Utilization of community-based transitional housing by homeless veteran populations diagnosed with a mental illness: The association between predisposing, enabling, and need factors with program outcomes

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Utilization of Community-Based Transitional Housing by Homeless Veteran Populations Diagnosed with a Mental Illness: The Association Between Predisposing, Enabling, and Need Factors with Program Outcomes

by

Roger Casey

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy Department of Community and Family Health College of Public Health University of South Florida

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Dedicated to my wife and sons
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Utilization of Community-Based Transitional Housing by Homeless Veteran Populations Diagnosed With a Mental Illness: The Association Between Predisposing, Enabling, and Need Factors With Program Outcomes

Roger Casey

ABSTRACT

Mental illness among homeless populations is a significant public health issue. Community-based programs that assist the homeless are most often developed to meet local housing needs, not the needs of mental health populations. Transitional housing, a model frequently utilized to address homelessness in communities, provides program-based housing with supportive services.

The purpose of this study was to examine the associations between participant-and program-level factors on the utilization of community-based transitional housing by homeless veterans diagnosed with a mental illness. The study tested a revised framework of the behavioral model of utilization for vulnerable populations theory.

The sample was comprised of male homeless veterans diagnosed with a mental illness who participated in community-based transitional housing programs in 2004 and 2005 ($n = 2,502$). Data were collected on 288 programs throughout the United States, operated by local nonprofit or local government agencies and monitored by the U.S. Department of Veterans Affairs under the Homeless Providers Grant and Per Diem Programs. Success was defined as either completion of a course of treatment as
determined by a master’s prepared clinician, or if housing was obtained upon discharge, as reported by the participant.

Initial bivariate results indicated that both demographic and situational variables predicted success in transitional housing. However, upon further statistical analyses, limited predictors were revealed. Participants were more likely to be successful if they were white, reported combat experience, were interested in the program prior to admission, and were enrolled in cognitive behavioral models. Participants were more likely to be housed upon discharge if they were white, received some type of public support, were homeless less than 30 days before admission, and showed interest in the program at the time of the initial interview. Participants were less likely to be successful if they were diagnosed as schizophrenic. There was an indication that participants enrolled in programs designated as faith-based were less likely to be housed than those enrolled in secular programs. No statistically significant associations were found between the level of services offered in the transitional housing programs with either successful completion or participants’ housing upon discharge.
CHAPTER I: INTRODUCTION AND STATEMENT OF THE PROBLEM

Overview

The fact that so many people in the United States lack suitable housing reflects relatively recent political and socioeconomic changes. Individuals especially vulnerable to these changes, and thus to homelessness, are those diagnosed with a mental illness. Increases in health care costs, increases in poverty, with concurrent decreases in income-support programs, the need for increased job training, decreases in availability of low-cost housing units, deinstitutionalization of those diagnosed with mental illness, changes in vagrancy laws—all are trends associated with the rise of homelessness since the 1980s (Interagency Council on the Homeless Annual Report, 1994). According to the National Alliance to End Homelessness, from 1970 through 1990, the number of low-income families increased by 40%, from 5.9 million to 8.5 million. At the same time, affordable housing available to these families declined by over 50%, leaving half of all low-income families without a permanent housing option (National Alliance for the Homeless Press Release, 2000). It is estimated that during the 1970s and 1980s, the United States lost affordable housing, but the number of those needing low-cost housing increased, contributing to a gap of 5 million affordable housing units (Dolbeare, 1996).

In addition to the evidence that may indicate the problem of homelessness is a result of a societal change, homelessness can also be attributed to the social and
behavioral aspects of individuals in the population. For instance, Plescia, Watts, Neibacher, and Strelnick (1997) identified a multitude of personal characteristics that increase an individual’s risk for homelessness. Research conducted through health-care outreach suggested that an individual’s health, an underutilization of community services, and a lack informal support networks can increase the likelihood of homelessness.

