school diploma	.3289	.15478	.935	.187	-.111
4. Proportion of female headed households with children under 6	.0310	.01949	.357	.842	.138
5. Proportion of subfamilies	.0562	.03021	.430	.165	-.812
6. Proportion of one-person household	.2123	.10507	.028	.075	.920
7. Proportion of unemployment	.0527	.02456	.468	.674	-.046
8. Proportion of households with public assistance income	.0641	.04131	.859	.354	-.010
9. Median household income	43583.48	21193.0	-.815	-.267	.010
10. Proportion of persons below 75% of poverty level	.1317	.08203	.641	.630	.359
11. Proportion of households without cars	.1429	.11346	.644	.320	.623
12. Proportion of households below poverty line without telephone	.0135	.01899	.550	.533	.410
13. Proportion of rental units	.3976	.20253	.718	.189	.571
14. Proportion of median contract rent to median household income	30.74	3.3238	.579	-.117	-.086
15. Median contract rent	634.80	171.945	-.675	-.495	-.064
16. Proportion of housing units with more than two person per room	.0587	.03403	.775	.034	.052

Factors and Loaded Variables

As shown in **Table 5.1**, the first factor, which explains the largest proportion of variance (49.6%), is named deprivation. There are ten variables that are loaded on this factor. Census tract groups with a high score on this factor represent areas with a high concentration of persons without high school diploma, households with public assistance income, persons below 75% of poverty level, households below poverty level without telephone, households without cars, rental units, proportion median contract rent to median household income and overcrowded rental households. These census tract groups are also characterized by a low median household income and a low median contract rent.

The second factor, which is labeled proportion of Blacks, female-headed household with young children and unemployment, explains 16.2% of the variance in the model. Census tract groups with a high score on this factor are characterized by a high concentration of African-American descent and a low concentration of Hispanic descent. These census tract groups also represent area with a high concentration of female headed households with children under 6 years of age and unemployment. This factor also indicates multicollinearity between proportion of African-American, female households with children under 6 and unemployment. There is significant correlation between proportion of female householders with children under 6 and proportion of unemployment. Areas with a high concentration of female householders with children under 6 are highly associated with areas with high level of unemployment. Such areas also correspond with areas with a high concentration of African-American and a low concentration of Hispanic.

The third factor, which is labeled proportion of one-person household, explains 13.6% of the variance in the model. Census tract groups with a high score on this factor represent areas with a high concentration of one-person households and a low proportion of households with subfamilies. This factor indicates that areas with a high proportion of one-person households highly correspond with areas with a low proportion of households with subfamilies.

These three factors are then used as the independent variables for further analysis in this study. The next analysis is regression analysis to determine what factors are associated with rate of prior addresses for each type of the homeless including homeless men, homeless women, homeless family, homeless individuals, homeless with ADM problem, homeless without ADM problem, chronic homeless and non-chronic homeless.

Comparison with Wong and Hillier's Study

With regard to the independent variables, there are some differences between this study and Wong and Hillier's study. As shown in **Table 5.1**, total number of variables in this study is 16 and total number of variable in Wong and Hillier's study as shown in **Table 5.2** is 14 variables. Ten variables were used in both studies: proportion of Blacks, proportion of Hispanics, proportion of female-headed households with children under 6 years old, proportion of subfamilies, proportion of one-person household, proportion of unemployment, proportion of households with public assistance income, proportion of person below 75 percent of poverty level, proportion of rental units and proportion of median contract rent to median household income.

Regarding overcrowding variable, this study uses proportion of rental units with more than two persons per room instead of proportion of housing units with more than two persons per room as used in Wong and Hillier's study. This variable is used to better represent overcrowding among renters from which most the homeless people originate. This study excludes three variables in Wong and Hillier's study: proportion of households

recently moved, proportion of vacant units and proportion of boarded-up housing units. On the other hand, this study add five new variables: proportion of persons without high school diploma, median household income, proportion of households without cars, proportion of households below poverty level without telephone and median contract rent.

Table 5. 2.
Results of Principal Components Analysis of Wong and Hillier's Study

No. Independent Variables	Mean	Standard Deviation	Social-Economic Distress	Instability	Hispanic-Over-crowded
1. Proportion of Hispanic	.055	.127	.019	.016	.889
2. Proportion of Blacks	.390	.395	.855	-.030	-.166
3. Proportion of female headed households with children under 6	.059	.061	.715	.000	.522
4. Proportion of one-person household	.316	.114	-.158	.850	-.296
5. Proportion of households with public assistance income	.149	.130	.758	.031	.547
6. Proportion of persons below 75% of poverty level	.152	.127	.725	.290	.511
7. Proportion of households recently moved (1989-90)	.152	.094	-.181	.824	.141
8. Proportion of housing units with more than two person per room	.004	.008	.173	.140	.826
9. Proportion of subfamilies	.056	.048	.813	-.274	.200
10. Proportion of boarded-up housing units	.024	.038	.832	.166	.015
11. Proportion of vacant housing units	.109	.073	.658	.535	-.047
12. Proportion of persons unemployed	.057	.034	.834	-.022	.256
13. Proportion of rented housing Units	.388	.209	.243	.886	.118
14. Rent income ratio	.184	.060	.160	.714	.324

Source: Wong and Hillier (2001): p. 30

The first factor of this study (deprivation) is loaded with some poverty-related variables and rental-units-related variables. Such loading supports for the literature on homelessness that poverty is strongly associated with housing problems to cause homelessness (Burt, 1992). The variables of median household income and median contract rent were loaded on this factor in negative direction. Low median household income and low median contract rent are indicators of deprivation. These two variables were excluded in Wong and Hillier's study.

The second factor is loaded with the variables of proportion of Blacks, proportion of Hispanics, proportion of female-headed household with young children and proportion of unemployment. Similarly, in Wong and Hillier's study, the proportion of Blacks, proportion of female-headed household with young children and proportion of unemployment were loaded on the same factor. In their study, these variables were loaded on the first factor along with poverty-related variables including proportion of households with public assistance income, proportion of households with income 75 percent below poverty and proportion of subfamilies. The second factor in Wong and Hillier's study, which they label instability, is loaded with the variables of proportion of one-person households, proportion of households recently moved, proportion of rented housing units and rent income ratio.

In the current study, the proportion of Blacks, proportion of female-headed household with young children and proportion of unemployment were loaded on different factor with the poverty-related variables. This indicates the neighborhoods with higher proportion of Blacks, higher proportion of female-headed households with young children and higher rates of unemployment are not necessarily deprived. I have tried to redo the principal components analysis using census tracts rather than census tract groups, but the result is not different. The variables of proportion of Blacks, proportion of Hispanics, proportion of female-headed household with young children and proportion of unemployment were still loaded on the same factor but separated from the poverty-related variables. I should note that further analysis should be done to investigate why these three variables are not loaded on the same factor along with the poverty-related variables.

This study shows that the variables of proportion of Blacks and proportion of Hispanics are highly correlated in opposite direction. Hispanics in Miami-Dade County makes up nearly sixty percent of the total of Miami-Dade County population. On the other hand, Blacks is a minority in Miami-Dade County which makes up only twenty one percent of the total of Miami-Dade County population. In Wong and Hillier's study with the case study of the city of Philadelphia, both Blacks and Hispanics are minorities. They are not highly correlated. In Philadelphia, Blacks makes up about forty percent and Hispanics makes up only five percent of the total of Philadelphia population. In addition, in Miami-Dade County there are many more middle class Hispanics, notably those migrated from Cuba, than in Philadelphia where Hispanics tend to occupy poorer neighborhoods. This is the explanation why the variables of proportion of Hispanics and proportion of Blacks were loaded differently in Wong and Hillier's study and in the current study.

The third factor is loaded with the variables of proportion of subfamilies in negative direction and proportion of one-person households. This indicates the neighborhoods with low proportion of subfamilies and high proportion of one-person household are not necessarily deprived. Such neighborhoods are also different from neighborhoods characterized by the second factor. Such neighborhood is of importance in explaining the incidence of homelessness because the proportion of subfamilies and the proportion of one-person household represent the extent of doubling-up. The doubling up is one way for homeless to stay off the streets and homeless shelters. In the meantime, the third factor in Wong and Hillier's study, which they label Hispanic-overcrowded, is loaded with two variables including proportion of Hispanics and proportion of housing units with more than two persons per room.

2. Factors Associated with the Rate of Prior Addresses of the Homeless Men

This study analyzes the distribution of prior addresses of 510 homeless men by census tract groups and link them with three factors resulted from the principal components

analysis. In order to identify the factors associated with the rate of prior addresses of the homeless, this study uses OLS regression and the results are presented in **Table 5.3**.

The adjusted R-square of the model is 0.541, which is relatively high. This model suggests that 54.1% of the variance in the rate of prior addresses of the homeless men can be explained by three factors resulted from the principal components analysis. The F-value of this model is 44.176 and the significance level of the model is .000. It means that the model is well acceptable.

Table 5.3.
OLS Regression Model of the Prior Addresses of Homeless Men

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.409	.072		-5.700	.000
	Deprivation	.639	.072	.572	8.857	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.476	.072	.427	6.601	.000
	Proportion of one-person households	.234	.072	.209	3.242	.002

Table 5.3 shows that deprivation, proportion of Blacks, female-headed household with young children and unemployment, and proportion of one-person households are statistically significant and positively associated with the rate of prior addresses of homeless men. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are significant at p level of 0.000. Meanwhile, proportion of one-person households is significant at p level of 0.002.

This model suggests that most homeless men formerly resided in areas characterized by deprivation. Deprivation in a census tract group is the strongest predictor, in terms of the standardized coefficient as shown in **Table 5.3**. Census tract groups with low proportion of subfamilies and high proportion of one-person households are less significant than census tract groups with deprivation and proportion of Blacks, female-headed household with young children and unemployment in producing homeless men.

As indicated in previous studies of the prior addresses of the homeless (Culhane, et. al., 1996; Wong and Hillier, 2001), the prior addresses of the homeless tend to be concentrated. The prior addresses of the homeless are spatially autocorrelated. Upon completion of the OLS models, the dependent variable of the rate of the prior addresses of homeless men was tested for spatial autocorrelation using CrimeStat 3.0 (Levine, 2004).

A Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless men (LNMEN01), which is $p=0.0001$, showing positive spatial autocorrelation (Moran's $I=0.100735$). This result suggests that areas with high rate of the prior addresses of homeless men tend to be close with other high-rate areas.

The Moran's I is a test of global autocorrelation. This test does not differentiate between spatial autocorrelation for different subsets. Levine (2004) asserted that a Moran correlogram is able to examine the spatial autocorrelation for different distance intervals. This test indicates how concentrated or distributed is the spatial autocorrelation. The Moran correlogram of homeless men can be seen in **Appendix G**. The figure shows that the Moran's I at short distance of less than 5 miles is high, nearly 0.40. As the distance between zones increase, the Moran's I value drops off until about 21 miles where upon it approaches the global Moran's I value. The empirical Moran's I value of homeless men is higher than the maximum simulated Moran's I value with random data. It suggests that it is highly unlikely that the Moran's I values obtained for each the distance intervals was due to chance based on the distribution of random Moran's I values (Levine, 2004).

As noted earlier this study uses spatial regression model to correct the estimate of OLS parameter due to the existence of spatial autocorrelation. Using S-PLUS version 6.2 - statistical software developed by Insightful, Inc., the result of spatial regression for identifying factors associated with the rate of the prior addresses of homeless men can be seen in **Table 5.4**.

Table 5. 4.
Spatial Regression Model of the Prior Addresses of Homeless Men

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	-.4093	.0000	-1.37+8	.0000
	Deprivation	.6495	.0720	9.0148	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.4799	.0721	6.6552	.0000
	Proportion of one-person households	.2198	.0720	3.0538	.0029

The result of spatial regression shows the estimates of the spatial regression model are similar with those of OLS model. All predictors are still statistically significant and positively associated with the rate of prior addresses of homeless men. There is just a slight decrease of p level of the proportion of one-person households from 0.002 on the OLS model to 0.0029 on the spatial regression model.

3. Factors Associated with the Rate of Prior Addresses of the Homeless Women

There are 310 prior addresses of homeless women that were analyzed in this study. The result of OLS regression analysis to determine factors associated with the rate of the prior addresses of homeless women is presented in **Table 5.5** The adjusted R-square of the model is 0.424, which is lower than that of the model of homeless men. This model suggests that 42.4% of the variance in the rate of prior addresses of the homeless women can be

explained by the independent variables. The F-value of this model is 27.982 and the significance level of the model is .000.

Table 5.5 shows that deprivation and proportion of Blacks, female-headed household with young children and unemployment are statistically significant and positively associated with the rate of prior addresses of homeless women. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are significant at p level of 0.000. In contrast with homeless men, the most homeless women formerly did not reside in areas that are characterized by high proportion of one-person households and low proportion of subfamilies.

As expected, the proportion of Blacks, female-headed household with young children and unemployment is the strongest predictor of the rate of the prior addresses of homeless women. This predictor suggests that census tract groups with concentration of Blacks, high proportion of female householders with children under six and high rates of unemployment are strongly and positively related to producing more homeless women.

With regard to the predictor of deprivation, homeless women have a lower standardized coefficient of this predictor (.329) than homeless men (.572). Deprivation is the strongest predictor for homeless men and is second to proportion of Blacks, female-headed households with young children and unemployment for homeless women. This finding reinforces the finding in the previous chapter that prior addresses of homeless women are less tied to neighborhoods with extreme poverty than homeless men.

Table 5.5
OLS Regression Model of the Prior Addresses of Homeless Women

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.669	.096		-6.939	.000
	Deprivation	.440	.097	.329	4.540	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.748	.097	.559	7.720	.000
	Proportion of one-person households	.187	.097	.140	1.933	.056

This study also examined the spatial autocorrelation in the dependent variable of the rate of the prior addresses of homeless women (LNWOMEN01). This study indicates that a Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless women ($p=0.0001$) and shows positive spatial autocorrelation (Moran's $I=0.069293$). This result suggests that areas with high rate of the prior addresses of homeless women are likely to be concentrated.

The Moran correlogram of homeless women, which is presented in **Appendix G** shows that the Moran's I at short distance of less than 5 miles is nearly 0.30. As the distance

between zones increase, the Moran's I value drops off until about 21 miles where upon it approaches the global Moran's I value.

The spatial regression model of the prior addresses of homeless women as shown in **Table 5.6** suggests that there is no significant difference with the OLS regression model. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are still statistically highly significant ($p=0.0000$). The proportion of one-person households is still statistically insignificant.

Table 5.6.
Spatial Regression Model of the Prior Addresses of Homeless Women

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	-.6695	.0000	-2.36+8	.0000
	Deprivation	.4492	.0965	4.6551	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.6817	.0972	7.0162	.0000
	Proportion of one-person households	.1562	.0970	1.6109	.1102

4. Factors Associated with the Rate of Prior Addresses of the Homeless Family

This study analyzes the distribution of prior addresses of 231 homeless families and identifies the factors associated with the rate of prior addresses of the homeless family. This study uses OLS regression and the results are presented in **Table 5.7**. The adjusted R-square of the model is 0.365, which is relatively low. This model suggests that 36.5% of the variance in the rate of prior addresses of the homeless family can be explained by the independent variables in this study. There should be other variables associated with the rate of the prior addresses of homeless family that were excluded in this study. The F-value of this model is 22.038 and the significance level of the model is .000.

Table 5.7 shows that deprivation and proportion of Blacks, female-headed household with young children and unemployment are statistically significant and positively associated with the rate of prior addresses of homeless family. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are significant at p level of 0.000.

The proportion of Blacks, female-headed household with young children and unemployment is the strongest predictor of the rate of the prior addresses of homeless family, as expected. Areas with high proportion of female householder with children under six, concentration of Blacks and high rates of unemployment are strongly and positively related to producing more homeless family.

The predictor of proportion of one-person households is negatively associated but not significant with the rate of prior addresses of homeless family. This suggests that census tract groups with low proportion of households with subfamilies and high proportion of one-person households are negatively related to producing homeless families but insignificant. This finding differs from the models of the rate of prior addresses of homeless men and homeless women.

Table 5. 7.
OLS Regression Model of the Prior Addresses of Homeless Family

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.873	.107		-8.139	.000
	Deprivation	.353	.108	.249	3.280	.001
	Proportion of Blacks, female-headed household with young children and unemployment	.801	.108	.565	7.440	.000
	Proportion of one-person households	-.011	.108	-.008	-.100	.921

The spatial autocorrelation within the dependent variable of the rate of the prior addresses of homeless family (LNFAMILY01) was also tested. This study indicates that a Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless family ($p=0.0001$) and shows positive spatial autocorrelation (Moran's $I=0.051430$).

This result suggests that areas with high rate of the prior addresses of homeless family tend to be clustered. The Moran correlogram of homeless family, which is shown in **Appendix G** indicates that the Moran's I at short distance of less than 8 miles is nearly 0.20. As the distance between zones increase, the Moran's I value decreases until about 29 miles where upon it approaches the global Moran's I value.

The result of spatial regression as presented in **Table 5.8** shows the estimates of the spatial regression model do not change much those of OLS model. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are statistically significant and positively associated with the rate of prior addresses of homeless families. Proportion of one-person households is still negatively associated but not statistically significant with the rate of prior addresses of homeless families. The spatial regression model increases the significant level of deprivation from 0.001 in the OLS regression model to 0.0008 and that of proportion of one-person households from 0.921 in the OLS regression model to 0.4620.

Table 5. 8.
Spatial Regression Model of the Prior Addresses of Homeless Family

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	-.8725	.0000	-2.94+8	.0000
	Deprivation	.3738	.1081	3.4563	.0008
	Proportion of Blacks, female-headed household with young children and unemployment	.8729	.1077	8.1056	.0000
	Proportion of one-person households	-.0795	.1078	-0.7382	.4620

5. Factors Associated with the Rate of Prior Addresses of the Homeless Individuals

There are 586 prior addresses of homeless individuals that were analyzed in this study. The result of OLS regression analysis to determine factors associated with the rate of the prior addresses of homeless individuals is presented in **Table 5.9**. The adjusted R-square of the model is 0.530, which is much higher than that of the homeless family model. This model suggests that 53.0% of the variance in the rate of prior addresses of the homeless individuals can be explained by the three uncorrelated factors resulted from the principal components analysis. The F-value of this model is 42.291 and the significance level of the model is .000.

Table 5.9 shows that deprivation, proportion of Blacks, female-headed household with young children and unemployment, and proportion of one-person households are statistically significant and positively associated with the rate of prior addresses of homeless men. Deprivation and proportion of Blacks, female-headed household with young children and unemployment, proportion of one-person households are significant at p level of 0.000. Among the three factors in the model, deprivation is the strongest predictor of the rates of prior addresses of homeless individuals.