During the 1990s, new federal funding was available to create programs to provide services for homeless populations. The Stewart B. McKinney Homeless Assistance Act (1987) created a range of services including emergency shelter, transitional housing, job training, primary health care, and education. This law inspired other federal, state, and local funding initiatives in an attempt to create programs to fill gaps in service needs through establishing local continuums of care—utilizing transitional housing as a primary component. Despite this new funding and the creation of targeted services for the homeless, the population of individuals and families without permanent housing increased throughout the last three decades.

Need for the Study

As a social problem, homelessness has enormous public health significance (Caton et al., 2005). Generally, programs for those who are homeless are developed to address a local need, resulting in a program-product more likely based upon community service gaps rather than sound research. To address a community’s immediate needs, program design trends and federal funding sources have favored transitional housing models. Offering a safe place to stay for up to two years, community-based transitional
housing programs include various services to address the causes and effects of homelessness. Participants who utilize transitional housing programs are engaged in a number of homeless-specific supportive services and referred to other community agencies for specialized services such as health or mental health care.

Community-based programs, although not necessarily by design, are seeing an increase in the number of individuals diagnosed with mental illness (North, Eyrich, Pollio, & Spitznagel, 2004). Estimates of the number of individuals diagnosed with a mental illness among the homeless population vary from 20% (Dickey, 2000) to 57% (Gelberg & Arangua, 2001). Some suggest that the prevalence of mental illness among the homeless population could be even as high as 80 to 95% (Martens, 2001).

Although transitional housing has been the most widely offered service-provision model during the last 20 years, existing research indicating whether this model is the most beneficial for those homeless individuals diagnosed with a mental illness is limited. In addition, it is difficult to determine from existing literature if there are any identifiable characteristics of this population that would suggest a greater likelihood of success in transitional housing type programs. A recent study demonstrated that interventions most likely to improve the life of a homeless person diagnosed with a mental illness are those found in programs that provide stable housing and basic services such as food and clothing. However, the same study demonstrated that those diagnosed with a mental illness are still compromised in terms of physical health, level of subsistence needs met, victimization, and subjective quality of life (Sullivan, Burnam, Koegel, & Hollenberg, 2000).
Currently, there is a trend away from assisting homeless individuals in transitional housing models. This trend is based on research that suggests specific groups of homeless populations can benefit from placement directly into permanent housing, avoiding the transitional housing step (Tsemberis, Gulcur, & Nakae, 2004). This “housing first” approach was conceptualized and developed primarily for those diagnosed with a mental illness; it offers participants direct housing placement, forgoing any type of transitional program.

Research is limited regarding the types of homeless individuals diagnosed with a mental illness that may benefit most or may be more likely to have positive outcomes from community-based transitional housing. In addition, as highlighted in later sections of this research, a limited number of published studies have explored the program services offered in community-based transitional housing that lead to successful outcomes. Community providers would benefit from research that explores the utilization of transitional housing by those populations diagnosed with a mental illness.

**Purpose of the Study**

The purpose of this research was to examine the associations between participant- and program-level factors on the utilization of community-based transitional housing by homeless veterans diagnosed with a mental illness. The study tested a revised framework of the behavioral model of utilization for vulnerable populations theory (Andersen, 1995; Andersen & Aday, 1978; Gelberg, Andersen, & Leake, 2000). In addition, it explored
the assumptions behind utilizing the transitional housing design for addressing homelessness.

Research Objectives

The research objectives were to

- Provide a descriptive analysis of participant characteristics in a national sample subset of homeless populations diagnosed with a mental illness utilizing community-based transitional housing programs;
- Examine and assess the intensity and types of services of community-based transitional housing utilized by a national sample subset of the homeless population diagnosed with a mental illness;
- Examine the associations of program participant characteristics and mental health diagnosis with community-based transitional housing outcomes;
- Examine the interaction of program-level services on the associations of program participant characteristics and mental health diagnosis with community-based transitional housing outcomes; and
- Develop and offer recommendations as to what types of community-based transitional housing programs may be best suited to meet the needs of homeless populations diagnosed with a mental illness.
Research Hypotheses

Participant-Level Hypotheses

1. There is no significant association between participant demographics and successful completion of community-based transitional housing.

2. There is a negative association between participant severity of homelessness and successful completion of community-based transitional housing.

3. There is a positive association between participant expressed interest in program utilization and successful completion of community-based transitional housing.

4. There is a positive association between participant perceived mental illness and successful completion of community-based transitional housing.

5. There is no significant association between participant mental health diagnosis and successful completion of community-based transitional housing.

Program-Level Hypotheses

6. There is a positive association between program certification status and participants’ successful completion of community-based transitional housing.

7. There is no significant association between the type of treatment-model philosophy of a community-based transitional housing program and participants’ successful completion.

8. There is no significant association between the religious basis of a community-based transitional housing program and participants’ successful completion.
9. There is a positive association between the level of (homeless-specific) program services and participants’ successful completion of community-based transitional housing.

Study Delimitations

The sample for this study included individuals who were determined to be veterans by the U.S. Department of Veterans Affairs (VA) and only those veterans, identified as homeless, who sought residential services or were assessed as needing services through outreach efforts conducted by VA staff.

The Literature Review and Methods sections explored several of the differences between the homeless-veteran and homeless-nonveteran populations. Although differences exist in race, age, education level, marital status, employment, and vulnerability risk for homelessness, generalizing to the nonveteran homeless population is not unreasonable.

The mental health diagnoses of the study subjects have been determined by master’s-prepared clinicians following established protocols administered by the U.S. Department of Veterans Affairs.

The data set for the study included information on approximately 300 transitional housing programs that represented geographically diverse locations throughout the United States. Programs were located in most states and the District of Columbia, in settings both urban and rural. Programs reviewed under this study represent various
types of transitional housing models: from low-demand, long-term housing to high-demand programs structured with limited lengths of stay.

The effects of program services on participant outcomes included consideration of only those services offered through community-based programs that received grants funded by the U.S. Department of Veterans Affairs (VA). By law, recipients of grants are required to comply with federal regulations that, in part, guide the provision of services. Many similar services are offered in community-based programs not funded under these grants. However, if a type of service offered in this program had a positive effect on participant outcomes, it would not be a reasonable assumption that the service would have the same effect in another community-based program unless the service was compared regarding type, intensity, and duration.

Data on program services were collected and prepared by Veterans Affairs staff that regularly site-visit the facility under protocols administered by VA.

Results of this study could have a significant impact on federal policy regarding transitional-housing treatment models for homeless individuals diagnosed with a mental illness.

Study Limitations

This study used existing administrative data. A preliminary analysis of the data was conducted to review the feasibility of utilizing this information and to determine if it was a reasonable data set for testing a particular theoretical framework and for
conducting the study. However, this existing data can be subject to limitations of the collection instruments and the interviewers, as discussed in the Measures section, as well as to other limitations of the recording and compiling of information prior to the research.

The sample for this study was made up exclusively of males who are military veterans. Although the study discusses the generalizability of this research to other VA samples, the specificity of this sample remains a limitation of the study.

The data used for this study were collected on subjects who were contacted by VA staff conducting outreach or on those who accessed VA staff either in the community or at a VA facility. Those subjects who accessed VA staff were most likely seeking assistance of some type, and as such, may have been more inclined to participate in the services provided.

The sample was limited to those in transitional housing programs who were diagnosed with a mental illness. Participants who had co-occurring substance-abuse disorders were excluded from the sample in an effort to narrow the focus of the research to outcomes from transitional housing programs for those with mental illness. Because substance-abuse disorder frequencies in this population are estimated at 60% to 80%, providing a more comprehensive approach to reviewing transitional housing outcomes would require further research.