This model suggests that most homeless individuals formerly resided in areas characterized by deprivation. Most of homeless individuals also formerly resided in areas with high proportion of Blacks, female-headed households with young children and unemployment as well as in areas characterized by high proportion of one-person households. In contrast with homeless families, the proportion of one-person household is positively associated and statistically highly significant with the rate of prior addresses of homeless individuals.

Regarding the predictor of deprivation, homeless individuals have a higher standardized coefficient of this predictor (.545) than homeless family (.249). Deprivation is the strongest predictor for homeless individuals and is second to proportion of Blacks, female-headed households with young children and unemployment for homeless family.

This finding reinforces the finding in the previous chapter that the spatial distributions of prior addresses of homeless individuals are more concentrated in areas of high poverty than homeless family.

Table 5. 9.
OLS Regression Model of the Prior Addresses of Homeless Individuals

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.400	.073		-5.504	.000
	Deprivation	.609	.073	.545	8.342	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.482	.073	.432	6.610	.000
	Proportion of one-person households	.269	.073	.241	3.687	.000

Using CrimeStat 3.0, this study tested the presence of spatial autocorrelation. A Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless individuals (LNSINGLE01), which is $p=0.0001$, showing positive spatial autocorrelation (Moran's $I=0.116367$). This result suggests that areas with high rate of the prior addresses of homeless individuals tend to be close with other high-rate areas.

The Moran correlogram of homeless individuals can be seen in **Appendix G**. The figure shows that the Moran's I at short distance of less than 8 miles is high, nearly 0.40. As the distance between zones further, the Moran's I value decreases until about 29 miles where upon it approaches the global Moran's I value.

This study uses spatial regression model to correct the estimate of OLS parameter due to the presence of spatial autocorrelation. Using S-PLUS version 6.2, the result of spatial regression for identifying factors associated with the rate of the prior addresses of homeless individuals is presented in **Table 5.10**.

The result of spatial regression shows the estimates of the spatial regression model are not too much different with those of OLS model. Deprivation, proportion of Blacks, female-headed household with young children and unemployment and proportion of one-person households are statistically significant and positively associated with the rate of prior addresses of homeless individuals. The spatial regression model only reduces the significance level of proportion of one-person households from 0.000 in the OLS regression model to 0.0002 in the spatial regression model.

Table 5. 10.
Spatial Regression Model of the Prior Addresses of Homeless Individuals

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	-.3998	.0000	-9.05+8	.0000
	Deprivation	.6133	.0731	8.3920	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.4813	.0727	6.6157	.0000
	Proportion of one-person households	.2848	.0729	3.9063	.0002

6. Factors Associated with the Rate of Prior Addresses of the Homeless with ADM Problem

This study analyzes the distribution of prior addresses of 423 homeless with ADM problem and identifies the factors associated with the rate of the prior addresses of homeless with ADM problem. This study uses OLS regression and the results can be found in **Table 5.11**. The adjusted R-square of the model is 0.489, which is relatively high. This model suggests that 48.9% of the variance in the rate of prior addresses of the homeless with ADM problem can be explained by the independent variables in this study. The F-value of this model is 36.086 and the significance level of the model is .000. It means that the model is well acceptable.

Table 5. 11.
OLS Regression Model of the Prior Addresses of Homeless with ADM Problem

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.498	.082		-6.079	.000
	Deprivation	.663	.082	.548	8.046	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.446	.082	.369	5.411	.000
	Proportion of one-person households	.311	.082	.257	3.773	.000

Table 5.11 shows that deprivation, proportion of Blacks, female-headed household with young children and unemployment, and proportion of one-person households are statistically highly significant and positively associated with the rate of prior addresses of homeless with ADM problems. Deprivation, proportion of Blacks, female-headed household with young children and unemployment and proportion of one-person households are significant at p level of 0.000. Among the three factors in the model, deprivation is the strongest predictor of the rates of prior addresses for homeless with ADM problem, in terms of the standardized coefficient.

This model suggests that most homeless with ADM problems formerly resided in areas characterized by deprivation. In addition, census tract groups with concentration of Blacks, high proportion of female-headed households with young children, high rates of unemployment and census tract groups with high proportion of one-person households are related to producing more homeless with ADM problems.

This study tested the present of spatial autocorrelation by using CrimeStat 3.0. A Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless with ADM problem (LNADM01), which is $p=0.0001$, showing positive spatial autocorrelation (Moran's $I=0.095731$). This result suggests that areas with high rate of the prior addresses of homeless with ADM problem tend to be clustered.

The Moran correlogram of homeless with ADM problem can be seen in **Appendix G**. The figure shows that the Moran's I at short distance of less than 8 miles is high, nearly 0.35. As the distance between zones increase, the Moran's I value drops off until about 29 miles where upon it approaches the global Moran's I value.

The spatial regression model was used to correct the estimate of OLS parameter because spatial autocorrelation exists. Using S-PLUS version 6.2, the result of spatial regression for identifying factors associated with the rate of the prior addresses of homeless with ADM problem is presented in **Table 5.12**.

Table 5. 12.
Spatial Regression Model of the Prior Addresses of Homeless with ADM Problem

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	-.4984	.0000	-1.28+8	.0000
	Deprivation	.6687	.0823	8.1132	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.4428	.0822	5.3880	.0000
	Proportion of one-person households	.3247	.0823	3.9459	.0001

The result of spatial regression shows the estimates of the spatial regression model do not much change those of OLS model. Deprivation and proportion of Blacks, female-

headed household with young children and unemployment and proportion of one-person households are statistically significant and positively associated with the rate of prior addresses of homeless with ADM problems. The spatial regression model only slightly reduces the significance level of proportion of one-person households from 0.000 in the OLS regression model to 0.0001 in the spatial regression model.

7. Factors Associated with the Rate of Prior Addresses of the Homeless without ADM Problem

There are 394 prior addresses of homeless without ADM problem in this study. The distributions of these prior addresses were analyzed to identify the factors associated with the rate of the prior addresses of homeless without ADM. This study uses OLS regression and the results are presented in **Table 5.13**. The adjusted R-square of the model is 0.492, which is slightly higher than that of homeless with ADM problem. This model suggests that 49.2% of the variance in the rate of prior addresses of the homeless without ADM problem can be explained by the independent variables in this study. The F-value of this model is 36.467 and the significance level of the model is .000.

Table 5.13 shows that deprivation and proportion of Blacks, female-headed household with young children and unemployment are statistically significant and positively associated with the rate of prior addresses of homeless without ADM problems. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are significant at p level of 0.000. The proportion of one-person households is also positively associated with the rate of prior addresses of homeless without ADM problems. In contrast with homeless with ADM problem, this predictor is statistically insignificant.

This result suggests that census tract groups with deprivation and high proportion of Blacks, high proportion of female-headed household with young children and high rates of unemployment are significantly related to producing more homeless without ADM problems.

Table 5. 13.
OLS Regression Model of the Prior Addresses of Homeless
without ADM Problem

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.557	.084		-6.639	.000
	Deprivation	.521	.084	.420	6.182	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.697	.084	.563	8.280	.000
	Proportion of one-person households	.137	.084	.110	1.623	.107

With regard to the predictor of deprivation, homeless without ADM problems have a lower standardized coefficient of this predictor (.420) than homeless with ADM problems (.548). Deprivation is the strongest predictor for homeless with ADM problems and is second to proportion of Blacks, female-headed households with young children and unemployment for homeless without ADM problems. This finding reinforces the finding in the previous chapter that prior addresses of homeless without ADM problems are less tied to neighborhoods with extreme poverty than homeless with ADM problems.

Using CrimeStat 3.0, this study tested the present of spatial autocorrelation. A Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless without ADM problem (LNNONADM01), which is $p=0.0001$, showing positive spatial autocorrelation (Moran's $I=0.089059$). This result suggests that areas with high rate of the prior addresses of homeless without ADM problem are likely to be clustered.

The Moran correlogram of homeless individuals can be seen in **Appendix G**. The figure shows that the Moran's I at short distance of less than 8 miles is high, more than 0.30. As the distance between zones increase, the Moran's I value decreases until about 29 miles where upon it approaches the global Moran's I value.

This study uses spatial regression model to correct the estimate of OLS parameter due to the positive spatial autocorrelation. **Table 5.14** presents the result of spatial regression for identifying factors associated with the rate of the prior addresses of homeless without ADM problems.

The spatial regression model of the prior addresses of homeless without ADM problems suggests that there is no significant difference with the OLS regression model. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are still statistically highly significant ($p=0.0000$). The proportion of one-person households is still statistically insignificant.

Table 5. 14.
Spatial Regression Model of the Prior Addresses of Homeless
without ADM Problem

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	-.5566	.0000	-1.72+8	.0000
	Deprivation	.5239	.0843	6.2169	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.7037	.0846	8.3153	.0000
	Proportion of one-person households	.1146	.0847	1.3528	.1790

8. Factors Associated with the Rate of Prior Addresses of the Chronic Homeless

This study analyzes the distribution of prior addresses of 231 chronic homeless and identifies the factors associated with the rate of the prior addresses of chronic homeless. This study uses OLS regression and the results can be found in **Table 5.15**. The adjusted R-square of the model is 0.443 meaning 44.3% of the variance in the rate of prior addresses of the chronic homeless can be explained by the three uncorrelated variables resulted from the principal components analysis. The F-value of this model is 30.158 and the significance level of the model is .000.

Table 5.15 shows that deprivation, proportion of Blacks, female-headed household with young children and unemployment, and proportion of one-person households are statistically significant and positively associated with the rate of prior addresses of chronic homeless. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are significant at p level of 0.000. Meanwhile, proportion of one-person households is significant at p level of 0.001.

This model suggests that most chronic homeless formerly resided in areas characterized by deprivation. Areas with concentration of Blacks, high proportion of female-headed households with young children and high rates of unemployment are also strongly related to producing more chronic homeless. Areas with low proportion of subfamilies and high proportion of one-person households are less significant than areas with deprivation and proportion of Blacks, female-headed household with young children and unemployment in producing chronic homeless.

This study tested the present of spatial autocorrelation by using CrimeStat 3.0. A Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of chronic homeless (LNCHRONIC01), which is $p=0.0001$, showing positive spatial autocorrelation (Moran's $I=0.098495$). This result suggests that areas with high rate of the prior addresses of chronic homeless are likely to be concentrated.

Table 5. 15.
OLS Regression Model of the Prior Addresses of Chronic Homeless

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.788	.102		-7.713	.000
	Deprivation	.758	.103	.526	7.393	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.498	.103	.345	4.854	.000
	Proportion of one-person households	.359	.103	.249	3.502	.001

The Moran correlogram of homeless with ADM problem can be seen in **Appendix G**. The figure shows that the Moran's I at short distance of less than 8 miles is high, nearly 0.40. As the distance between zones increase, the Moran's I value drops off until about 29 miles where upon it approaches the global Moran's I value. The spatial regression model was used to correct the estimate of OLS parameter due to the presence of spatial autocorrelation. **Table 5.16** presents the result of spatial regression for identifying factors associated with the rate of the prior addresses of chronic homeless.

The result of spatial regression shows the estimates of the spatial regression model are not too much different with those of OLS model. All predictors are still statistically significant and positively associated with the rate of prior addresses of homeless men. There is just a slight decrease of p level of the proportion of one-person households from 0.001 in the OLS model to 0.0013 in the spatial regression model.

Table 5. 16.
Spatial Regression Model of the Prior Addresses of Chronic Homeless

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-.7875	.0000	-2.56+8	.0000
	Deprivation	.7269	.1033	7.0353	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.4628	.1033	4.4787	.0000
	Proportion of one-person households	.3406	.1031	3.3041	.0013

9. Factors Associated with the Rate of Prior Addresses of the Non-Chronic Homeless

There are 586 prior addresses of non-chronic homeless that were analyzed in this study. The result of OLS regression analysis to determine factors associated with the rate of the prior addresses of non-chronic homeless is presented in **Table 5.17**. The adjusted R-square of the model is 0.499, which is higher than that of the model of chronic homeless. This model suggests that 49.9% of the variance in the rate of prior addresses of the non-chronic homeless can be explained by the independent variables. The F-value of this model is 37.494 and the significance level of the model is .000.

Table 5.17 shows that deprivation and proportion of Blacks, female-headed household with young children and unemployment are statistically significant and positively associated with the rate of prior addresses of non-chronic homeless. Deprivation and proportion of Blacks, female-headed household with young children and unemployment are significant at p level of 0.000. The proportion of one-person households is statistically significant at p level of 0.017 and positively associated with the rate of prior addresses of

non-chronic homeless. Compared with chronic homeless, the predictor of proportion of one-person households is less significant in producing non-chronic homeless.

Table 5. 17.
OLS Regression Model of the Prior Addresses of Non-Chronic Homeless

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.424	.076		-5.592	.000
	Deprivation	.503	.076	.446	6.607	.000
	Proportion of Blacks, female-headed household with young children and unemployment	.605	.076	.535	7.933	.000
	Proportion of one-person households	.185	.076	.164	2.427	.017

Regarding the predictor of deprivation, non-chronic homeless individuals have a lower standardized coefficient of this predictor (.446) than chronic homeless (.526). Deprivation is the strongest predictor for chronic homeless and is second to proportion of Blacks, female-headed households with young children and unemployment for non-chronic homeless. This finding reinforces the finding in the previous chapter that the spatial distribution of prior addresses of chronic homeless are more tied in areas of high poverty than non-chronic homeless.

The spatial autocorrelation within the dependent variable of the rate of the prior addresses of non-chronic homeless (LNNONCHRONIC01) was also tested. This study indicates that a Moran's I-test for spatial autocorrelation was significant for the rate of the prior addresses of homeless family ($p=0.0001$) and shows positive spatial autocorrelation (Moran's $I=0.089989$). This result suggests that areas with high rate of the prior addresses of non-chronic homeless tend to be concentrated. The Moran correlogram of non-chronic homeless, which is shown in **Appendix G** indicates that the Moran's I at short distance of less than 8 miles is nearly 0.30. As the distance between zones increase, the Moran's I value decreases until about 29 miles where upon it approaches the global Moran's I value.

Table 5.18 shows the results of the spatial regression model of the prior addresses of non-chronic homeless. This table suggests that there is no significant difference with the OLS regression model. Deprivation and proportion of Blacks, female-headed household with young children and unemployment and proportion of one-person households are statistically significant and positively associated with the rate of prior addresses of non-chronic homeless. The spatial regression model increases the significance level of proportion of one-person households from 0.017 in the OLS regression model to 0.0097.

Table 5. 18.
Spatial Regression Model of the Prior Addresses of Non-Chronic Homeless

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-.4242	.0000	-1.42+8	.0000
	Deprivation	.5169	.0761	6.7899	.0000
	Proportion of Blacks, female-headed household with young children and unemployment	.6183	.0758	8.1559	.0000
	Proportion of one-person households	.2014	.0765	2.6349	.0097

10. Summary

The results of the OLS regression models and the spatial regression models indicate clearly the differences of the factors in census tract groups associated with the rate of prior addresses of homeless people between homeless men and homeless women, homeless family and homeless individuals, homeless with ADM problem and homeless without ADM problem and between chronic homeless and non-chronic homeless.

The summary of the OLS regression models showing factors associated with the rate of prior addresses of eight types of homeless people is presented in **Table 5.19**. The numbers shown in the table are the standardized coefficients of the OLS regression models. The significance level for each model at $p \leq 0.001$, $p \leq 0.01$, or $p \leq 0.05$ is also shown in the table.

As indicated earlier the spatial autocorrelations were identified in the rate of residential origins of eight homeless categories. In order to correct the estimates of the OLS parameter due to the existence of spatial autocorrelation, this study employed spatial regression models. The summary of the spatial regression models showing factors associated with the rate of prior addresses of homeless men, homeless women, homeless family, homeless individuals, homeless without ADM problems, homeless without ADM problems, chronic homeless and non-chronic homeless is presented in **Table 5.20**. The numbers shown in the table are the unstandardized coefficients of the spatial regression models.

The results of the spatial regression models are similar with those of the OLS models, except for homeless family, homeless individuals, homeless without ADM problems, and non-chronic homeless. Meanwhile, the spatial regression models correct the OLS model of chronic homeless and non-chronic homeless in terms of the significance level of proportion of one-person households. The few changes on the OLS models may be caused by the robustness of the OLS models and the relatively low spatial autocorrelation.

Table 5. 19.
The Summary of the OLS Regression Model

Homeless Types	Factors		
	Deprivation	Proportion of Blacks, female-headed household with young children, and unemployment	Proportion of one-person households
Homeless Men	0.572***	0.427***	0.209**
Homeless Women	0.329***	0.559***	0.140
Homeless Individuals	0.545***	0.432***	0.241***
Homeless Family	0.249***	0.565***	-.008
Homeless with ADM Problem	0.548***	0.369***	0.257***
Homeless without ADM Problem	0.420***	0.563***	0.110
Chronic Homeless	0.526***	0.345***	0.249***
Non-chronic Homeless	0.446***	0.535***	0.164*

Note: *** - significant at $p < 0.001$, ** - significant at $p < 0.01$, * - significant at $p < 0.05$

Both OLS models and spatial regression models show that deprivation and proportion of Blacks, female-headed households with young children, and unemployment are statistically highly significant and positively associated with the rate of prior addresses of eight types of homeless people: homeless men, homeless women, homeless family, homeless individuals, homeless without ADM problems, homeless without ADM problems, chronic homeless and non-chronic homeless.

This finding suggests that most homeless people of varying types formerly resided in neighborhoods characterized by high deprivation and high proportion of Blacks, female-headed households with young children, and unemployment. The neighborhoods with high deprivation are characterized by a low educational attainment of their residents, high concentration of households with public assistance income, poverty, lack of social networks and family relationship, transportation mismatch, high proportion of rental units, rental affordability problem and rental overcrowding. Such neighborhoods are also characterized by low median households income and low median contract rent.

The pair-wise comparisons of homeless types by gender, family status, the occurrence of ADM problems and chronicity with regard to the predictor of deprivation clearly show differences in standardized coefficients between homeless types. Deprivation has a higher coefficient for homeless men, homeless individuals, homeless with ADM problems and chronic homeless than for homeless women, homeless family, homeless without ADM problems and non-chronic homeless. This finding reinforces the findings as presented in the previous chapter that the spatial distribution of prior addresses of homeless men, homeless individuals, homeless with ADM problems and chronic homeless are more tied to neighborhoods of high poverty than homeless women, homeless family, homeless without ADM problems and non-chronic homeless.

With regard to the predictor of proportion of one-person households, the pair-wise comparisons of homeless types by gender, family status, the occurrence of ADM problems and chronicity also clearly show differences between homeless types. As mentioned earlier,

two variables were loaded in this predictor: proportion of subfamilies in negative direction and proportion of one-person households. The neighborhoods with high proportion of one-person households are also characterized by low proportion of subfamilies.