The services offered at each transitional housing program were summarized by the individual program. It was assumed that if a participant was in a particular program, the participant received that program’s services. Additionally, the study neither tracked
nor recorded services that the program participant may have received in the community or at another facility.

Participant outcomes were recorded immediately upon discharge from the transitional housing program. Follow-up data on participants that would capture continued success in the community were not available.

Definitions

The following terminology was used throughout the study. A number of these definitions can be found in the rules and regulations that implement Public Law 102-590 (38 CFR 61.0).

*Community-based:* located in the community, in near proximity to locations the participants of the program frequent or where they are likely to be. *Community-based* also implies that the program is supported by and is coordinated with other organizations with similar missions and participants.

*GPD-funded program:* a community-based transitional housing program funded under the VA’s Homeless Providers Grant and Per Diem Program.

*GPD participant:* a person who receives services provided at sites funded with assistance under VA’s Homeless Providers Grant and Per Diem Program.

*Homeless or homeless individual* (From the U.S. Department of Housing and Urban Development definition as set forth in McKinney Act Legislation, 1987):

an individual who lacks a fixed, regular, and adequate nighttime residence and has a primary nighttime residence that is [1] a
supervised publicly or privately operated shelter designed to provide temporary living accommodations; [2] an institution that provides a temporary residence for persons intended to be institutionalized; or [3] a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings. Note: the term homeless or homeless individual does not include any individual imprisoned or otherwise detained pursuant to an Act of the Congress or a state law. An individual on probation, parole, or under electronic custody is not considered imprisoned or otherwise detained.

Nonprofit organization: an organization recognized by the U.S. Internal Revenue Service as a 501(c)3 or 501(c)19.

Mental illness: illness of the mind as determined and diagnosed by a master’s-prepared clinician using standardized diagnostic procedures set forth by clinical practice, not to include substance abuse.

Participant or subject: an individual who receives services provided at the sites described or in programs referenced in this study.

Supportive housing: noninstitutional housing, scattered through the community, with a limited number of participants, in conjunction with supportive services.

Supportive services: services that address the causes and effects of homelessness, with a goal of moving participants to independent living in the community.
Transitional housing: housing in a collective or semi-institutional setting with supportive services, intended to facilitate the movement of homeless individuals and their dependents to permanent housing within 24 months.

Veteran: a person who served in the active military, naval, or air service, and who was discharged or released under conditions other than dishonorable.

Summary

Assisting homeless individuals requires sound research regarding the provision of housing for various populations. A study that can suggest which types of transitional housing services are likely to be most beneficial for those who are homeless and diagnosed with a mental illness will have potential significance for public health policy. This study offered both an assessment of the types of homeless services available in a national sample and an examination of the program-level services that may increase the effectiveness of the transitional housing model. This study aims to assist providers who struggle day to day with helping the homeless, researchers who study this complex and persistent social phenomenon, and decision makers, e.g., officials and state and federal legislators, who influence the allocation and utilization of limited public health resources, especially as those resources relate to the homeless diagnosed with a mental illness.
CHAPTER II: REVIEW OF THE LITERATURE

This chapter provides both a discussion of the theoretical basis of this study and a review of the relevant research literature on homeless populations and programs to assist the homeless. The Theoretical Framework section of this chapter includes a discussion on the transitional housing model as an integral component to the continuum of care promoted by the federal government through housing policies of the 1980s and 1990s. Following this discussion, the theoretical foundations of the transitional housing model design are contrasted with recent program research. Finally, the behavioral model and the revised *behavioral model for vulnerable populations* are discussed and proposed as the theoretical framework for this study.