Table 5. 20.
The Summary of the Spatial Regression Model

Homeless Types	Factors		
	Deprivation	Proportion of Blacks, female-headed household with young children, and unemployment	Proportion of one-person households
Homeless Men	0.6495***	0.4799***	0.2198**
Homeless Women	0.4492***	0.6817***	0.1562
Homeless Individuals	0.6133***	0.4813***	0.2848***
Homeless Family	0.3738***	0.8729***	-.0795
Homeless with ADM Problem	0.6678***	0.4428***	0.3247***
Homeless without ADM Problem	0.5239***	0.7037***	0.1146
Chronic Homeless	0.7269***	0.4628***	0.3406**
Non-chronic Homeless	0.5169***	0.6183***	0.2014

Note: *** - significant at $p \leq 0.001$, ** - significant at $p \leq 0.01$, * - significant at $p \leq 0.05$

The proportion of one-person households is positively associated with the rate of prior addresses of homeless men and homeless women. This predictor is a significant predictor for homeless men at $p \leq 0.01$ but it is insignificant for homeless women. Comparing models for homeless family and models for homeless individuals, the proportion of one-person households is not only different in term of significance level but also in the direction. The proportion of one-person households is negatively associated with the rate of prior addresses of homeless family but it is insignificant. On the contrary, the proportion of one-person households is positively associated with the rate of prior addresses of homeless individuals and significant at $p \leq 0.05$.

The proportion of one-person households is positively associated with the rate of prior addresses of homeless with ADM problems and homeless without ADM problems. This predictor is a significant predictor for homeless with ADM problem at $p \leq 0.001$ but it is insignificant for homeless without ADM problem. Similarly, the proportion of one-person households is positively associated with the rate of prior addresses of chronic homeless and non-chronic homeless. This predictor is a significant predictor for chronic homeless at $p \leq 0.01$ but it is insignificant for non-chronic homeless.

CHAPTER SIX

CONCLUSIONS AND POLICY IMPLICATIONS

This chapter presents the conclusion and policy implications of the spatial analyses of prior addresses of the homeless and the factors associated with the rate of prior addresses of the homeless people of varying types. Limitations of the study and directions for future research based on the findings of the study are also discussed.

1. Overview of the Findings

Spatial Distributions of Prior Addresses of the Homeless

This study attempted to seek the spatial distribution of prior addresses of the homeless people of varying types by gender, family status, the occurrence of alcohol, drug and mental health (ADM) problems, chronicity and veteran status. It hypothesizes that homeless people of varying types will have differential spatial distribution of their prior addresses.

This study used spatial distribution statistics and hot-spot analysis to examine the spatial distribution of the prior addresses of varying categories of the homeless. This study hypothesizes that homeless people of varying type will have differential spatial distribution of their prior addresses. Hypothesis 1.1 says that homeless women will report prior addresses that are more widely spread and less concentrated in poor neighborhoods than men. The results clearly show the difference between the spatial distributions of the prior addresses of homeless men and homeless women. The prior addresses of homeless men are more heavily concentrated in the Northern part of the study than other parts of the county. The Northern part of the study area is areas with high concentration of poverty. On the other hand, the prior addresses of homeless women are more equally distributed between the Northern parts and the Southern parts of the county. The statistical test for the mean centers and standard deviational ellipses differences between the prior addresses of homeless men and those of homeless women indicate that the differences are statistically significant at the p value $\leq .05$ level. The findings could bring new dimension, namely spatial distribution of residential origins, to gender perspective on homelessness problem.

Hypothesis 1.2 says that homeless families will report prior addresses that are more widely spread and less concentrated in poor neighborhoods than homeless individuals. Similar with the prior addresses of homeless women, the prior addresses of homeless families are equally distributed in the Northern parts and the Southern parts of the county. On the other hand, the prior addresses of homeless individuals are heavily concentrated in the Northern parts of the study area in which the people with extreme poverty are highly concentrated. The statistical test for the mean centers and standard deviational ellipses differences between the prior addresses of homeless families and those of homeless individuals indicate that the differences are statistically significant at the p value of $\leq .005$ level. Two previous studies on residential origins of the homeless investigated only the residential origins of homeless family in New York City and Philadelphia (Culhane, et. al., 1995; Wong and Hillier, 2001). The findings of this study expand the two previous studies with respect to other homeless categories. It clearly shows that spatial distributions of prior addresses of homeless family and those of homeless individuals are significantly different.

Regarding homeless category by the occurrence of ADM problem, this study hypothesize, in Hypothesis 1.3, that homeless with ADM problems will tend to report prior addresses that are more concentrated in poor neighborhoods than homeless without ADM problems. The study reveals the statistically significant differences in the spatial distribution of prior addresses between homeless with ADM problems and those of homeless without ADM problems. The prior addresses of homeless with ADM problem are more concentrated in the Northern part of Miami-Dade County in which poverty is heavily concentrated than other parts of Miami-Dade County. On the contrary, the prior addresses of homeless without ADM problems are distributed more evenly between the Northern parts and the Southern parts of Miami-Dade County. The statistical tests indicate that the differences between the spatial distribution of prior addresses of homeless with ADM problem and those of homeless without ADM problem are statistically significant at the p value $\leq .01$ level.

Hypothesis 1.4 says that chronic homeless will tend to report prior addresses more concentrated in poor neighborhoods more than non-chronic homeless. Similar with the prior addresses of homeless without ADM problems, the prior addresses of non-chronic homeless are equally distributed in the Northern parts and the Southern parts of the county. On the other hand, the prior addresses of chronic homeless are heavily concentrated in the Northern parts of the study area in which the poor neighborhoods are highly concentrated. The statistical test for the mean centers and standard deviational ellipses differences between the prior addresses of chronic homeless and those of non-chronic homeless indicate that the differences are statistically significant at the p value of $\leq .005$ level.

With regard to homeless category by veteran status, this study hypothesize, in Hypothesis 1.5, that homeless people who are veterans will tend to report prior addresses that are not spatially different from homeless people who are not veterans. The results show that homeless veteran and homeless non-veteran have no statistically significant differences in the spatial distribution of their prior addresses. Both homeless categories reported their prior addresses that are highly concentrated in the Northern part of the study area.

This study clearly shows similar pattern of the spatial distribution of prior addresses of homeless women to those of homeless women-dominated categories including homeless family, homeless without ADM problem and non-chronic homeless. The prior addresses of these homeless categories are less tied to neighborhoods of high poverty than those of homeless men and homeless men-dominated categories including homeless individuals, homeless with ADM problem and chronic homeless. This finding suggest that domestic violence as one of major causes of homelessness for women that is not confined strictly to neighborhoods of high poverty is one of variables that explains the differential distribution of prior addresses of homeless women and homeless women-dominated categories from homeless men and homeless men-dominated categories.

The findings of this study provide empirical support for the homelessness literature that the heterogeneity of the homeless is their most distinctive characteristics. The literature on homelessness has been well developed to show that each category of homeless has distinctive causes of homelessness. This study expands the literature on homelessness by investigating the spatial distribution of prior addresses of varying categories of the homeless and suggesting that the various factors associated with the causes of varying categories of the homeless did correspond to the spatial distribution of residential origins of the homeless. The spatial distribution of residential origins could be a new dimension in comparing and contrasting the characteristics of varying categories of the homeless.

Factors Associated with the Rate of Prior Addresses of the Homeless

This study also attempted to identify factors that are associated with the rate of prior addresses of the homeless people of varying types. It developed three groups of variables in census tract groups that are hypothesized to be associated with producing homeless including demographic, socioeconomic and housing factors. This study hypothesizes that different demographic, socioeconomic and housing factors are associated with differential rate of the prior addresses of homeless people.

Homeless Men vs. Homeless Women

The study indicates the differences between the factors in census tract groups that are associated with the rate of prior addresses of homeless men and those of homeless women. Proportion of one-person households is statistically significant and positively associated with the rate of prior addresses of homeless men but it is insignificant for homeless women. This result suggests that homeless men are more likely to report their prior addresses in neighborhoods characterized by high proportion of one-person households and low proportion of subfamilies than homeless women.

In addition, proportion of Blacks, female-headed household with young children and unemployment is the strongest predictor of the rate of the prior addresses for homeless women. Areas with concentration of Blacks, high proportion of female householder with young children and high rates of unemployment are strongly related to producing more homeless women. On the other hand, the strongest predictor of the rate of the prior addresses for homeless men is deprivation. Census tract groups that are characterized by deprivation strongly correspond to produce more homeless men. Areas with deprivation are characterized by a high concentration of persons without high school diploma, households with public assistance income, persons below 75% of poverty level, households below poverty level without telephone, households without cars, rental units, proportion median contract rent to median household income and overcrowded rental households. These census tract groups are also characterized by a low median household income and a low median contract rent.

Homeless Family vs. Homeless Individual

The differences between the factors associated with the rate of prior addresses of homeless family and those of homeless individuals were also identified. Proportion of one-person households is statistically significant and positively associated with the rate of prior addresses of homeless individuals. On the contrary, this predictor is insignificant and negatively associated with the rate of prior addresses of homeless family. This result suggests that homeless individuals formerly resided in the neighborhoods characterized by high proportion of one-person households and low proportion of subfamilies. On the other hand, homeless families previously lived in the neighborhoods characterized by low proportion of one-person households and high proportion of subfamilies. This finding also indicates that census tract groups with high proportion of one-person households and low proportion of subfamilies are related to producing more homeless individuals rather than homeless families.

Additionally, the strongest predictor of the rate of the prior addresses of homeless family is proportion of Blacks, female-headed household with young children and unemployment. Areas with concentration of Blacks, high proportion of female householder with young children and high rates of unemployment are strongly related to producing more homeless families. On the other hand, the strongest predictor of the rate of the prior

addresses of homeless individuals is deprivation. Census tract groups that are characterized by deprivation are highly significant in producing more homeless individuals.

Homeless with ADM Problem vs. Homeless without ADM Problem

The study also indicates the differences between the factors associated with the rate of prior addresses of homeless with ADM problem and those of homeless without ADM problem. Proportion of one-person households is statistically highly significant and positively associated with the rate of prior addresses of homeless with ADM problem but it is not significant for homeless without ADM problem. This result suggests that homeless with ADM problem are more likely than homeless without ADM problem to report their prior addresses in neighborhoods characterized by high proportion of one-person households and low proportion of subfamilies. Census tract groups with high proportion of one-person households and low proportion of subfamilies are related to producing more homeless with ADM problem rather than homeless without ADM problem.

In addition, the strongest predictor of the rate of the prior addresses of homeless with ADM problem is deprivation. This result suggests that most homeless with ADM problem formerly resided in the neighborhoods characterized by a low educational attainment of their residents, low proportion of households recently moved, high concentration of households with public assistance income, poverty, lack of social networks and family relationship, transportation mismatch, high proportion of rental units, rental affordability problem and rental overcrowding. Such neighborhoods are also characterized by low median households income and low median contract rent. On the other hand, the strongest predictor of the rate of the prior addresses of homeless without ADM problem is proportion of Blacks, female-headed household with young children and unemployment. This suggests that census tract groups with high proportion of Blacks, concentration of female-headed households with young children and high rate of unemployed persons are strongly related to producing more homeless without ADM problems.

Chronic Homeless vs. Non-Chronic Homeless

The differences between the factors associated with the rate of prior addresses of chronic homeless and those of non-chronic homeless were also identified. The spatial regression model of non-chronic homeless corrects the significance level of the OLS model of chronic homeless for the predictor of proportion of one-person household from $p \leq 0.05$ to insignificant.

Based on the spatial regression model, proportion of one-person households is statistically significant and positively associated with the rate of prior addresses of chronic homeless and it is insignificant for non-chronic homeless. This result suggests that chronic homeless are more likely than non-chronic homeless to report their prior addresses in neighborhoods characterized by high proportion of one-person households and low proportion of subfamilies.

Additionally, the strongest predictor of the rate of the prior addresses of chronic homeless is deprivation. This result suggests that most chronic homeless formerly resided in the neighborhoods characterized by deprivation. On the other hand, the strongest predictor of the rate of the prior addresses of non-chronic homeless is proportion of Blacks, female-headed household with young children and unemployment. This suggests that census tract groups with high proportion of Blacks, concentration of female-headed households with young children and high rate of unemployed persons are strongly related to producing more non-chronic homeless.

Summary

The results of this study clearly reveal that deprivation are statistically highly significant and positively associated with the rate of prior addresses of homeless people of varying types by gender, family status, the occurrence of ADM problem and chronicity. This finding suggests that the rate of prior addresses of the homeless is highly associated with poverty and housing problems. It also provides empirical support for the literature on homelessness that poverty and housing problems are highly correlated and primary causes of homelessness.

The OLS regression models and spatial regression models show that deprivation has a higher standardized coefficient for homeless men, homeless individuals, homeless with ADM problems and chronic homeless than for homeless women, homeless family, homeless without ADM problems and non-chronic homeless. This finding confirms the results of the spatial analysis of prior addresses of the homeless that homeless men, homeless individuals, homeless with ADM problems and chronic homeless are more tied to neighborhoods of high poverty than homeless women, homeless family, homeless without ADM problems and non-chronic homeless.

The study also indicates that the rate of prior addresses of homeless people by gender, family status, the occurrence of ADM problem and chronicity are associated with the proportion of Blacks. It provides support for the literature on homelessness that Black population is an at-risk group of being homeless. It is also consistent with the fact that Black homeless is overrepresented in Miami-Dade County as indicated in the 2005 point-in-time survey and the 2005 homeless census in Miami-Dade County.

The result of this study indicates that most homeless with ADM problem come from neighborhood characterized by the problem of housing affordability. Their homelessness may be caused substantially by the process of deinstitutionalized and society's treatment of mentally ill but also caused by the problem of housing affordability. This study does not have any ADM-related measure such as alcohol outlet and the distance from mental health facility. If such data was available, we can compare the significance of ADM-related variable with housing or other variables.

The spatial regression models result in very few changes in the estimates of the OLS parameters. Most of the spatial regression models are similar to those of the OLS model. There are only a few statistically significant changes: the changes in the statistical significance level of proportion of one-person households for homeless individuals, homeless with ADM problem and non-chronic homeless; and the change of the statistical significance level of deprivation for homeless family. The few changes in the OLS models may be due to their relatively low spatial autocorrelation and their robustness.

2. Implications of the Findings

The following section discusses the implication of the findings from this study to the theories of homelessness, research methods of homelessness and homelessness prevention programs. The discussion of the implication of the findings for homelessness prevention program is intended to better target the homelessness prevention program in Miami-Dade County.

Theories of Homelessness

The spatial analyses of prior addresses of the homeless people of varying types show the statistically significant differences in the spatial distribution of the prior addresses of varying types of the homeless including gender, family status, the occurrence of ADM problems and chronicity. Such findings provide empirical support for the homelessness theory that homeless is a heterogeneous population. The heterogeneity of the homeless is their most distinctive characteristics including the spatial distribution of their residential origins.

Homeless is not a homogenous population. Each type of the homeless has distinctive characteristics that distinguish one type of the homeless from other type of the homeless. The spatial distribution of the prior addresses can be a new characteristic that distinguishes between one type of the homeless and other type of the homeless. Theories of homelessness should take into account the heterogeneity of homeless population to better explain the intractability of homelessness problem.

The findings of this study concerning factors in the neighborhood associated with the rate of prior addresses of homeless people support for the homelessness theory that structural factors cause the incidence of homelessness. This study indicates that census tract groups with deprivation are statistically highly significant in producing more homeless of varying categories. Areas with deprivation are characterized by poverty-related indicators and housing-problem indicators. This result indicates that poverty is strongly associated with housing problem to cause homelessness. Among structural factors, poverty and housing problems are the most important factors that cause homelessness (Burt, 1992; Dolbeare, 1996). The strong association between poverty and housing problem as indicated in this study also supports the extent of abeyance construct (Hopper, 2003). The incidence of homelessness can be perceived as a mismatch between the scarce available affordable housing rental units and the excessive supply of poor people.

This study also indicates that another structural factor namely unemployment has impact on the rate of homelessness. This study reveals that census tract groups that characterized by deprivation and high rate of unemployment, proportion of Blacks and female-headed households with young children are strongly and positively related to producing homelessness. This finding supports the theory that the extents of unemployment and poverty have impact on the incidence of homelessness (Lee, et. al., 2003; Takahashi, 1993). In addition, the finding also supports the theory that female-headed household with young children are at-risk of homelessness (Early, 2005; Takahashi, 1996).

The results of the spatial analyses of residential origins of the various homeless categories suggest the possibility that domestic violence as well as other gender-based variables are significant variables that explains the differential distribution of homeless women, homeless family, homeless without ADM problems and non-chronic homeless from homeless men, homeless individuals, homeless with ADM problem and chronic homeless. This finding supports the theory that domestic violence, for example, plays a significant role in explaining the incidence of homelessness among women (Burt, 2001; Crook, 1999; Zugazuga, 2004).

Research Methods of Homelessness

This study used the rate of prior addresses of the homeless people of varying types in Miami-Dade County as dependent variables. The rate of prior addresses of the homeless people is an intracity prevalence measure of homelessness. The use of intracity prevalence measure of homelessness in this study clearly shows the advantages of this measure over the

intercity measures. As indicated by Culhane, et. al. (1996), the intracity measure allows this study to assess spatial variation and processes that contribute to the incidence of homelessness within a jurisdiction having the same policy and regulation. The study displays the advantages of the use of intracity prevalence measure of homelessness that may lead to more extensive use of such a measure in next homelessness researches.

In addition to the use of intracity prevalence measure of homelessness, this study also reveals the advantages of the use of Geographic Information Systems (GIS) and hot-spot analysis in investigating spatial distribution of prior addresses of the homeless people of varying types. As indicated previously by Wong and Hillier (2001), the application of GIS allows this study to integrate data from 2000 Census and the 2005 point-in-time homelessness survey, produce spatial display of data that is easy to understand, and perform spatial data analysis to examine the spatial distribution of residential origins of the homeless.

The use of hot-spot analysis in this study complements the use of GIS to provide picture of concentration of the prior addresses of the homeless. The application of hot-spot analysis allows this study to analyze the concentration and density variation of the prior addresses of the homeless. The study clearly shows the advantages of the use of GIS and hot-spot analysis that may contribute to more extensive use of GIS and hot-spot analysis in investigating other issues on homelessness.

Homelessness Prevention Programs

Current Programs

As indicated in the federal continuum of care model, homeless prevention program is a component of the Miami-Dade County Continuum of Care (Miami-Dade County Homeless Trust, 2004). The Homeless Prevention program in Miami-Dade County has two components: Homeless Helpline and rental assistance (Mahar, 2005; Raymond, 2005). Those components were funded by Miami-Dade County Homeless Trust and run by Camillus House.