Theoretical Framework

*The Continuum of Care and Transitional Housing*

This study focuses on the utilization of transitional housing by vulnerable populations. Community-based, transitional-type housing addresses the need for, or lack of, low-cost housing: displaced individuals are provided temporary housing through transitional programs while they are able to “make a living.” As vulnerable populations drop out of low-cost housing, community-based transitional housing-type programs fill the gaps. The transitional housing programs assist the participants in addressing the
causes and effects of homelessness (Barrow & Rita, 1998). Upon completion of these programs, it is assumed the vulnerable (relative to this study, veterans diagnosed with a mental illness) will be better system-fit individuals, that is, ready to secure housing, presumably with enhanced social networks, increased entitlement revenues, job skills, and improved mental and physical health.

The term *transitional housing* is used to describe a wide variety of setting types designed for those populations who have an unassured residence. There is no national listing of transitional housing programs; many exist through informal arrangements with nonprofit organizations or self-help groups. Transitional housing programs for those participants focusing on sobriety maintenance remain intentionally anonymous. During the past 10 years, the U.S. Departments of Health and Human Services (HHS), Housing and Urban Development (HUD), Justice (DOJ), and Veterans Affairs (VA) have all offered funding to construct and/or operate community-based programs that are transitional in nature. The Urban Institute (1999) estimates that there are approximately 4,400 transitional housing programs in operation nationally.

A systems approach to addressing the homeless problem has been evident in national policy. In 1993, President Clinton issued Executive Order 12848 to provide for streamlining and strengthening U.S. efforts to break the cycle of homelessness. Under this Executive Order, federal agencies, through the U.S. Interagency Council on Homelessness, were charged with developing a coordinated federal plan with the necessary administrative and legislative initiatives to address the nation’s homeless problem. This plan, detailed in the document entitled *Priority: Home! The Federal Plan*
to Break the Cycle of Homelessness (Interagency Council on the Homeless, 1994),
established federal policy that encouraged specific program design models to address
homelessness.

This federal plan reformulated the way communities could request federal funding
under the McKinney Act. Instead of community agencies making applications directly to
federal funding sources, local groups were required to initiate and formulate planning
councils to submit coordinated and collaborative applications establishing a
comprehensive continuum of care, thus encouraging a systemic approach to solving local
homelessness. Although many communities had previously attempted to develop
coordinated homeless assistance, the federal plan established national policy by
prioritizing funding based upon a community’s description of and commitment to a local
continuum of care for the homeless. For example, to be competitive in seeking HUD
funding under the McKinney Act 1994 Homeless Super Notice of Fund Availability
(NOFA) process, a community must have shown evidence of local planning to develop a
comprehensive continuum of care. Other federal funding agencies (HHS, DOJ, VA), in
subsequent funding announcements, also required continuums of care.

A core component of the continuum of care is transitional housing. The diagram
below (Figure 1) was included in the 1994 federal plan:
According to the federal plan, implementation of the continuum of care would help enhance a localized systemic effort and “move existing homeless assistance programs with diverse rules and requirements toward a single coordinated approach to dealing with homelessness” (Interagency Council on the Homeless, 1994, p. 74).

Evident in this plan, and thus in the continuum, is the assigned importance of the transitional housing component. Transitional housing was, and continues to be, viewed as a way to assist individuals in addressing the causes and effects of homelessness, enabling individuals to become better system-fit. According to the Department of Housing and Urban Development (HUD), transitional housing should provide temporary residence with supportive services to help people develop the skills necessary for permanent housing.

The theory of transitional housing has been embraced and supported by federal policy, and adopted by localities. However, a review of the literature, presented in the
second section of this chapter, does not provide conclusive evidence of the effectiveness of this model, especially for those homeless individuals diagnosed with a mental illness.

The Behavioral Model and the Behavioral Model for Vulnerable Populations

Researchers have utilized various theoretical frameworks to examine and study homeless populations. Based upon interviews with mothers living in temporary emergency shelters, Banyard (1995) suggests that coping theory is useful. Studying a group of homeless individuals diagnosed with a mental illness, Benda (2004) chose predictors of readmission to psychiatric care based upon life-course theory. Berne, Dato, Mason, and Rafferty (1990) utilized a poverty model to study conditions that contribute to significant physical and mental health problems of families. Other theories or models have been utilized to study homeless individuals or like groups of homeless populations, for example, systems integration modeling (Dennis, Steadman, & Cocozza, 2000), learned helplessness theory (Flynn, 1997), learned helplessness with social disaffiliation theory (Goodman, Saxe, & Harvey, 1991), and attachment theory (Gwadz, Clatts, Leonard, & Goldsamt, 2004).

A number of theoretical models have been used to study the homeless population as well as the societal costs of homelessness and utilization of services by homeless populations. Through a discussion of systems theory, Caplan & Caplan (2000) demonstrated how the public health approach to homelessness is not based upon primary, secondary, or tertiary prevention but on crisis theory. As a result, many systems of care may actually harm the people seeking assistance. The resources and adaptive
characteristics of the homeless population are discussed as solutions to the problem by Haber & Toro (2004) through a social organization model in a broad ecological development perspective. Kreider & Nicholson (1997) discuss the impediments that homeless populations face in accessing health care, based upon other, nonfinancial barriers. Perhaps one of the more provocative studies is Lyon-Callo’s (2000) research demonstrating that the “medicalizing of homelessness” may reinforce service organizations’ blame of the homeless population for their situation. Such medicalizing avoids the larger political economic processes that are the root causes of homelessness.

This study focused on the utilization of a particular service, transitional housing, by a homeless population. The individual causes of, or the systemic reasons for, homelessness were avoided as specific topics of this research. Therefore, a revised version of Andersen’s behavioral model of health services theory served as this study’s analytic framework and basis for data analysis.

The behavioral model (Andersen, 1995; Andersen & Aday, 1978) is a theory frequently used to study patterns of health-care service utilization. The initial framework developed by Andersen suggests that a population’s use of health care services is a function of the population’s predisposition to use it, of the factors that enable or impede use, and of an individual’s need for care (Pruchno & McMullen, 2004). The theory and its contributing models assist in defining a sequence of conditions that may be factors in whether or not populations use services and the volume of services they consume (Andersen & Aday).
In the behavioral model, variables are organized under three domains (predisposing factors, enabling factors, or need factors), each characterized as possible determinants of utilization (see Figure 2). Predisposing factors, such as demographic characteristics (age, sex, marital status, ethnicity, and education), exist before the illness. Enabling factors include those environmental or individual characteristics that increase the likelihood of service utilization, such as financial resources, ability to locate services, or health care insurance. Need factors are considered to be the number of current or past health conditions; need factors may also include subjects’ perceptions of their health conditions or professional evaluations of their health.

The behavioral model has been widely used as a framework for research exploring access to and utilization of health care services. Studies based upon the behavioral model have explored use of services by populations with developmental disabilities (Pruchno & McMullen, 2004), utilization of support groups by family caregivers of adults with mental illness (Biegel, Shafran, & Johnsen, 2004), use of health services among the elderly (Saag et al., 1998), ethnic differences in the utilization of inpatient mental health service (Padgett, Patrick, Burns, & Schlesinger, 1994), and the influence of health beliefs of elderly adults on access to and utilization of care (Evashwick, Rowe, Diehr, & Branch, 1991).
Initially, the primary focus of the Andersen model was to explain access and service availability. More recently, however, research has expanded the model, and the conceptualization of service access has included not only access, but also utilization and the receipt of services (Phillips, Morrison, Andersen, & Aday, 1998; Pruchno & McMullen, 2004). Although not frequently cited in earlier studies, Aday and Andersen (1995) originally highlighted the importance of the utilization of services and the completion of the course of treatment when considering access to care. “Implicit in the characterizations of access as properties of the individual or the system, then, is the assumption that the quantity and quality of an individual’s passage through the medical care system are affected by these factors” (Aday, 1974, p. 210).