Homeless Helpline is a toll-free number providing information and referrals to persons in Miami-Dade who are homeless or near-homeless. Miami-Dade County Homeless Trust publicizes the Homeless Helpline by placing posters in various public places throughout the county. The caseworkers in Camillus House answer the Homeless Helpline for persons who call and then follow the prompts that they are about to become homeless. Persons who are already homeless are routed elsewhere. The caseworkers generally spend a brief amount of time determining general eligibility.

In most cases the caseworkers of the Homeless Helpline try to refer people to some of the larger rental assistance programs, i.e. Emergency Financial Assistance for Housing Program (EFAHP) that is funded by the Florida's Department of Children and Family and Emergency Food and Shelter (EFS) Program. EFAHP provides a one-time payment of up to \$400 to families who are face the loss of shelter because of non-payment of rent. The applicants must have at least one child under the age of 18 and proof of housing emergency (Department of Children and Family, 2005). EFS program that is funded by Federal Emergency Management Agency (FEMA) provides funding to many homelessness programs for supporting homeless prevention services including rent/mortgage assistance, utility assistance and food vouchers.

The homeless prevention program in Miami-Dade County also provides rental assistance for persons who do not qualify for EFAHP. Mahar (2005) asserted that frequently those who do not qualify elsewhere but qualify for the program are single persons with no kids, or persons who only have a 3-day notice and not an official court-ordered eviction

notice. If it looks like they qualify, the Case Manager gives them an appointment to come in. During the appointment, she does an intake assessment to determine if they have other needs too.

The rental assistance program is to help the persons near-homeless get out a situation where they can not pay their rent. The program can pay up to \$800 for one month's rent. The case manager also will refer for vocational training, budgeting classes, etc. The Case Manager establishes a written case plan and give clients food boxes as incentives for showing up for follow-up appointments. Mahar (2005) acknowledged that it is generally difficult to get people to show up for follow-up once the program had paid the rent. The program have had more success with persons that have other needs we are able to help with such as referrals for mental health services or primary health care. The program also helped contact the landlord to let them know that Camillus House is involved and will be paying, which usually buys the clients a few more days.

The Homeless Prevention program is located at 726 NE 1st Avenue, Miami and is staffed by one full-time Homeless Prevention Case Manager. Total number of homeless individuals/families that received rental assistance from the program is about 120 per year. Raymond (2005) asserts that the available fund is not enough to keep people from being homeless. Miami-Dade County Homeless Trust has enhanced the program with a new contract starting in January 2006 with the Human Service Coalition. They will provide linkages with benefits such as tax returns for earned income tax credits and entitlement through a benefit bank.

Directions for Future Programs

The spatial analyses of prior addresses of the homeless people of varying types in this study reveal the spatial distribution of their addresses that are highly concentrated in two different part of the county: Downtown Miami and Homestead. The prior addresses of homeless women, homeless families, homeless without ADM problem and non-chronic homeless are equally concentrated in both parts of the county. Meanwhile, the prior addresses of homeless men, homeless individuals, homeless with ADM problem and chronic homeless are heavily concentrated in the Northern part of the county.

The current homeless prevention program is located only in one location in Downtown Miami. As indicated by Mahar (2005), the clients need to come in-person to the office of the program to receive assistance. This fact may disadvantage people near-homeless who live in the Southern part of the county. The study clearly indicates that prior addresses of homeless women, homeless families, homeless without ADM problem and non-chronic homeless are highly concentrated in the Southern part of the county.

The current location of the homeless prevention program may spoil the effort to prevent homeless women and homeless families. Women or families who are on the brink of homelessness and live in the Southern part of the county may not able to access to the program because the location of the program is too far from their residences.

The spatial distribution statistics and hot-spot analysis obviously reveal the fact that the prior addresses of the homeless people of varying types are also heavily concentrated in the Southern part of the county. In order to better prevent homelessness in Miami-Dade County, it is necessary to develop new homeless prevention center in the Southern part of the county. The possible location for new homeless prevention center is in Homestead.

The hot-spot analyses also display density variation and concentration of the prior addresses of the homeless people of varying types. If the resources are available to specify homelessness prevention program by gender, family status, the occurrence of ADM problem

and chronicity, the results of the study should assist in targeting the specific homelessness prevention program for each type of homeless. The resources for preventing homelessness programs should be allocated differently for each type of homelessness prevention program because concentration and density variation of prior addresses for each type of homeless are different.

For example, if we want to prevent chronic homelessness, we will locate the resources to the neighborhoods that most chronic homeless come from. The hot-spot analysis shows several concentrated areas of prior addresses of chronic homeless that are located in Downtown Miami, Hialeah and Miami Beach. The result suggests that the resources for preventing chronic homeless to be allocated in those three areas.

This study also clearly reveals the hot spot or highly concentrated prior addresses of homeless with ADM problems in Downtown Miami. The secondary hot spots of prior addresses of homeless with ADM also were identified in Homestead, Miami Beach, Perrine and Hialeah. In Miami Beach, this study identified two secondary hot spots of prior addresses of homeless with ADM problem. The findings suggest that the resources for preventing homeless with ADM problem should be directed to Downtown Miami, Homestead, Miami Beach, Perrine and Hialeah.

On the other hand, if we want to prevent homeless women, we will locate the resources to areas with high concentrated prior addresses of homeless women. Downtown Miami, Homestead, Perrine and North Miami are found to have high concentrated prior addresses of homeless women. Similarly, this study clearly reveals the highly concentration of prior addresses of homeless family in the neighborhoods located in Downtown Miami, Homestead, Perrine and North Miami. The results suggest that the resources for preventing homeless women as well as homeless families to be allocated in those four areas.

Such findings and recommendations have been presented to a small discussion group in the Miami-Dade County Homeless Trust in December 2005. Generally, the discussants confirmed the findings regarding the spatial distribution of prior addresses of the homeless and the recommendation for better directing homelessness prevention program in Miami-Dade County. Hence, the findings reported in the study have been confirmed by the homeless service providers in Miami-Dade County.

This study also identified factors associated with the rate of prior addresses of the homeless people of varying types. Neighborhood with high poverty, unemployment and housing problems were found to be at greatest risk for generating homeless people of varying types. The results suggest that the policy of reducing poverty, creating jobs and expanding housing assistance would significantly prevent homelessness.

3. Limitation of the Study

Limitation of the study is threefold: the validity and reliability of the survey instruments, the limits of cross sectional study of the homeless and the data availability. The survey instruments used in this study were adopted from a standardized core survey instrument developed by the state of Florida's Office on Homelessness and the Florida Coalition for the Homeless. The survey instruments have not been tested in terms of validity and reliability.

The questions concerning the occurrence of alcohol, drug or mental health (ADM) problems have no valid and reliable responses from the respondents. The occurrence of ADM problem was merely based on the self-reported responses from one or two questions concerning mental health and emotional problems. There is no valid and reliable instrument

to measure the mental health or emotional problems of the respondents in this statewide survey instrument.

The most critical question of this study is the question of respondent's prior addresses. Similar to questions concerning the occurrence of ADM problems, the validity and reliability of this question have not been tested. The study found 171 missing addresses because the respondents did not provide their prior addresses. The prior addresses of the homeless were merely based on the self-reported responses from the respondents. There was no proof of previous residence from the respondent.

This study used data that was obtained through a point-in-time homelessness survey conducted on January 27, 2005. This study is a cross sectional point-in-time study of the homeless that only captures the incidence of homelessness in one day: January 27, 2005. This study does not capture the incidence of homelessness for a longer period of time for instance during the year. As indicated in the literature review, many people enter and leave homelessness during a year. It is important to capture the turnover in the homeless population to comprehend the complexity of homelessness problem. A cross sectional point-in-time study like this study is not as good as period prevalence study of the homelessness in comprehending the problem of homelessness.

Another limitation of this study is concerning the factors associated with the rate of prior addresses of the homeless. As indicated by dozens studies on homelessness, the causes of homelessness are multifaceted factors. The causes of homelessness include structural factors and individual factors. This study used data from the 2000 Census data. There are still many factors associated with the risk of homelessness that are not available in the 2000 Census data. Therefore, several important factors associated with the risk of homelessness were excluded in the study such as job availability, crime rate, measures of social capital and quality of neighborhoods.

With regard limitation of this study, I should note that the geographic distribution of participating homelessness programs as shown in **Figure 3.1** should be taken into account in interpreting the spatial distribution of prior addresses of the homeless in this study. As mentioned in the research methodology chapter, the number of participating homelessness programs in the 2005 point-in-time homelessness survey in Miami-Dade County was 50 programs and there are many other homelessness programs in Miami-Dade County that did not participate in the survey. The spatial distribution of prior addresses of the homeless might be different if non-participating homelessness programs participated in the survey.

4. Directions for Further Research

The two previous studies on residential origins of the homeless (Culhane, et. al., 1996; Wong and Hillier, 2001) collected data from database in the centralized public shelter systems in New York City and Philadelphia. The samples of their studies were only sheltered homeless. This study collected data from emergency shelters, transitional housing programs and outreach programs in Miami-Dade County. The samples of the study include sheltered homeless and non-sheltered homeless.

The collected data would allow this study to compare and contrast between spatial distributions of prior addresses of sheltered homeless and non-sheltered homeless. Such a study should be interesting since the sheltered homeless and non-sheltered homeless may have distinctive characteristics.

This study and two previous studies on residential origins of the homeless clearly indicate that the residential origins of the homeless can be used to identify factor associated with the risk of homelessness. The use of residential origins of the homeless can reveal

where the homeless come from and address the question of where to target homelessness prevention program. This study used census tract groups as the units of analysis. These units of analysis were created by joining some neighboring census tracts. This was necessary because the number of prior addresses of the homeless in these census tracts was quite small. Research with higher numbers of prior addresses will be able to use smaller units of analysis, namely census tracts and census block groups. The use of census tracts or census block groups will better represent the variability of the neighborhood than the use of census tract groups.

The categorization of homeless by the occurrence of ADM problem was based on the self-reported responses from the homeless to the questions concerning ADM problems. As mentioned earlier, the survey instruments have not been tested in terms of validity and reliability. This fact is a threat to validity and reliability of this study. For future research, it is recommended to use instrument designated exclusively for determining the occurrence of ADM problem such as MSCI (Modified version of the Colorado Symptom Index) scale. Conrad, et. al. (2001) has found that this instrument is reliable and valid measure of psychological symptom in homeless people with severe mental illness and/or substance abuse disorders.

This study used only the available data from the 2000 Census Data. For better comparing and contrasting between homeless with ADM problem and homeless without ADM problem, some variables such as alcohol outlet, the availability of mental health facility or other related variables should be used. The availability of facility for veterans may be useful for better comparing and contrasting between homeless veteran and homeless non-veteran.

APPENDIX A

AGENCIES AND PROGRAMS PARTICIPATING IN THE 2005 POINT-IN-TIME HOMELESSNESS SURVEY IN MIAMI-DADE COUNTY

1. Bayview Center for Mental Health, Inc.

Crossroad

This program provides mental health services for homeless persons with co-occurring mental and substance abuse disorders. The clients are homeless singles either homeless women or homeless men. The program is a drop-in center that provides substance abuse treatment. The clients are not required to pay for the services. The facility is open weekdays from 8:00-4:30 and located at 12550 Biscayne Blvd North Miami, FL 33181.

2. Betterway of Miami, Inc.

Residential

This program provides transitional housings for the homeless in Miami-Dade County. They also provide other services including meal three times a day, medical treatment, and transportation. There are a total of 55 beds in the program including 3 beds for homeless women and 52 beds for homeless men. This program does not accept homeless with children.

The program accepts clients who have substance abuse problems and are able to understand English. The homeless persons with mental illness will not be accepted in the program and they will be referred to other programs. The clients are not required to pay for the services unless they have income. The clients are allowed to stay in the program up to 6 months. The facility is located at 800 NW 28th Street Miami, FL 33127.

3. Camillus House

Beckham Hall Emergency Shelter for Men

This program provides emergency shelter for homeless single men. A total of 100 beds are available in this program. The clients may stay for up to 90 days during which time they receive employment counseling services and case management. The program also provides free meals for the clients.

To be accepted in the program, the client must have proper ID and ability to working. The program does not accept homeless men with children. The clients are not required to pay for the services they received. Depending on the needs and the motivation of the clients, they may then be placed into transitional housing. The facility is located at 2735 NW 10th Ave Miami, FL 33127.

Camillus Health Concern

This program provides homeless persons and low-income populations of Miami-Dade County with a variety of health care services and supportive services. The health care services offered by the program include preventive care, episodic care for acute illness, chronic disease management, and specialty and surgical referrals as needed. Pediatric health service including immunizations and disease prevention; health maintenance and prevention for women; HIV/AIDS services; oral health services and mental health services are also provided in the program.

The program also offers case management services including housing placement, employment referrals, supportive counseling, and assistance in accessing benefits. For those

who have no access to care, the program provides transportation services including van transportation, taxi, and the bus and metro rail passes. The facilities of the program are located at 336 NW 5th St, Miami.

Outreach

This program provides non-sheltered homeless with information on social services and shelter availability. The program employs two mobile outreach teams who go into the streets to find homeless persons and assist them with accessing homelessness services offered in Miami-Dade County. The operation hours of the team are Monday to Friday from 8:00 am to 4:00 pm. The team covers the area South Dade South of Kendall Drive to SW 280th Street. The average numbers of homeless persons that is found by the team is 20 to 30 persons each day.

The team also provides non-sheltered homeless who not ready engage in services with food bags, clothing, and blankets. The team made referral to the Homeless Assistance Center, to substance abuse treatment programs, medical facilities, job placement centers, and other services depending upon the needs of the clients.

16-Bed Non-Treatment

This program provides homeless single men with transitional housings. There are a total of 16 beds available in this program. The clients may stay up to six months and receive on-site case management and life skills trainings. They also receive free meals three times a day. After being accepted in the program, the clients are required to find a job within three weeks. The clients then are required to pay the services as much as thirty percent of their income. The facility of this program is located at 27940 S Dixie Hwy Naranja, FL 33032.

34-Bed Non-Treatment

This program provides transitional housings for homeless single women. A total of 34 beds are available in this program. They are housed in several cottage-style buildings located at 27940 S Dixie Hwy Naranja, FL 33032. They may stay for up to six months during which time they receive on-site case management and life skills trainings. The program also provides three meals a day. The clients must find a job within three weeks since they are accepted in the program. The clients are required to contribute as much as thirty percent of their income to the program.

Beach Workout

This program provided homeless single adults with transitional housings. There are a total of 16 beds in this program including 2 beds assigned for homeless women and 14 beds assigned for homeless men. The clients are housed in 8 apartments located at 1241 Normandy Dr. Miami Beach, FL 32141. They are allowed to stay in the program up to 6 months during which time they receive case management and employment assistance. The clients are required to contribute to the program as much as thirty percent of their income.

Courtyard 35-Bed Families

This program provided transitional housings for homeless families. A total of 35 beds are available in the program to accommodate about 10 homeless families. The program is a scattered-site apartment complex in Homestead, with staff located at 27940 S. Dixie Hwy, Homestead. The clients may stay for up to 6 to 9 months in the program during which

time they receive case management and supportive services and stabilize their employment situations and prepare to move on into permanent housing.

Airbase Singles

This program provides transitional housings for homeless single men. The program could accommodate up to 28 homeless persons. The clients may stay in the program up to six to nine months depending upon the needs of the clients. The program has four apartment including two 3-bedroom apartments and two 4-bedroom apartments. The clients with the U.S. military experience are given priority to participate in the program. The program is reserved 75% for veterans. The clients are required to show their willingness and ability to work. After getting jobs, they must contribute as much as thirty percent of their income towards program fees. The program is located at 28200 SW 125th Ave Homestead, FL 33033.

Airbase Families

This program provides homeless families with a six month long transitional housing. A total of 160 beds are available for homeless families in this program. They are housed in 36 fully furnished apartment units ranging from one-bedroom apartment to four-bedroom apartment. The facilities are located at 12320 SW 283rd St. Homestead, FL 33032.

The clients must contribute thirty percent of their income towards program fees. A variety of services is provided to the clients including intensive case management, bus passes vouchers, on-site job development, on-site tutoring, job placement, book for school, fee for school, and fee for tutoring. The program also provides child care services on an as-needed basis.

Single Room Occupancy (SRO)/Villas

This program provides homeless single men and women with transitional housings.. Those who are in recovery from substance abuse can participate in this program. The program has a specific focus on targeting those who have recently completed substance abuse treatment and are employed. The client may have mental health issue, but the program does not provide mental health services. The client must receive the services elsewhere.

The clients may stay for up to 6 to 18 months depending upon the needs of the clients. The program provides them with employment counseling and case management. The facilities of this program are located in two locations: 2136 NW 8th Ave, Miami and 3040 NW 77th St, Miami. There are a total of 28 beds in the first location and 17 beds in the second location.

4. Carrfour Supportive Housing

Transition to Affordable Housing (TAHP)

This program provides transitional housings for homeless families. A total of 67 beds are available in this program. They are housed in 16 apartment units scattered in 7 locations in Homestead with staffs located at 201 NE 11th St. Homestead. To be accepted in the program, the clients must have no alcohol and drug problems. The program also accepts some clients with disability. The program allows the clients to stay for up to 18 months during which time they receive employment counseling. The clients also are required to contribute thirty percent of their income through program fees.

Transition to Homeownership (THOP)

This program provides homeless families with one-year transitional housings. There are a total of 127 beds available in this program. The clients are housed in 33 apartment units scattered in 10 locations in South Dade with staffs located at 1554 NE 8th St. South Dade. They must have no drugs and alcohol problems to be accepted in the program. The clients are required to contribute 30 percent of their income to operating expenses.

5. Citrus Health Network, Inc.

Outreach

This program is exclusively designed to find homeless persons with mental illness on the streets. The program is composed of two teams outreach workers. Each team consists of two outreach workers. The team covers the area of Miami-Dade County. Regularly, they made outreach contacts in Miami on Mondays and in Miami Beach on Tuesdays. For those who need mental health services, the teams made referral to the mental health care provided by Citrus Health Network, Inc.

Kiva Saven Haven

This program provides transitional housings with comprehensive mental health services for homeless persons with mental health illness and psychiatric history. The services include emergency psychiatric services, psychiatric crisis stabilization, psychotherapy and substance abuse prevention and intervention. There are a total of 14 beds in the program located at 1339 SE 9 Ave Hialeah, FL 33012. The clients are homeless single either men or women. They also receive meal services from the program. Those who have income are required to contribute seventy percent of their income towards program fees.