Enhancing the receipt of treatment as an important component of service utilization, Phillips et al. (1998) discuss the importance of provider-related variables in
the behavioral model of utilization. Provider-related variables include those factors that may be influenced by providers, as well as provider characteristics that interact with patient characteristics to influence utilization (see Figure 3). For example, factors that may be influenced by providers include the method of service delivery or the types of services (within the existing service model). Provider characteristics that interact with recipients of service could be the gender of the healthcare provider or the context where care occurs. These variables measure the context where the utilization occurs.

According to Phillips, the influence of these variables has been relatively unexplored. Of the research reviewed that cited the behavioral model between 1975 through 1995, only 51% included provider-related variables.

Figure 3. Enhanced Concept of the Behavioral Model (Phillips et al., 1998)
Further revisions of the behavioral model were suggested by Gelberg, Andersen, and Leake (2000). Considering special needs of various subject groups, Gelberg et al. (2000) presented the behavioral model for vulnerable populations, enhancing the initial model to include domains especially relevant to understanding the health and health-seeking behavior of vulnerable populations. According to the authors, this adaptation includes factors to consider when studying the use of health services and health outcomes of vulnerable populations with special needs (see Figure 4). The categories can be tailored to the types of specific populations when the model is applied to those groups. In a study of a homeless population diagnosed with a mental illness, Desai, Rosenheck, and Kasprow (2003) found that vulnerable domain factors were important supplements in assessing determinants of receipt of medical care.

In this revised model, Gelberg et al. (2000) also emphasized Andersen’s original premise that course of treatment is a necessary consideration when studying access. The authors state that “while most models of health service utilization stop at utilization, with this study we were able to examine the effects of realized access (i.e., utilization) on health outcomes. Health status is both an outcome as well as a determinant of use” (p. 27).
Although the behavioral model and its revisions have been a framework widely used to study health care utilization, there has been limited use of this model in research with homeless populations. Studies have included research on competing priorities including barriers to medical care among homeless adults (Gelberg, Gallagher, Andersen, et al., 1997), medical service use by sheltered homeless (Weinreb, Goldberg, & Perloff, 1998), predictors of the course of health services utilization of homeless people (Gelberg et al., 2000), the accessibly of medical care for homeless women (Lim, Andersen, Leake, Cunningham, & Gelberg, 2002), and determinants of medical care (Desai et al., 2003).

This study tested the behavioral model for vulnerable populations for those homeless individuals diagnosed with a mental illness. Variables were identified within the context of the Andersen behavior model as *predisposing, enabling* or *need factors*. The study design considered outcome measures as an important factor in evaluating...
utilization of care. The design also incorporated provider-related variables to determine the context where utilization occurs. Recognizing the major revision to the model proposed by Gelberg, Gallagher, Andersen, and Koegel (1997), additional domains tailored for the subject population were added.

**Literature Review**

The following section reviews the relevant literature pertaining to homelessness and those in the homeless population diagnosed with a mental illness. An overview of the social epidemiology of homelessness is followed by a review of the literature on homelessness and mental illness. Next, intervention methodologies are discussed through a review, and this discussion leads to an examination of the literature relevant to the specific program designs of transitional housing. Finally, a review is provided on the programs and research pertaining to homeless veterans, the subject group of this study.