Crisis Outpatient Bed (COB)

This program provides transitional housing with comprehensive mental health services for homeless individuals with mental health illness who participate in the jail diversion project. The jail diversion project is aimed to reduce the recidivism rate for the mentally ill person in Miami-Dade County. The mentally ill persons who are arrested for felony level charges or misdemeanors will be diverted to this program.

The program provides a variety of mental health services including emergency psychiatric services, psychiatric crisis stabilization, and substance abuse prevention and intervention. A total of 22 beds are available in this program. The program also provides meal services to the clients. The program is funded by Homeless Trust Fund and Department of Children and Family. The clients do not have to pay for the services. The facilities of the program are located at 1339 SE 9 Ave Hialeah, FL 33012.

Shaman Transitional Residence

This program provides two-year transitional housing for homeless individuals with mental illness and psychiatric problem. The program offers comprehensive mental health services including emergency psychiatric services, psychiatric crisis stabilization, and substance abuse prevention and intervention; case management and referral services. The clients are women and men without children. A total of 24 beds are available in this program. They are not required to pay for the services. The program is located at 3380 NW 79th St. Miami 33147.

6. City of Miami Homeless Assistance Program

Outreach

This program provides outreach services to homeless individuals and families within the City of Miami jurisdictions. The program is composed of ten outreach worker teams. Each team consists of two staffs known as community outreach specialists (COS) and one volunteer. Their mission is to identify and provide homeless individuals and families with information and referral services countywide.

The mobile outreach teams conduct outreach seven days a week in variety of ways including visiting abandoned buildings and parks, searching under bridges or expressways, disseminating information; and providing other services such as transportation, food, blankets and clothing to the non-sheltered homeless. The more detailed information of this program can be found at www.ci.miami.fl.us/pages/AboutNET/mhap.asp.

7. City of Miami Beach Office of Community Services

Outreach

This program identifies non-sheltered homeless within the City of Miami Beach jurisdiction and provides them with information and referral services in Miami-Dade County. The program employs two mobile outreach teams who go into the streets to find homeless persons and assist them with accessing homelessness services. There are a total of five outreach workers in the program. The operation hours of the team are Monday to Friday from 8:00 am to 5:00 pm.

8. Community Partnership for the Homeless

Homeless Assistance Center I

This program provides emergency shelters for homeless individuals and families. There are dormitories for homeless singles men and women and a total of 242 beds are available for them. There are also a number of individual rooms for homeless families including homeless single mother with her children and homeless couple with their children. A total of 160 beds are available for homeless families.

The clients may stay for up to two months and pay nothing for the services. They receive three meals per day, clothing, showers, case management and transportation services. The program also provides the clients with job development and training and on-site childcare program. The facilities of this program are located at 1550 N Miami Ave Miami, FL 33132. The program started in 1995.

Homeless Assistance Center II

This program provides homeless individuals and families with emergency shelters. The program allows the clients to stay a maximum of sixty days and does not require the client to pay for the services. The program provides them with daily meals services, clothing, showers, transportation services, case management, job and vocational training, and childcare program.

A total of 150 beds for homeless families and 150 beds for homeless singles are available in the program. Homeless families are kept together in apartment style units with multiple bunk beds. A locker is provided for each client to store their personal belongings.

The facilities of this program are located at 28205 SW 125th Ave, Homestead, FL 33033. The program started in 1998.

9. Douglas Gardens Community Mental Health Center

Mayfair Transitional Housing

This program provides transitional housings for homeless singles either men or women with mental illness and psychiatric problem. The program provides mental therapy, primary health care, referral services, and meals to the clients. The length of stay in the program depends upon the needs of the clients. For those who earn income are required to contribute thirty percent of their income to operating expenses. A total of 42 beds are available in the program and they are located at 190 Park Ave Miami Beach, FL 33139.

Successful Investment

This program is specifically designed to provide transitional housings for homeless female who are victims of domestic violence. There are a total of 12 apartment units for accommodating one homeless single female and eleven homeless families. There are a total of 42 beds in those apartment units. These apartments are located at 701 Lincoln Rd. Miami Beach, FL 33139.

The program provides legal services and childcare to the clients. The program does not provide meals services. The clients may stay for up to fifteen months depending upon the needs of the clients. All of services provided in this program are free of charge for the clients.

10. Fellowship House

Naranja Safe Haven

This program provides homeless singles with transitional housings. There are a total of 14 beds available in this program including 8 beds for homeless men and 6 beds for homeless women. The program also provides case management and meals services to the clients. The length of stay depends upon the needs of the clients and the clients are not required to contribute to the program. The facilities of the program are located at 27255 SW 144 Ave, Homestead.

Homeless Primary Care Services

This program provides transitional housing with mental health services for homeless individuals with mental illness problem including schizophrenia, depression and anxiety disorders. The program provides psychiatric rehabilitation program and medication management. There are a total of 12 beds including 8 beds for homeless female and 4 beds for homeless male. The clients do not receive meal services but money to buy food from grocery stores. The program does not require the client to contribute to operating expenses. The facilities of the program are located at 13707 SW 90th Ave Miami, FL 33176.

11. James E. Scott Community Association, Inc.

Transition and Stabilization

This program provides transitional housing for homeless single men with substance abuse problem. A total of 35 beds are available in this program. The program allows the

clients to stay a maximum of 6 months and requires them to contribute thirty percent of their income through program fees. The program provides referral services to psychiatric and medical treatment facilities, group and individual job counseling, and meals services. The facilities of the program are located at 10555 NW 21st Ave Miami, FL 33147.

12. Jewish Community Services of South Florida, Inc.

Homeless Employment Services (HESS)

This program provides homeless individuals with employment and vocational services. The program is aimed to help homeless individuals find employments. The program has job stations in several emergency shelters and transitional housing programs in Miami-Dade County. The program provides homeless individuals with resume techniques, interview skills, direct job referrals and job training. The clients must be eighteen years of age or older and have a valid ID to participate in this program.

Homeless Outreach Program for Employment (HOPE)

This program provides employment assistance day labor and vocational services to homeless individuals. The program also sends the clients to training or school and helps them find direct employment. The clients must be eighteen years of age or older to participate in this program and may stay a maximum of 6 months in the program. Unlike Homeless Employment Service, HOPE does not have station in the shelters. The clients must come to the program office to receive the services. For those who are in need, the program also provides bus tokens and work clothes.

13. Legal Services of Greater Miami

Homeless Legal Assistance

This program provides homeless persons with legal services. The services include legal assistance with regard to public benefit, employment, landlord dispute, divorce, ID or immigration. The program receives special grant to make outreach contacts with the homeless and provide community education to the homeless in the shelters. The program provides legal assistance to about 500 homeless individuals each year.

14. Lutheran Services Florida

Esperanza

This program provides transitional housings for homeless families. The clients may be single mother with children or couple with children. The program provides a variety of services including referrals to day care assistance and healthcare professional, employment services, educational and training services. The clients may stay for up to six months in the program. The clients are housed in 10 apartment units scattered in several locations in Miami with staffs located at 102501 NW 27 Ave Miami, FL 33167. A total of 45 beds are available in the program. The clients are not required to contribute to operating expenses.

New Beginnings

This program provides homeless families with transitional housing. The clients are housed in 6 houses located at 16201 SW 95th Ave Miami, FL 33157. There are a total of 48 beds in this program. The program provides case management, employment services, and

referral to healthcare facilities and employment agencies. The program allows the clients to stay twelve to eighteen months depending upon the needs of the clients. The clients are required to contribute thirty percent of their income towards program fees.

New Day

This program provides transitional housing for homeless families with transitional housing. The clients may be single mother with children or couple with children. They are housed in 5 apartment units located at 13815 SW 271st Char. Homestead, FL 33032. A total of 20 beds are available in this program. The clients are required to contribute thirty percent of their income to operating expenses. The program allows the clients to stay twelve to eighteen months depending upon the needs of the clients. The program provides case management, employment services, and referral to healthcare facilities and employment agencies.

Passageways to Independence (PIN) North

This program provides homeless families with transitional housings. This program is welfare to work housing program for homeless family who have or are in danger of exhausting their welfare benefit. The clients are housed in six apartment units located in several locations with staffs located at 12701 NW 27th Ave Miami, FL 33157. A total of 25 beds are available in this program. The program provides vocational counseling, employment assistance, and case management.

Passageways to Independence (PIN) South

This program is the same with PIN North. The clients are housed in six apartment units located in some locations with staffs located at 15201 SW 95th Ave Miami, FL 33176. There are a total of 25 beds in this program. Both PIN North and PIN South are funded by the Miami-Dade County Homeless Trust.

15. Miami-Dade County Department of Human Services

Outreach

This program provides outreach services to homeless persons within the Miami-Dade County jurisdictions. The program employs six mobile outreach teams who go into the streets to find homeless persons and assist them with accessing homelessness services offered in Miami-Dade County. The operation hours of the team are Monday to Friday from 8:30 am to 5:00 pm. The team covers areas in which are not covered by City of Miami's Outreach teams, City of Miami Beach's Outreach teams or Camillus House's Outreach teams.

Inn Transition South

This program provides transitional housings for homeless individuals and families who are victims of domestic violence. The clients may previously stay in an emergency shelter. There are a total of 250 beds available in this program. The clients are housed in 56 apartment units located at 11900 SW 202nd St Miami, FL 33177. They may stay for up to two years.

The program offers a variety of supporting services including case management, transportation services, child enrichment activities, parenting groups, job skill training, career

counseling, and financial and legal counseling. The clients are required to contribute thirty percent of their income towards program fees.

Housing Employment Program

This program provides homeless singles with transitional housing. A total of 10 beds are available in the program including 8 beds for homeless single men and 2 beds for homeless single women. The clients must have no alcohol, drug and mental illness problem and TBC disease. The program allows the clients to stay a maximum of 6 months and does not require them to pay for the services. The facilities of the program are located at 3140 NW 27th St Miami, FL 33142.

16. New Hope Corps

New Hope Residential

This program provides transitional housings for homeless single adult men with substance abuse problem, personality disorders, mood disorders, or anxiety disorders. There are a total of 24 beds available in this program. The program also provides group therapy, individual counseling, spiritual enhancement, meals, and referral to healthcare facilities and mental health professionals. The clients are required to contribute thirty percent of their income towards program fees. The program allows them to stay for up to six to nine months. The facilities of the program are located at 1020 N Krome Homestead, FL 33033.

17. New Horizons

Primary Care

This program provides transitional housings for homeless single adults men and women with mental illness and/or drug problem. A total of 20 beds are available in the program. The clients may stay for up to 3 years in the program and are required to contribute thirty percent of their income to operating expenses. The facilities of the programs are located at 1215 NW 60th St. Miami, FL 33142.

Bloom Center

This program provides transitional housing for homeless single women and homeless women with children under 5 years old. The priorities are given to the clients with drug problem. The program provides drug rehabilitation treatment to the clients. There are a total of 6 beds in this program. The program allows the clients to stay a maximum of 6 months. The facilities of the program are located at 1469 NW 36th St. Miami, FL 33142.

18. The Salvation Army

City of Miami Beach (CMB)

This program provides homeless single men and women from the City of Miami Beach with emergency shelter. The program conducts outreach services and seeks homeless singles in the City of Miami Beach jurisdiction and then places them in the Salvation Army's emergency shelter. There are a total of 26 beds in the program. The clients may stay for up to three months and are not required to pay for the services. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142. The program is funded by the City of Miami Beach.

Detainee

This program provides emergency shelter for homeless single men and women. The clients of this program are those who released within a week from Miami-Dade County correction program. There are 7 beds available in this program. The program allows the clients to stay a maximum of three months and does not require the clients to pay for the services. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142.

Federal Emergency Management Agency (FEMA)

This program provides homeless single men and women with emergency shelter. The program allows the clients to stay for up to three months. The clients pay nothing for services. A total of 30 beds are available in the program. Meals services and case management are also provided for the clients. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142. The program is funded by a grant from FEMA.

Jackson Memorial Hospital (JMH)

This program provides emergency shelter for homeless single men and women who discharged from the Jackson Memorial Hospital system. The clients may have been treated in the hospital due to accident or overdoses. There are a total of 10 beds in this program. The program is free of charge and allows the clients to stay for up to three months. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142. The program is funded by Jackson Memorial Hospital.

South Florida AIDS Network (SFAN)

This program provides emergency shelter for homeless single men and women who infected or affected by HIV/AIDS. A total of 28 beds are available in this program. The clients may stay for up to three months and pay nothing to the program. The clients also receive HIV education during their stay in the program. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142. The program is funded by South Florida AIDS Network that was established by the Public Health Trust-Jackson Memorial Hospital.

Homeless Trust Fund (HTF) Women and Family

This program provides homeless women and families with emergency shelter and other supporting services. The supporting services include job training and placement, legal assistance, effective parenting classes, and daycare for the client's children. There are a total of 30 beds in this program. The program allows the clients to stay up to 6 months and does not require the clients to pay for the services. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142. The program is funded by the Miami-Dade County Homeless Trust Fund.

Homeless Trust Fund (HTF) Men

This program provides emergency shelter for homeless single men. There are several supporting services provided in this program including substance abuse treatment, on-site job development and counseling and case management. A total of 30 beds are available in the program. The clients may stay for up to 90 days and are not required to pay for the

services. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142 and funded by the Miami-Dade County Homeless Trust Fund.

Here's Hope

This program is an emergency shelter program that designed specifically for homeless singles and families with AIDS/HIV. The clients are those infected with the disease and others who are affected by it. They are either women or men. A total of 45 beds are available in the program including 10 beds for homeless families and 35 beds for homeless singles. The program also provides the clients with education, drug and alcohol counseling, and transportation. It is a free program for the clients. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142.

Chronically Homeless Program (CHP)

This program provides emergency shelters for chronically homeless individuals. The clients have been homeless for more than a year or experiencing three episodes of homelessness in the past two years. They are either men or women. There are a total of 30 beds in the program. The program also provides the clients with drug and alcohol counseling, job training and placement, transportation services, and life skill training. The clients pay nothing for the services. The program is located at the Salvation Army's emergency shelter at 1907 NW 38th St Miami, FL 33142.

APPENDIX B

SURVEY INSTRUMENTS

- 1. Outreach and Supportive Services**
- 2. Emergency Housing**
- 3. Transitional Housing**

Miami-Dade County Homeless Trust
2005 Annual Survey: Short Form –Outreach & Supportive Services Final

Your answers to the following survey by questions will help us understand how we can better meet the needs of people who are homeless in Miami-Dade County. This survey is voluntary. You may choose not to answer some questions. You may also stop answering at any time. Your answers will not affect the services available to you or your family, even if you do not answer at all. Your answers may be used for research purposes, but no identifying (e.g. your name) information is being requested/shared. Thank you for taking a few moments to help us.

SECTION A. Please answer these questions about yourself.

1. Have you completed this survey earlier today or this week? 1 ☐ Yes 0 ☐ No		
2. Please tell us your initials: _____		
3. Do you have a regular place to stay right now? 1 ☐ Yes 0 ☐ No		
4a. Where did you stay last night?		
1 ☐ Shelter	2 ☐ Transitional Housing	3 ☐ Permanent housing for persons who have been homeless
4 ☐ Treatment Facility	5 ☐ Hospital	6 ☐ Jail or Prison
7 ☐ My Own Place	8 ☐ Friend's or Relative's Home	9 a ☐ Hotel or Motel (not provided by an agency)
		9b. ☐ Hotel or Motel (provided by Homeless Trust Outreach)
10 ☐ Foster Care	11 ☐ Street or Woods	12 ☐ Car, Boat or Other Vehicle
		13 ☐ Other: _____
<i>(If Jail/Prison, Hospital or Treatment Facility is checked above, ask the following question - OTHERWISE SKIP TO QUESTION 5):</i>		
4b. Where were you staying right before you came to that place?		
1 ☐ Shelter	2 ☐ Transitional Housing	3 ☐ Permanent housing for persons who have been homeless
4 ☐ Treatment Facility	5 ☐ Hospital	6 ☐ Jail or Prison
7 ☐ My Own Place	8 ☐ Friend's or Relative's Home	9 ☐ Hotel or Motel (not provided by an agency)
10 ☐ Foster Care	11 ☐ Street or Woods	12 ☐ Car, Boat or Other Vehicle
		13 ☐ Other: _____
5a. Will you be forced to leave the place you stayed within the next week? 1 ☐ Yes 0 ☐ No		
5b. Will you have a place to stay <u>OR</u> money that you will use to get a place to stay once you leave? 1 ☐ Yes 0 ☐ No		
5c. What was the address of the last house or apartment you lived in?: Street Address _____ City _____ State _____ Zip Code _____ Country _____		
6. Are you: 1 ☐ Male 0 ☐ Female		
7. What is your age _____		

RACE/ETHNICITY:8a. Are you Hispanic or Latino? 1 ☐ Yes 0 ☐ No

8b. What is your race? (you may name more than one race)

- 1 ☐ American Indian/Alaskan Native 2 ☐ Asian 3 ☐ Black/African American
 4 ☐ Native Hawaiian/Other Pacific Islander 5 ☐ White 6 ☐ Haitian 7 ☐ Other: _____

9. Have you ever served on active duty in the U.S. military?

- 1 ☐ Yes 0 ☐ No

SECTION B. Please answer these questions about your family and others staying with you.

10. Are you:

- 1 ☐ Single and never married 2 ☐ Divorced, separated or widowed
 3 ☐ Married or have a partner (staying with you now)

11. Do you have any family members staying with you now? 1 ☐ Yes 0 ☐ No (SKIP TO QUESTION 20)12. If YES, including yourself, other adults and children, how many family members are staying with you now? _____ (COMPLETE QUESTIONS 13-19)**if there are children, complete Questions 13-16****if there are adults, complete Questions 17-19**

13. Girls: How many?: _____

14. Girls: Age(s)? 14a _____ 14c _____
 14b _____ 14d _____

15. Boys: How many?: _____

16. Boys: Age(s)? 16a _____ 16b _____
 16c _____ 16d _____

☐ Check here if more children are recorded on the back.

17. Gender: 17a 1 ☐ Male 2 ☐ Female
 17b 1 ☐ Male 2 ☐ Female
 17c 1 ☐ Male 2 ☒ Female

18. Age(s): 18a _____ 18b _____ 18c _____

19. Veteran? 19a 1 ☐ Yes 0 ☐ No
 19b 1 ☐ Yes 0 ☐ No
 19c 1 ☐ Yes 0 ☐ No

☐ Check here if more adults are recorded on the back.**SECTION C. Please answer these questions about your experiences.**

20. How many separate periods of time in the past 3 years have you been without a regular place to stay (including right now)? (Without a Regular Place to stay means living on the streets or in emergency shelter).

- 1 ☐ 1 time 2 ☐ 2-3 times 3 ☐ 4 or more times

21. How long since you last had a regular place to stay?

(Regular Place to stay means not living on the streets or in emergency shelter)

- 1 ☐ 1 week or less 2 ☐ More than 1 week, but less than 1 month
 3 ☐ Between 1 and 6 months 4 ☐ More than 6 months, but less than 1 year
 5 ☐ 1 year or more

22. Do you have any of the following? 1 ☒ **Yes** 0 ☐ **No** (SKIP TO QUESTION 23)

22a. Which of the following do you have? (you may choose more than one)

- 1 ☐ Physical/medical problems (besides HIV/AIDS) 2 ☐ HIV/AIDS
 3 ☐ Mental Health or emotional problems 4 ☐ Drug or alcohol problems
 5 ☐ Other: _____ 6 ☐ Developmental Disability

22b. Chronically Homeless

- 1 ☐ Yes (If person answered Yes to Questions 20 # 3 AND 22 OR 21 #5 AND 22)
 0 ☐ No

For each service in the following list, do you (or your family) really need it right now? (Check all that apply)

- 23a. ☐ Emergency Shelter 23b. ☐ Transitional Housing 23c. ☐ Permanent Housing
 23d. ☐ Education/Job Training 23e. ☐ Health Care
 23f. ☐ Alcohol/Drug Treatment 23g. ☐ Mental Health Treatment
 23h. ☐ Drop-in Center (showers, rest rooms, mailing address, storage, phone)
 23i. ☐ Financial Assistance 23j. ☐ Food or Meals
 23k. ☐ Job Placement 23l. ☐ Domestic Violence Services
 23m. ☐ HIV services 23n. ☐ Legal Services
 23o. ☐ Immigration Services 23p. ☐ Clothing assistance
 23q. ☐ Child Care

24. How long have you been staying in Miami-Dade County?

- 1 ☐ 1 month or less 2 ☐ Between 1 and 6 months
 3 ☐ More than 6 months, but less than 1 year 4 ☐ 1 year or more

25. Ever been in Foster Care?

1 ☐ Yes 0 ☐ No

26. Please indicate if you received Earned Income Tax Credit.

1 ☐ Yes 0 ☐ No

27. What caused you to become homeless? Please check the ONE REASON (ONLY PICK ONE, PLEASE), that you consider to be the most important.

Employment or financial reasons	Unemployed/lost job	☐ 1
	Not enough income to meet basic needs	☐ 2
	Welfare benefits ended	☐ 3
Housing	I have no one to watch my children	☐ 4
	Evicted	☐ 5
	Released from jail/prison or hospital	☐ 6
Medical/Disability	Left shelter or other program	☐ 7
	Physical/medical problems	☐ 8
	Mental health or emotional problems	☐ 9
	Alcohol or drug problems	☐ 10
Family	HIV/AIDS	☐ 11
	Break-up, divorce or separation	☐ 12
	Domestic Violence	☐ 13

Other (please describe): _____

THANK YOU for helping us with this survey.

OFFICE USE ONLY:

Person Completing Survey: _____ Date: _____

Agency where Survey Completed: _____

Name of Program:

☐ Street ☐ Agency ☐ Encampment ☐ Housing ☐ Public Building

Type of Program

☐ Outreach

☐ Emergency Shelter

☐ Youth

Shelter

☐ Transitional Shelter

☐ Drop In Center

☐ Supportive

Services

Respondent Spending Up To 30 Days in Jail, Hospital or Treatment Facility? ☐ Yes

☐ No

Revised January 22, 2005

Miami-Dade County Homeless Trust
2005 Annual Survey: Short Form – Emergency Housing-Final

Your answers to the following survey by questions will help us understand how we can better meet the needs of people who are homeless in Miami-Dade County. This survey is voluntary. You may choose not to answer some questions. You may also stop answering at any time. Your answers will not affect the services available to you or your family, even if you do not answer at all. Your answers may be used for research purposes, but no identifying (e.g. your name) information is being requested/shared. Thank you for taking a few moments to help us.

SECTION A. Please answer these questions about yourself.

1. Have you completed this survey earlier today or this week? 1 ☐ Yes 0 ☐ No		
2. Please tell us your initials: _____		
3. Do you have a regular place to stay right now? 1 ☐ Yes 0 ☐ No		
4a. Where did you stay last night?		
1 ☐ Shelter	2 ☐ Transitional Housing	3 ☐ Permanent housing for persons who have been homeless
4 ☐ Treatment Facility	5 ☐ Hospital	6 ☐ Jail or Prison
7 ☐ My Own Place	8 ☐ Friend's or Relative's Home	9 a ☐ Hotel or Motel (not provided by an agency)
		9b. ☐ Hotel or Motel (provided by Homeless Trust Outreach)
10 ☐ Foster Care	11 ☐ Street or Woods	12 ☐ Car, Boat or Other Vehicle
		13 ☐ Other: _____
<i>(If Jail/Prison, Hospital or Treatment Facility is checked above, ask the following question - OTHERWISE SKIP TO QUESTION 5):</i>		
4b. Where were you staying right before you came to that place?		
1 ☐ Shelter	2 ☐ Transitional Housing	3 ☐ Permanent housing for persons who have been homeless
4 ☐ Treatment Facility	5 ☐ Hospital	6 ☐ Jail or Prison
7 ☐ My Own Place	8 ☐ Friend's or Relative's Home	9 ☐ Hotel or Motel (not provided by an agency)
10 ☐ Foster Care	11 ☐ Street or Woods	12 ☐ Car, Boat or Other Vehicle
		13 ☐ Other: _____
5a. Will you be forced to leave the place you stayed within the next week? 1 ☐ Yes 0 ☐ No		
5b. Will you have a place to stay <u>OR</u> money that you will use to get a place to stay once you leave? 1 ☐ Yes 0 ☐ No		
5c. What was the address of the last house or apartment you lived in?: Street Address _____ City _____ State _____ Zip Code _____ Country _____		
6. Are you: 1 ☐ Male 0 ☐ Female		
7. What is your age _____		

RACE/ETHNICITY:8a. Are you Hispanic or Latino? 1 ☐ Yes 0 ☐ No

8b. What is your race? (you may name more than one race)

- 1 ☐ American Indian/Alaskan Native 2 ☐ Asian 3 ☐ Black/African American
 4 ☐ Native Hawaiian/Other Pacific Islander 5 ☐ White 6 ☐ Haitian 7 ☐ Other: _____

9. Have you ever served on active duty in the U.S. military?

- 1
- ☐
- Yes 0
- ☐
- No

SECTION B. Please answer these questions about your family and others staying with you.

10. Are you:

- 1 ☐ Single and never married 2 ☐ Divorced, separated or widowed
 3 ☐ Married or have a partner (staying with you now)

11. Do you have any family members staying with you now? 1 ☐ Yes 0 ☐ No (SKIP TO QUESTION 20)12. If YES, including yourself, other adults and children, how many family members are staying with you now? _____ (COMPLETE QUESTIONS 13-19)**if there are children, complete Questions 13-16****if there are adults, complete Questions 17-19**

13. Girls: How many?: _____

14. Girls: Age(s)? 14a _____ 14c _____
 14b _____ 14d _____

15. Boys: How many?: _____

16. Boys: Age(s)? 16a _____ 16b _____
 16c _____ 16d _____

☐ Check here if more children are recorded on the back.

17. Gender: 17a 1 ☐ Male 2 ☐ Female
 17b 1 ☐ Male 2 ☐ Female
 17c 1 ☐ Male 2 ☒ Female

18. Age(s): 18a _____ 18b _____ 18c _____

19. Veteran? 19a 1 ☐ Yes 0 ☐ No
 19b 1 ☐ Yes 0 ☐ No
 19c 1 ☐ Yes 0 ☐ No

☐ Check here if more adults are recorded on the back.**SECTION C. Please answer these questions about your experiences.**

20. How many separate periods of time in the past 3 years have you been without a regular place to stay (including right now)? (Without a Regular Place to stay means living on the streets or in emergency shelter).

- 1 ☐ 1 time 2 ☐ 2-3 times 3 ☐ 4 or more times

21. How long since you last had a regular place to stay?

(Regular Place to stay means not living on the streets or in emergency shelter)

- 1 ☐ 1 week or less 2 ☐ More than 1 week, but less than 1 month
 3 ☐ Between 1 and 6 months 4 ☐ More than 6 months, but less than 1 year
 5 ☐ 1 year or more

22. Do you have any of the following? 1 ☒ **Yes** 0 ☐ **No** (SKIP TO QUESTION 23)

22a. Which of the following do you have? (you may choose more than one)

- 1 ☐ Physical/medical problems (besides HIV/AIDS) 2 ☐ HIV/AIDS
 3 ☐ Mental Health or emotional problems 4 ☐ Drug or alcohol problems
 5 ☐ Other: _____ 6 ☐ Developmental Disability

22b. Chronically Homeless

- 1 ☐ Yes (If person answered Yes to Questions 20 # 3 AND 22 OR 21 #5 AND 22)
 0 ☐ No

For each service in the following list, do you (or your family) really need it right now? (Check all that apply)

- 23b. ☐ Transitional Housing 23c. ☐ Permanent Housing
 23d. ☐ Education/Job Training 23e. ☐ Health Care
 23f. ☐ Alcohol/Drug Treatment 23g. ☐ Mental Health Treatment
 23h. ☐ Drop-in Center (showers, rest rooms, mailing address, storage, phone)
 23i. ☐ Financial Assistance 23j. ☐ Food or Meals
 23k. ☐ Job Placement 23l. ☐ Domestic Violence Services
 23m. ☐ HIV services 23n. ☐ Legal Services
 23o. ☐ Immigration Services 23p. ☐ Clothing assistance
 23q. ☐ Child Care

24. How long have you been staying in Miami-Dade County?

- 1 ☐ 1 month or less 2 ☐ Between 1 and 6 months
 3 ☐ More than 6 months, but less than 1 year 4 ☐ 1 year or more

25. Ever been in Foster Care?

1 ☐ Yes 0 ☐ No

26. Please indicate if you received Earned Income Tax Credit.

1 ☐ Yes 0 ☐ No

27. What caused you to become homeless? Please check the ONE REASON (ONLY PICK ONE, PLEASE), that you consider to be the most important.

Employment or financial reasons	Unemployed/lost job	☐ 1
	Not enough income to meet basic needs	☐ 2
	Welfare benefits ended	☐ 3
Housing	I have no one to watch my children	☐ 4
	Evicted	☐ 5
	Released from jail/prison or hospital	☐ 6
Medical/Disability	Left shelter or other program	☐ 7
	Physical/medical problems	☐ 8
	Mental health or emotional problems	☐ 9
	Alcohol or drug problems	☐ 10
Family	HIV/AIDS	☐ 11
	Break-up, divorce or separation	☐ 12
	Domestic Violence	☐ 13

Other (please describe): _____

THANK YOU for helping us with this survey.

OFFICE USE ONLY:

Person Completing Survey: _____ Date: _____

Agency where Survey Completed: _____

Name of Program: _____

☐ Street ☐ Agency ☐ Encampment ☐ Housing ☐ Public Building

Type of Program

☐ Outreach

☐ Emergency Shelter

☐ Youth

Shelter

☐ Transitional Shelter

☐ Drop In Center

☐ Supportive

Services

Respondent Spending Up To 30 Days in Jail, Hospital or Treatment Facility? ☐ Yes

☐ No

Revised January

22, 2005

Your answers to the following survey by questions will help us understand how we can better meet the needs of people who are homeless in Miami-Dade County. This survey is voluntary. You may choose not to answer some questions. You may also stop answering at any time. Your answers will not affect the services available to you or your family, even if you do not answer at all. Your answers may be used for research purposes, but no identifying (e.g. your name) information is being requested/shared. Thank you for taking a few moments to help us.

1. Have you completed this survey earlier today or this week? 1 ☐ Yes 0 ☐ No

2. Please tell us your initials: _____

3. Do you have a regular place to stay right now?
1 ☐ Yes 0 ☐ No

4a. Where did you stay last night?

1 ☐ Shelter	2 ☐ Transitional Housing	3 ☐ Permanent housing for persons who have been homeless
4 ☐ Treatment Facility	5 ☐ Hospital	6 ☐ Jail or Prison
7 ☐ My Own Place	8 ☐ Friend's or Relative's Home	9 a ☐ Hotel or Motel (not provided by an agency)
		9b. ☐ Hotel or Motel (provided by Homeless Trust Outreach)
10 ☐ Foster Care	11 ☐ Street or Woods	12 ☐ Car, Boat or Other Vehicle
		13 ☐ Other: _____

(If Jail/Prison, Hospital or Treatment Facility is checked above, ask the following question - OTHERWISE SKIP TO QUESTION 5):

4b. Where were you staying right before you came to that place?

1 ☐ Shelter	2 ☐ Transitional Housing	3 ☐ Permanent housing for persons who have been homeless
4 ☐ Treatment Facility	5 ☐ Hospital	6 ☐ Jail or Prison
7 ☐ My Own Place	8 ☐ Friend's or Relative's Home	9 ☐ Hotel or Motel (not provided by an agency)
10 ☐ Foster Care	11 ☐ Street or Woods	12 ☐ Car, Boat or Other Vehicle
		13 ☐ Other: _____

5a. Will you be forced to leave the place you stayed within the next week?
1 ☐ Yes 0 ☐ No

5b. Will you have a place to stay OR money that you will use to get a place to stay once you leave?
1 ☐ Yes 0 ☐ No

5c. What was the address of the last house or apartment you lived in?:

Street Address _____

City _____ State _____ Zip Code _____ Country _____

6. Are you: 1 ☐ Male 0 ☐ Female

7. What is your age

RACE/ETHNICITY:8a. Are you Hispanic or Latino? 1 ☐ Yes 0 ☐ No

8b. What is your race? (you may name more than one race)

- 1 ☐ American Indian/Alaskan Native 2 ☐ Asian 3 ☐ Black/African American
 4 ☐ Native Hawaiian/Other Pacific Islander 5 ☐ White 6 ☐ Haitian 7 ☐ Other: _____

9. Have you ever served on active duty in the U.S. military?

- 1 ☐ Yes 0 ☐ No

SECTION B. Please answer these questions about your family and others staying with you.

10. Are you:

- 1 ☐ Single and never married 2 ☐ Divorced, separated or widowed
 3 ☐ Married or have a partner (staying with you now)

11. Do you have any family members staying with you now? 1 ☐ Yes 0 ☐ No (SKIP TO QUESTION 20)12. If YES, including yourself, other adults and children, how many family members are staying with you now? _____ (COMPLETE QUESTIONS 13-19)**if there are children, complete Questions 13-16****if there are adults, complete Questions 17-19**

13. Girls: How many?: _____

14. Girls: Age(s)? 14a _____ 14c _____
 14b _____ 14d _____

15. Boys: How many?: _____

16. Boys: Age(s)? 16a _____ 16b _____
 16c _____ 16d _____

☐ Check here if more children are recorded on the back.

17. Gender: 17a 1 ☐ Male 2 ☐ Female
 17b 1 ☐ Male 2 ☐ Female
 17c 1 ☐ Male 2 ☒ Female

18. Age(s): 18a _____ 18b _____ 18c _____

19. Veteran? 19a 1 ☐ Yes 0 ☐ No
 19b 1 ☐ Yes 0 ☐ No
 19c 1 ☐ Yes 0 ☐ No

☐ Check here if more adults are recorded on the back.**SECTION C. Please answer these questions about your experiences.**

20. How many separate periods of time in the past 3 years have you been without a regular place to stay (including right now)? (Without a Regular Place to stay means living on the streets or in emergency shelter).

- 1 ☐ 1 time 2 ☐ 2-3 times 3 ☐ 4 or more times

21. How long since you last had a regular place to stay?

(Regular Place to stay means not living on the streets or in emergency shelter)

- 1 ☐ 1 week or less 2 ☐ More than 1 week, but less than 1 month
 3 ☐ Between 1 and 6 months 4 ☐ More than 6 months, but less than 1 year
 5 ☐ 1 year or more

22. Do you have any of the following? 1 ☒ **Yes** 0 ☐ **No** (SKIP TO QUESTION 23)

22a. Which of the following do you have? (you may choose more than one)

- 1 ☐ Physical/medical problems (besides HIV/AIDS) 2 ☐ HIV/AIDS
 3 ☐ Mental Health or emotional problems 4 ☐ Drug or alcohol problems
 5 ☐ Other: _____ 6 ☐ Developmental Disability

22b. Chronically Homeless

- 1 ☐ Yes (If person answered Yes to Questions 20 # 3 AND 22 OR 21 #5 AND 22)
 0 ☐ No

For each service in the following list, do you (or your family) really need it right now? (Check all that apply)

- 23c. ☐ Permanent Housing 23d. ☐ Education/Job Training
 23e. ☐ Health Care
 23f. ☐ Alcohol/Drug Treatment 23g. ☐ Mental Health Treatment
 23h. ☐ Drop-in Center (showers, rest rooms, mailing address, storage, phone)
 23i. ☐ Financial Assistance 23j. ☐ Food or Meals
 23k. ☐ Job Placement 23l. ☐ Domestic Violence Services
 23m. ☐ HIV services 23n. ☐ Legal Services
 23o. ☐ Immigration Services 23p. ☐ Clothing assistance
 23q. ☐ Child Care

24. How long have you been staying in Miami-Dade County?

- 1 ☐ 1 month or less 2 ☐ Between 1 and 6 months
 3 ☐ More than 6 months, but less than 1 year 4 ☐ 1 year or more

25. Ever been in Foster Care?

1 ☐ Yes 0 ☐ No

26. Please indicate if you received Earned Income Tax Credit.

1 ☐ Yes 0 ☐ No

27. What caused you to become homeless? Please check the ONE REASON (ONLY PICK ONE, PLEASE), that you consider to be the most important.

Employment or financial reasons	Unemployed/lost job	☐ 1
	Not enough income to meet basic needs	☐ 2
	Welfare benefits ended	☐ 3
Housing	I have no one to watch my children	☐ 4
	Evicted	☐ 5
	Released from jail/prison or hospital	☐ 6
Medical/Disability	Left shelter or other program	☐ 7
	Physical/medical problems	☐ 8
	Mental health or emotional problems	☐ 9
	Alcohol or drug problems	☐ 10
Family	HIV/AIDS	☐ 11
	Break-up, divorce or separation	☐ 12
	Domestic Violence	☐ 13

Other (please describe): _____

THANK YOU for helping us with this survey.

OFFICE USE ONLY:

Person Completing Survey: _____ Date: _____

Agency where Survey Completed: _____

Name of Program: _____

☐ Street ☐ Agency ☐ Encampment ☐ Housing ☐ Public Building

Type of Program

☐ Outreach

☐ Emergency Shelter

☐ Youth

Shelter

☐ Transitional Shelter

☐ Drop In Center

☐ Supportive

Services

Respondent Spending Up To 30 Days in Jail, Hospital or Treatment Facility? ☐ Yes

☐ No

APPENDIX C

**CENSUS TRACTS AND TOTAL POPULATION OF
CENSUS TRACT GROUPS**

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
1	000106	5,415	
1	000108	3,333	
1	000109	1,932	
1	000110	7,749	18,429
2	000111	6,188	
2	000112	8,025	
2	000113	3,055	17,268
3	000114	7,999	
3	000115	11,154	
3	000116	1,791	20,944
4	000201	8,104	
4	000202	6,789	
4	000203	11,107	26,000
5	000204	4,811	
5	000205	8,289	
5	000206	5,423	18,523
6	000208	9,991	
6	000209	7,875	17,866
7	000210	9,106	
7	000305	7,303	
7	000306	5,354	21,763
8	000301	7,317	
8	000302	2,439	
8	000304	10,036	19,792
9	000401	9,426	
9	000402	3,341	
9	000403	6,447	19,214
10	000404	6,264	
10	000405	4,520	
10	000406	8,311	19,095
11	000407	11,715	
11	000408	5,898	17,613
12	000501	6,224	
12	000502	10,440	
12	000503	6,345	23,009
13	000601	5,302	
13	000602	5,314	
13	000604	6,182	16,798
14	000603	5,494	

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
14	000605	4,721	
14	000606	11,838	22,053
15	000703	11,556	
15	000704	8,448	20,004
16	000705	5,319	
16	000706	7,683	
16	000707	6,740	
16	000708	6,589	26,331
17	000801	11,587	
17	000803	8,116	
17	000804	4,978	24,681
18	000901	7,666	
18	000902	6,937	
18	000903	3,817	18,420
19	001002	6,307	
19	001003	5,547	
19	001004	6,150	
19	001005	2,174	
19	001006	3,322	23,500
20	001101	5,315	
20	001102	5,093	
20	001103	4,397	
20	001104	4,568	19,373
21	001202	7,899	
21	001203	7,590	
21	001204	5,466	20,955
22	001301	5,728	
22	001302	6,360	
22	001401	4,421	
22	001402	3,581	20,090
23	001501	4,024	
23	001502	5,010	
23	001901	4,033	
23	001903	2,957	16,024
24	001601	10,418	
24	001602	6,236	16,654
25	001701	3,663	
25	001702	2,557	
25	001703	5,427	
25	001801	3,586	

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
25	001802	3,569	22,384
25	001803	3,582	
26	001904	4,061	
26	002001	4,327	
26	002003	3,410	14,666
26	002004	2,868	
27	002100	2,968	
27	002201	4,641	
27	002202	5,880	18,538
27	002300	5,049	
28	002401	9,395	
28	002402	4,950	
29	002500	11,542	15,717
29	002600	4,175	
30	002701	8,887	
30	002702	1,580	
30	002800	1,303	15,289
30	002900	3,519	
31	003001	2,765	
31	003003	6,233	
31	003004	3,800	19,798
31	003100	4,203	
31	003400	2,797	
32	003601	1,896	
32	003602	6,616	13,000
32	003701	2,400	
32	003702	2,088	
33	003801	5,179	
33	003802	8,214	13,393
34	003901	10,494	
34	003907	8,874	
35	003904	6,733	
35	003905	10,345	25,482
35	003906	2,574	
35	003908	5,830	
36	004000	5,163	
36	004101	8,472	16,711
36	004102	3,076	
37	004201	5,623	
37	004202	5,386	

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
37	004300	8,376	19,385
38	004401	6,163	
38	004402	5,528	
38	004500	2,496	
38	004601	6,620	
38	004602	3,893	24,700
39	004701	5,335	
39	004702	5,845	
39	004703	4,880	
39	004800	122	16,182
40	004901	3,544	
40	004902	5,488	
40	005001	6,927	
40	005002	4,750	
40	490100	1,469	22,178
41	005100	8,870	
41	005201	4,945	
41	005202	5,506	19,321
42	005301	7,846	
42	005302	6,912	14,758
43	005401	8,480	
43	005402	9,426	17,906
44	005501	5,768	
44	005502	6,539	
44	005600	4,245	16,552
45	005701	5,868	
45	005703	5,458	
45	005704	6,856	18,182
46	005801	6,028	
46	005802	7,978	14,006
47	005901	4,221	
47	005902	4,260	
47	005903	5,232	
47	005904	4,604	18,317
48	006001	6,518	
48	006002	5,417	11,935
49	006101	5,048	
49	006102	5,728	
49	006200	9,580	20,356
50	006301	6,214	

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
50	006302	5,039	22,784
50	006401	3,706	
50	006402	4,033	
50	006403	3,792	
51	006500	8,259	19,783
51	006601	6,851	
51	006602	4,673	
52	006701	9,166	
52	006702	3,505	24,582
52	006800	6,063	
52	006900	5,848	
53	007001	7,300	
53	007002	6,682	23,022
53	007100	6,132	
53	007200	2,908	
54	007300	3,850	
54	007400	6,244	16,914
54	007501	2,584	
54	007502	2,770	
54	007503	1,466	
55	007601	2,670	20,391
55	007602	8,676	
55	007603	3,426	
55	007604	5,619	
56	007701	6,916	21,532
56	007702	6,091	
56	007703	8,525	
57	007801	823	
57	007802	8,704	19,728
57	007803	10,201	
58	007901	3,557	
58	007902	3,157	
58	008000	5,275	20,842
58	008100	8,853	
59	008201	8,337	
59	008203	8,291	
59	008204	8,718	25,346
60	008303	8,600	
60	008306	7,288	
60	008307	6,387	

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
61	008304	7,397	
61	008305	5,368	12,765
62	008405	6,436	
62	008407	7,749	
62	008409	5,184	19,369
63	008411	8,632	
63	008412	6,752	
63	008413	7,515	22,899
64	008410	6,419	
64	008414	7,341	
64	008415	5,357	19,117
65	008501	6,593	
65	008502	4,830	
65	008601	5,181	
65	008602	6,543	23,147
66	008700	12,005	
66	008803	6,790	18,795
67	008801	9,006	
67	008804	7,578	16,584
68	008901	6,900	
68	008902	7,441	
68	008904	1,875	
68	008905	10,295	26,511
69	009006	7,313	
69	009013	8,510	
69	009014	4,524	
69	009100	6,341	26,688
70	009007	131	
70	009008	12,095	
70	009009	5,080	
70	009010	3,855	21,161
71	009011	8,966	
71	009012	12,195	
71	009015	4,287	25,448
72	009016	8,715	
72	009017	6,332	
72	009018	8,376	
72	009019	4,565	27,988
73	009200	3,726	
73	009309	7,443	

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
73	009310	8,137	
73	009311	6,746	26,052
74	009304	9,729	
74	009305	5,084	
74	009306	7,426	22,239
75	009307	7,242	
75	009308	7,451	14,693
76	009400	6,290	
76	009501	4,941	
76	009502	9,315	20,546
77	009600	6,640	
77	009801	8,864	
77	009802	11,817	27,321
78	009701	9,712	
78	009702	6,570	16,282
79	009901	5,394	
79	009902	11,332	
79	009903	5,086	
79	009904	2,628	24,440
80	010001	6,504	
80	010002	10,600	17,104
81	010005	7,993	
81	010007	14,705	22,698
82	010009	7,532	
82	010010	5,086	
82	010006	7,237	19,855
83	010111	4,218	
83	010124	2,257	
83	010164	8,623	
83	010174	5,880	20,978
84	010114	8,730	
84	010173	18,547	27,277
85	010125	0	
85	010168	12,693	
85	010169	7,766	20,459
86	010129	16,606	
86	010130	4,649	21,255
87	010131	10,081	
87	010132	5,460	
87	010142	5,269	20,810

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
88	010133	14,395	
88	010134	6,665	21,060
89	010135	10,901	
89	010136	9,171	20,072
90	010137	8,250	
90	010138	10,921	19,171
91	010139	7,037	
91	010140	5,913	
91	010141	5,022	17,972
92	010143	11,277	
92	010144	12,326	
92	010145	5,523	29,126
93	010146	14,710	
93	010153	8,719	23,429
94	010147	5,623	
94	010148	5,582	
94	010149	6,952	18,157
95	010150	7,004	
95	010151	5,416	
95	010152	6,852	19,272
96	010154	10,719	
96	010157	7,039	
96	010165	4,413	22,171
97	010155	10,369	
97	010156	10,754	21,123
98	010158	9,740	
98	010159	8,557	
98	010160	6,650	24,947
99	010161	9,077	
99	010162	5,497	
99	010163	6,500	21,074
100	010166	9,598	
100	010167	12,869	22,467
101	010170	10,890	
101	010171	3,593	
101	010172	6,201	20,684
102	010175	6,778	
102	010176	5,419	
102	010177	6,499	
102	010178	5,936	24,632

Census Tract Group	Census Tract	Population	
		Census Tract	Census Tract Group
103	010201	1,727	20,129
103	010204	5,867	
103	010205	5,103	
103	010300	7,432	
104	010203	9,829	
104	010206	8,012	19,198
104	010400	1,357	
105	010500	5,123	
105	010602	2,915	18,635
105	010607	10,597	
106	010604	5,097	
106	010605	11,464	17,843
106	010606	6,379	
107	010702	425	
107	010703	7,582	24,596
107	010704	7,914	
107	010800	8,675	
108	010900	6,308	
108	011100	12,708	19,016
109	011001	6,717	17,460
109	011003	4,558	
109	011004	6,185	
110	011201	4,703	17,406
110	011202	7,514	
110	011500	5,189	
111	011300	7,442	22,077
111	011401	4,330	
111	011402	10,305	
Total		2,253,362	

APPENDIX D

TESTS OF NORMALITY FOR DEPENDENT VARIABLES

APPENDIX E

THE DISTRIBUTION OF PRIOR ADDRESSES OF THE HOMELESS BY CENSUS TRACT GROUPS

Census Tract Group	Number of Prior Addresses of the Homeless										
	ALL	Men	Women	Family	Single	ADM	Non ADM	Chronic	Non Chronic	Veteran	Non Veteran
1	3	3	0	3	0	1	2	0	3	1	2
2	0	0	0	0	0	0	0	0	0	0	0
3	1	1	0	1	0	1	0	0	1	0	1
4	4	4	0	4	0	0	4	0	4	4	0
5	3	3	0	3	0	1	2	0	3	1	2
6	11	7	4	5	6	4	7	2	9	0	11
7	9	3	6	2	7	2	7	1	8	0	9
8	5	4	1	4	1	3	2	0	5	0	5
9	14	6	8	8	6	8	6	6	8	1	13
10	10	6	4	7	3	7	3	5	5	0	10
11	10	7	3	8	2	4	6	3	7	1	9
12	6	3	3	3	3	3	3	1	5	0	6
13	1	1	0	1	0	1	0	1	0	0	1
14	6	5	1	5	1	3	3	2	4	0	6
15	4	2	2	2	2	3	1	0	4	0	4
16	2	2	0	2	0	1	1	0	2	0	2
17	16	8	8	13	3	12	4	8	8	1	15
18	8	7	1	8	0	5	3	3	5	0	8
19	20	16	4	15	5	8	12	3	17	1	19
20	5	3	2	2	3	0	5	1	4	1	4
21	8	5	3	5	3	4	4	1	7	2	6
22	10	3	7	5	5	5	5	2	8	0	10
23	22	13	9	18	4	13	9	6	16	0	22
24	20	11	9	16	4	18	2	16	4	0	20
25	17	11	6	12	5	11	6	4	13	2	15
26	13	11	2	11	2	8	5	6	7	0	13
27	13	4	9	7	6	3	10	3	10	0	13
28	16	9	7	13	3	8	8	3	13	2	14
29	9	5	4	9	0	6	3	6	3	2	7
30	45	35	10	40	5	37	8	23	22	4	41
31	25	13	12	18	7	9	16	8	17	3	22
32	37	30	7	33	4	20	17	12	25	5	32
33	1	1	0	1	0	0	1	1	0	0	1
34	13	11	2	12	1	10	3	7	6	2	11
35	5	2	3	4	1	3	2	2	3	0	5
36	2	1	1	2	0	2	0	1	1	0	2
37	11	7	4	10	1	8	3	3	8	0	11
38	13	10	3	13	0	10	3	5	8	2	11

Census Tract Group	Number of Prior Addresses of the Homeless										
	ALL	Men	Women	Family	Single	ADM	Non ADM	Chronic	Non Chronic	Veteran	Non Veteran
39	4	3	1	4	0	2	2	2	2	2	2
40	4	2	2	3	1	3	1	2	2	0	4
41	19	17	2	19	0	15	4	8	11	1	18
42	9	7	2	9	0	5	4	1	8	0	9
43	7	7	0	7	0	5	2	4	3	1	6
44	5	5	0	5	0	2	3	0	5	1	4
45	1	1	0	1	0	0	1	1	0	0	1
46	2	2	0	2	0	1	1	0	2	0	2
47	1	1	0	1	0	1	0	0	1	0	1
48	4	3	1	3	1	1	3	1	3	0	4
49	0	0	0	0	0	0	0	0	0	0	0
50	3	2	1	2	1	2	1	1	2	0	3
51	7	6	1	7	0	4	3	2	5	0	7
52	4	4	0	3	1	3	1	1	3	0	4
53	7	4	3	5	2	5	2	0	7	3	4
54	1	1	0	1	0	1	0	0	1	0	1
55	0	0	0	0	0	0	0	0	0	0	0
56	4	1	3	3	1	1	3	0	4	0	4
57	0	0	0	0	0	0	0	0	0	0	0
58	2	1	1	2	0	0	2	0	2	0	2
59	3	2	1	2	1	1	2	1	2	0	3
60	17	9	8	10	7	5	12	3	14	2	15
61	10	5	5	8	2	9	1	3	7	1	9
62	3	2	1	3	0	3	0	2	1	1	2
63	0	0	0	0	0	0	0	0	0	0	0
64	3	1	2	2	1	1	2	0	3	0	3
65	0	0	0	0	0	0	0	0	0	0	0
66	4	3	1	4	0	2	2	0	4	0	4
67	4	4	0	4	0	4	0	1	3	1	3
68	3	2	1	3	0	1	2	0	3	0	3
69	6	4	2	5	1	5	1	3	3	0	6
70	1	1	0	1	0	1	0	0	1	1	0
71	0	0	0	0	0	0	0	0	0	0	0
72	6	4	2	3	3	2	4	2	4	1	5
73	0	0	0	0	0	0	0	0	0	0	0
74	3	2	1	2	1	2	1	0	3	0	3
75	6	4	2	5	1	5	1	2	4	0	6
76	7	4	3	5	2	3	4	1	6	1	6
77	2	2	0	2	0	2	0	0	2	1	1

Census Tract Group	Number of Prior Addresses of the Homeless										
	ALL	Men	Women	Family	Single	ADM	Non ADM	Chronic	Non Chronic	Veteran	Non Veteran
78	2	1	1	1	1	1	1	0	2	0	2
79	6	3	3	5	1	3	3	0	6	1	5
80	3	2	1	3	0	1	2	1	2	0	3
81	3	1	2	1	2	0	3	0	3	0	3
82	5	3	2	3	2	1	4	0	5	1	4
83	0	0	0	0	0	0	0	0	0	0	0
84	10	7	3	5	5	6	4	3	7	0	10
85	3	1	2	2	1	1	2	1	2	0	3
86	0	0	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0	0	0
88	1	1	0	1	0	1	0	0	1	1	0
89	3	3	0	3	0	1	2	0	3	0	3
90	1	1	0	1	0	1	0	0	1	0	1
91	4	3	1	3	1	2	2	1	3	0	4
92	1	0	1	0	1	1	0	1	0	0	1
93	0	0	0	0	0	0	0	0	0	0	0
94	1	1	0	1	0	1	0	0	1	0	1
95	5	3	2	2	3	2	3	3	2	1	4
96	2	2	0	2	0	1	1	1	1	0	2
97	0	0	0	0	0	0	0	0	0	0	0
98	1	1	0	1	0	1	0	1	0	0	1
99	0	0	0	0	0	0	0	0	0	0	0
100	3	2	1	1	2	0	3	0	3	1	2
101	2	0	2	1	1	0	2	0	2	0	2
102	1	0	1	0	1	1	0	0	1	0	1
103	2	1	1	1	1	0	2	0	2	1	1
104	24	12	12	11	13	8	16	4	20	3	21
105	13	6	7	9	4	4	9	4	9	0	13
106	5	2	3	4	1	3	2	0	5	1	4
107	65	29	36	27	38	18	47	13	52	7	58
108	32	17	15	14	18	10	22	3	29	0	32
109	13	4	9	6	7	4	9	2	11	0	13
110	12	7	5	8	4	6	6	5	7	1	11
111	14	8	6	9	5	6	8	2	12	1	13
Total	817	510	307	586	231	423	394	231	586	71	746

APPENDIX F

**CORRELATION MATRIX OF INDEPENDENT
VARIABLES**

		PBLACK	PSPAN	PNOHIGH	PFYOUCHD	PSUBFAM	POPHOLD
Correlation	PBLACK	1.000	-.762	.260	.767	.334	.008
	PSPAN	-.762	1.000	.278	-.496	.161	-.256
	PNOHIGH	.260	.278	1.000	.452	.523	-.069
	PFYOUCHD	.767	-.496	.452	1.000	.153	.168
	PSUBFAM	.334	.161	.523	.153	1.000	-.631
	POPHOLD	.008	-.256	-.069	.168	-.631	1.000
	PUNEMP	.590	-.257	.565	.736	.245	-.027
	PHHPAI	.406	.094	.889	.587	.460	.044
	MEDHHINC	-.365	-.143	-.771	-.568	-.405	-.106
	PNOPOV	.574	-.268	.676	.803	.079	.365
	PNOCAR	.313	-.086	.606	.551	-.115	.635
	PNOPHONE	.466	-.235	.584	.650	-.001	.356
	PRENT	.171	.102	.635	.552	-.141	.522
	PENTHINC	.066	.214	.435	.040	.322	.044
	MEDCRENT	-.470	.136	-.738	-.633	-.299	-.112
	PRCROWD	.133	.223	.702	.306	.230	.053
Sig. (1-tailed)	PBLACK		.000	.003	.000	.000	.467
	PSPAN	.000		.002	.000	.046	.003
	PNOHIGH	.003	.002		.000	.000	.235
	PFYOUCHD	.000	.000	.000		.054	.039
	PSUBFAM	.000	.046	.000	.054		.000
	POPHOLD	.467	.003	.235	.039	.000	
	PUNEMP	.000	.003	.000	.000	.005	.390
	PHHPAI	.000	.164	.000	.000	.000	.322
	MEDHHINC	.000	.067	.000	.000	.000	.133
	PNOPOV	.000	.002	.000	.000	.206	.000
	PNOCAR	.000	.184	.000	.000	.115	.000
	PNOPHONE	.000	.006	.000	.000	.498	.000
	PRENT	.037	.144	.000	.000	.070	.000
	PENTHINC	.247	.012	.000	.337	.000	.325
	MEDCRENT	.000	.078	.000	.000	.001	.122
	PRCROWD	.082	.009	.000	.001	.008	.291

		PUNEMP	PHHPAI	MEDHHINC	PNPOV	PNOCAR
Correlation	PBLACK	.590	.406	-.365	.574	.313
	PSPAN	-.257	.094	-.143	-.268	-.086
	PNOHIGH	.565	.889	-.771	.676	.606
	PFYOUCHD	.736	.587	-.568	.803	.551
	PSUBFAM	.245	.460	-.405	.079	-.115
	POPHOLD	-.027	.044	-.106	.365	.635
	PUNEMP	1.000	.560	-.574	.732	.429
	PHHPAI	.560	1.000	-.718	.772	.717
	MEDHHINC	-.574	-.718	1.000	-.680	-.594
	PNPOV	.732	.772	-.680	1.000	.833
	PNOCAR	.429	.717	-.594	.833	1.000
	PNOPHONE	.559	.713	-.499	.883	.807
	PRENT	.465	.687	-.622	.762	.840
	PENTHINC	.144	.370	-.529	.266	.309
	MEDCRENT	-.620	-.757	.564	-.741	-.589
	PRCROWD	.383	.614	-.575	.501	.464
Sig. (1-tailed)	PBLACK	.000	.000	.000	.000	.000
	PSPAN	.003	.164	.067	.002	.184
	PNOHIGH	.000	.000	.000	.000	.000
	PFYOUCHD	.000	.000	.000	.000	.000
	PSUBFAM	.005	.000	.000	.206	.115
	POPHOLD	.390	.322	.133	.000	.000
	PUNEMP		.000	.000	.000	.000
	PHHPAI	.000		.000	.000	.000
	MEDHHINC	.000	.000		.000	.000
	PNPOV	.000	.000	.000		.000
	PNOCAR	.000	.000	.000	.000	
	PNOPHONE	.000	.000	.000	.000	.000
	PRENT	.000	.000	.000	.000	.000
	PENTHINC	.066	.000	.000	.002	.000
	MEDCRENT	.000	.000	.000	.000	.000
	PRCROWD	.000	.000	.000	.000	.000

		PNOPHONE	PRENT	PENTHINC	MEDCRENT	PRCROWD
Correlation	PBLACK	.466	.171	.066	-.470	.133
	PSPAN	-.235	.102	.214	.136	.223
	PNOHIGH	.584	.635	.435	-.738	.702
	PFYOUCHD	.650	.552	.040	-.633	.306
	PSUBFAM	-.001	-.141	.322	-.299	.230
	POPHOLD	.356	.522	.044	-.112	.053
	PUNEMP	.559	.465	.144	-.620	.383
	PHHPAI	.713	.687	.370	-.757	.614
	MEDHHINC	-.499	-.622	-.529	.564	-.575
	PNOPOV	.883	.762	.266	-.741	.501
	PNOCAR	.807	.840	.309	-.589	.464
	PNOPHONE	1.000	.654	.250	-.620	.370
	PRENT	.654	1.000	.238	-.623	.630
	PENTHINC	.250	.238	1.000	-.214	.343
	MEDCRENT	-.620	-.623	-.214	1.000	-.605
	PRCROWD	.370	.630	.343	-.605	1.000
Sig. (1-tailed)	PBLACK	.000	.037	.247	.000	.082
	PSPAN	.006	.144	.012	.078	.009
	PNOHIGH	.000	.000	.000	.000	.000
	PFYOUCHD	.000	.000	.337	.000	.001
	PSUBFAM	.498	.070	.000	.001	.008
	POPHOLD	.000	.000	.325	.122	.291
	PUNEMP	.000	.000	.066	.000	.000
	PHHPAI	.000	.000	.000	.000	.000
	MEDHHINC	.000	.000	.000	.000	.000
	PNOPOV	.000	.000	.002	.000	.000
	PNOCAR	.000	.000	.000	.000	.000
	PNOPHONE		.000	.004	.000	.000
	PRENT	.000		.006	.000	.000
	PENTHINC	.004	.006		.012	.000
	MEDCRENT	.000	.000	.012		.000
	PRCROWD	.000	.000	.000	.000	

APPENDIX G

**MORAN'S CORRELOGRAM OF DEPENDENT
VARIABLES**

Moran's Correlogram LNMEN01

Moran's Correlogram LNWOMEN01

Moran's Correlogram LNFAMILY01

Moran's Correlogram LNSINGLE01

Moran's Correlogram LNADM01

Moran's Correlogram LNNONADM01

Moran's Correlogram LNCHRONIC01

Moran's Correlogram LNNCHRONIC01

APPENDIX H

HUMAN SUBJECTS APPROVAL

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2763
(850) 644-8673 - FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 3/2/2005

To:
Deden Rukmana
1800 Micosukee Commons Dr. # 1108
Tallahassee, FL 32308

Dept: URBAN AND REGIONAL PLANNING

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Analyzing the Spatial Distribution of Prior Addresses of the Homeless

The forms that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Exempt per 45 CFR § 46.101(b) 4 and has been approved by an accelerated review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If the project has not been completed by 2/28/2006 you must request renewed approval for continuation of the project.

You are advised that any change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

Cc: Charles Connerly
HSC No. 2005.157

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BIOGRAPHICAL SKETCH

DEDEN RUKMANA

EDUCATION

- **Ph.D. in Urban and Regional Planning**, Florida State University, April 2006. *Dissertation title:* The Spatial Origins of the Homeless: How the Homeless Vary in their Geographic Distribution. *Committee:* Charles E. Connerly (chair), Rebecca Miles, Wendy P. Crook (Social Work)
- **Master of Planning and Development Studies**, University of Southern California, May 2001. *Concentration:* Sustainable Development; Housing; International Development Planning
- **M.S. in Development Studies**, Bandung Institute of Technology, Indonesia, January 1997. *Thesis Title:* Community Empowerment in the Rural Poverty Alleviation Program: The Case Study of Ciamis Regency.
- **B.S. in Urban and Regional Planning**, Bandung Institute of Technology, Indonesia, April 1994.

PUBLICATIONS

Articles in Refereed Journals:

- **Rukmana, Deden.** (2005). Empowerment and Housing Provision for Urban Poor: Community-based Housing Development in Indonesia. *International Journal of Environmental, Cultural, Economic and Social Sustainability*. (in-press)
- Stiftel, Bruce, **Deden Rukmana** and Bhuiyan Alam. (2004). Faculty Quality at U.S. Planning Schools: An NRC-Style Study. *Journal of Planning Education and Research* 24(1): 6-22
- **Rukmana, Deden.** (2003). Gender Perspective on Homelessness. *Critical Planning* 10: 95-105
- **Rukmana, Deden.** Where the homeless youth come from: A study of the prior addresses distribution of homeless youth in Miami-Dade County, Florida. Submitted to *American Behavioral Scientist*.

Other Journal Publications:

- **Rukmana, Deden.** (2006). Exploring the Concept of Empowerment. *Tata Kota* (forthcoming)
- **Rukmana, Deden.** The Post-Modern Critique of Planning. (2005). *Jurnal Perkotaan Universitas Indonesia* 3: 12-21
- **Rukmana, Deden.** (2005). How Planning Differs from Other Disciplines: Assessing on Anchor Points for Planning's Identification. *Jurnal Institut Teknologi Nasional*. 9(1): 15-22
- Stiftel, Bruce, **Deden Rukmana** and Bhuiyan Alam. (2004). A Reply to Graduate Planning School Study Responses. *Journal of Planning Education and Research* 24(2): 128-130
- **Rukmana, Deden.** (2004). The Determining Factors of Urban Location Patterns. *Jurnal Fakultas Ekonomi Universitas Padjadjaran* 19(1): 1-10
- **Rukmana, Deden.** (1995). Partisipasi Masyarakat dalam Kebijakan Pengembangan Wilayah Terbelakang (Community Participation in Depressed Region Development Policy), *Jurnal Perencanaan Wilayah dan Kota* 19: 23-35

Articles in Other Publications:

- **Rukmana, Deden.** (2005). Pedagang Kaki Lima dan Informalitas Perkotaan (Street Vendors and Urban Informality). *Kompas Newsletter*. December 2005.
<http://www.uplink.or.id/content/view/212/68/lang,id/>

- **Rukmana, Deden.** (2005). Urbanisasi dan Perubahan Perilaku Penduduk (Urbanization and the Changes of Residents Attitude). *Info Urban and Regional Development Institute (URDI)* 19. October 2005.
- **Rukmana, Deden.** (1992). Penataan Ruang Kawasan Rawan Bencana Alam (Spatial Planning in Natural Disaster Disturbed Region). *Pikiran Rakyat Daily Newspaper*. November 7, 1992

Monographs (past five years only)

- Crook, Wendy, **Deden Rukmana**, and Donna Brown. 2005. *Creating Effective Partnerships to Develop Affordable and Attractive Housing in Tallahassee's Southside Neighborhoods*. A Report submitted to the Community Outreach Partnership Center Housing Subcommittee. Department of Urban and Regional Planning. Florida State University.
- Crook, Wendy, Ronald Mullis, Ann Mullis, Thomas Cornille, Stephanie Shepherd, Nicole Sullender, and **Deden Rukmana**. 2004. *Development of Outcome Measurement Systems for Florida's Homeless Programs*. A Report submitted to the Florida Department of Children and Families, Office on Homelessness. School of Social Work. Florida State University.

CONFERENCE PRESENTATIONS

- **Rukmana, Deden.** *The Spatial Origins of the Homeless: How the Homeless Vary in Their Geographic Distribution*. A paper to be presented at The Sixth International Conference on Diversity in Organization, Communities and Nations, June 12-15, 2006 in New Orleans
- **Rukmana, Deden** and Hayati S. Hasibuan. Urbanization and Motorcycles: The Challenges for Urban Transport in Jakarta. A paper presented at the 2006 Transportation Research Board Annual Meeting, January 22-26, 2006 in Washington, D.C.
- **Rukmana, Deden.** *Empowerment and Urban Poor: Poverty Alleviation Program and Housing Provision Program for Urban Poor in Indonesia*. A paper presented at the ACSP 2005 Annual Conference, October 27-30 in Kansas City, Missouri
- **Rukmana, Deden.** *Exploring Connections between Homelessness and Housing Affordability*. A paper presented at the 2005 Annual Meeting of the Urban Affairs Association, April 13-16, 2005 in Salt Lake City, Utah
- **Rukmana, Deden.** *Empowerment and Urban Poverty Alleviation in Indonesia*. A paper presented at the 2005 Annual Meeting of the Urban Affairs Association, April 13-16, 2005 in Salt Lake City, Utah
- **Rukmana, Deden.** *Empowerment and Housing Provision for Urban Poor: Community-based Housing Development in Indonesia*. A paper presented at the Sustainability Conference 2005, February 25-27, 2005 in Hawaii
- Stiftel, Bruce, **Deden Rukmana**, and Bhuiyan Alam. 2003. *Faculty Quality at U.S. Planning Schools: An NRC-Style Study*. A paper presented at the AESOP-ACSP 2003 Joint Congress, July 8-12, 2003 in Leuven, Belgium

RESEARCH EXPERIENCE

- **Research Assistant**, Department of Urban and Regional Planning, Florida State University
 1. *Community Outreach Partnership Center (COPC), Subproject of Neighborhood Environments and Physical Activity*. August 2004-present.
 - Lead in collecting data for the environmental audit of focus neighborhood and entering it into GIS; helped with recruiting and interviewing respondents; observe and recorded physical activity on street segments; conducted environmental audit including walking trail, parks and facilities for physical activity; conducted relevant literature.

- Conducted spatial analysis using GIS such as geocoding, classification, buffering and network analysis; prepared maps for presentations and reports; analyzed how the availability of sidewalks, bus stop and facilities influence levels of physical activity.
- 2. *Community Outreach Partnership Center (COPC), Subproject of Housing Development and Neighborhood Revitalization.* August 2004-present.
 - Conducted literature review of instruments for measuring the effectiveness of community-based organization in providing affordable housing and neighborhood revitalization; designed survey instruments; interviewed leaders of community-based organizations and residents.
 - Conducted qualitative data analysis; prepared qualitative data tracking form; performed content analysis to identify themes; prepared data sorter template for conducting statistical analysis of codes co-occurrence; prepared reports and presented findings to COPC Housing Subcommittee.
- 3. *Travel Behavior and Physical Activity.* August 2003-April 2004.
 - Collected data from the Census Data to identify the characteristics of neighborhood that the respondents lived; compiling data from the survey
 - Used GIS applications to create variables of distances between respondents' homes to various destinations including within walking distance and driving distance.
- 4. *Assessing Faculty Quality at U.S. Planning Schools.* August 2002-December 2003.
 - Collected data of faculty composition and rank of planning schools in the U.S. from university Websites; compiled total number of faculty and percentage of full professor for each planning schools; obtained data of publications and citations from ISI's Web of Science for each faculty.
 - Calculated and analyzed the publishing faculty, density of publications, Gini coefficient of distribution of publications, density of citations and Gini coefficient of citation distribution for each planning school; prepared paper for conference presentation and publications.
- **Research Assistant,** College of Social Work, Florida State University
Development of Outcome Measurement Systems for Florida's Homeless Programs. Summer 2004.
 - Conducted relevant literature reviews on performance measurement instruments of homelessness programs at system level, program/organizational level and individual level; prepared final report to the Department of Children and Families' State Office on Homelessness.
- **Research Assistant,** University of Southern California
Transportation Needs of Childrens Hospital Los Angeles. January 2001-March 2001.
 - Designed survey instruments to identify the transportation needs and conducted preliminary survey in the Children Hospital Los Angeles.
- **Researcher Assistant,** Center for Urban and Regional Development Studies, Bandung Institute of Technology, Indonesia
 1. *Study of Integrated Rural Accessibility Planning in Indonesia, Second Phase.* 1997-1998
 2. *Study of Integrated Rural Accessibility Planning in Indonesia, First Phase.* 1995-1996
 3. *Ocean Spatial Planning.* 1994-1995
 4. *Study of National Transportation System.* 1994-1995
 5. *Social Economic Impact Analysis of Bintan Development.* 1994-1995

TEACHING EXPERIENCES

- **Teaching Assistant**, *URP-5211 Statistics*, Department of Urban and Regional Planning, Florida State University, Fall 2003
Assisted Professor Jeffrey Brown in lecturing computer lab sessions of a graduate course of Statistics. Lectured the application of SPSS.
- **Instructor**, *URP-3000 Introduction to Planning and Urban Development*, Department of Urban and Regional Planning, Florida State University, Summer 2003
- **Instructor**, *Operational Research*, Department of Economics, Galuh Ciamis University, 1999-2000
- **Teaching Assistant**, *Planning Analysis Method*, Department of Urban and Regional Planning, Bandung Institute of Technology, 1991-1995

HONORS AND DISTINCTIONS

- Dissertation Research Grant, Florida State University, October 2005
- Gill-Chin Lim Travel Award, October 2005
- Urban Affairs Association's Annual Meeting Supportive Fund, April 2005
- FannieMae Travel Scholarship Award, October 2004
- Graduate Assistantship Award from the Department of Urban and Regional Planning, Florida State University, Fall 2002-Spring 2004
- FSU Graduate Student Leadership Award Nomination, March 2004
- The Doreen Flummer Affordable Housing Conference Student Scholarship, 2003
- Scholarship for Master's program from the Government of the Republic of Indonesia under Capacity Building in Urban Infrastructure Management (CBUIM) Project, 2000-2001
- Indonesian National Development Planning Board Fellowship, 1997
- University Consortium on the Environment (UCE) Fellowship, 1994

PROFESSIONAL EXPERIENCES

- **Ministry of Home Affairs, the Republic of Indonesia.** (2000)
Assistant Program Manager, *Project Management Unit for Municipal Innovation Project*.
 - Managed and coordinated more than a hundred urban development projects throughout Indonesia funded by the World Bank.
 - Provided technical assistances and supervision to project managers in local governments
 - Reviewed the progress of the projects and prepared reports along with the project consultants.
- **Planning Department of Ciamis Regency, West Java Province, Indonesia.** (1996-2000)
 1. Project Manager, *Site Plan of Sindangkasih and Parunglesang Region; Master Plan of Ciamis Regency; Feasibility Study of Tourist Market in Pangandaran; Legalization of Master Plans of Cities in Ciamis Regency; Master Plan of Cijeungjing City; Master Plan of Purwaharja City; Master Plan of Ciamis Regency.*
 2. Coordinator, *Project Implementation Unit of West Java Urban Development Project in Ciamis Regency.*
 3. Planner, *Development Plan of Pangandaran Tourist Region.*
 4. Technical Team, *Development Policy of Ciamis Regency; Tourist Development Study of Segara Anakan Region in Ciamis Regency; Ecosystem Analysis of Segara Anakan Region; Sub Project Appraisal Report of Integrated Urban Infrastructure Development Plan of Ciamis Town; Master Plan of Kalipucang City; Site Plan of Pangandaran City; Site Plan of Banjar City.*
- **Urban Development and Planning Consultants**
 1. Community and Economic Development Expert, *Project of Empowerment of Poor Community in Ciamis Regency*, Studio Cilaki Empatlima Consultant, Ltd., Bandung, Indonesia (1998-1999)

2. Community and Economic Development Expert, *Community Economic Development Program*, Darussalam Islamic Institute, Ciamis, Indonesia (1998-1999)
3. Planner, *Block Plan of West and South Bogor*, Quadra Cipta Selaras Consultant, Ltd., Bandung, Indonesia. (1994-1995).
4. Planner, *Industrial Estate Plan of Subang*. Quadra Cipta Selaras Consultant, Ltd., Bandung, Indonesia. (1994-1995).
5. Planner, *Master Plan of Indramayu Regency*. Belaputera Interplan Consultant, Ltd., Bandung, Indonesia. (1994-1995).
6. Planner, *Master Plan of Purwakarta Regency*. Quadra Cipta Selaras Consultant, Ltd., Bandung, Indonesia. (1993-1994).
7. Assistant Planner, *Master Plan of Majalengka Regency*. Quadra Cipta Selaras Consultant, Ltd., Bandung, Indonesia. (1992-1993)

COMMUNITY SERVICES (*past five years only*)

- Reviewer for *International Journal of Environmental, Cultural, Economic and Social Sustainability*. 2005
- President, the Indonesian Students Association of Tallahassee. 2003-2005
- Member, HUD SuperNOFA Community Advisory Committee of Tallahassee. 2004