*The Social Epidemiology of Homelessness*

A number of studies have shown psychosocial attributes that correlate with homelessness. Increased risk for homelessness has been associated with mental illness (Breakey et al., 1989; Isaac, 1990; Koegel, Burnam, & Farr, 1988; Phelan & Link, 1999; Pollio, North, Thompson, Paquin, & Spitznagel, 1997; Sullivan et al., 2000). Increased risk for homelessness has also been associated with substance abuse (Calsyn & Morse, 1991; Johnson, Freels, Parsons, & Vangeest, 1997; Vangeest & Johnson, 2002; Wenzel, 1993;) and with individuals who have co-occurring disorders (Blankertz, Cnaan, White,
Fox, & Messinger, 1990; Fischer & Breakey, 1991; Wenzel, Ebener, Koegel, & Gelberg, 1996). In addition, an increased risk for homelessness has been associated with other, environmental characteristics rather than individual traits. The limited availability of low-cost housing, increased poverty, and increasingly weaker social ties evident in contemporary family units have all been linked to the rise in the homeless population (Dolbeare, 1996; Schutt & Gerret, 1992). Additionally, environmentally exclusive determinants have been associated with homelessness, for instance, increased community violence, enactment of rigid local vagrancy laws, and reduction of community-based social services (Foscarinis, 1991; Haugland, Siegel, Hopper, & Alexander, 1997).

Highlighting the multiplicity of possible causes of homelessness, yet other research has identified determinants exclusive of those mentioned above. The causes for homelessness have also been linked to poor health (Rosenheck, Gallup, & Frisman, 1993) and childhood abuse (Koegel, Melamid, & Burnam, 1995; Susser, Struening, & Conover, 1987).

The most recent demographic information available on the homeless population can be found in a report published by the Urban Institute (1999), entitled *Homelessness: Programs and the People They Serve: National Survey of Homeless Assistance Providers and Clients*. Of those homeless individuals seeking services nationally, 80% were between 25 and 54 years old. Sixty-eight percent were male, and 32% were female. Forty-one percent were white, non-Hispanic; 40% were black, non-Hispanic; 11% were Hispanic; and 8% were Native American. Forty-eight percent of the homeless individuals were never married; of the 52% that were married at one time, 24% were
divorced, and 15% were separated. The proportion of those who graduated from high school was 34%; 28% reported higher educational attainment.

Of the homeless population, approximately 60% stayed in shelters; however, 20% lived literally on the streets. Slightly over half did not have any paid employment within 30 days prior to being interviewed. Only 40% received any type of government benefits; however, that figure was higher for those reporting as part of a family system (52%).

**Mental Illness Among the Homeless**

The prevalence of mental illness among the homeless is not static. A study that examined data collected in 1980, 1990, and 2000, revealed a dramatic increase in mood and substance-use disorders among the homeless population (North et al., 2004). The authors stated that service systems need to be aware of potential prevalence changes and the impact of these changes on service needs. The most prominent mental disorders among the homeless were found to be depression, affective disorders, substance abuse, psychotic disorders, schizophrenia, and personality disorders (Martens, 2001). Additionally, Martens reported that the prevalence of mental disorders among the homeless may be as high as 80 to 95%. According to this research, in the United States homelessness is a major, complex, public health problem.

Most of the studies exploring the relationship between homelessness and mental illness began appearing in the literature in the 1980s. Early studies identified a homeless sample as unaffiliated persons living in extreme poverty with high levels of physical and mental disability (Rossi, Wright, Fisher, & Willis, 1987). Early studies also found that rates of schizophrenia were elevated among individuals who had been homeless many
times or for long periods of time (Koegel, Burnam, & Farr, 1988). Using standardized diagnostic criteria, Fischer, Shapiro, Breakey, Anthony, and Kramer (1986) found that about one-third of homeless individuals had a current psychiatric disorder. In the same sample, homeless individuals exhibited higher prevalence rates in every diagnostic category, and homeless men were found to have higher rates of hospitalization for mental disorders.

During the late 1980s, other studies demonstrated the high rates of co-morbidity, that is, mental illness with substance abuse, among the homeless population. These studies also identified the need for mental health and substance abuse services (Breakey et al., 1989). Koegel & Burnam (1988) found that the homeless were characterized by a substantially higher prevalence of other mental disorders in addition to substance abuse disorders, particularly the major mental illnesses. In the 1990s and into 2000, research continued to show the high prevalence rates of mental illness among homeless individuals (Caton, Shrout, Eagle, & Felix, 1994; Fischer & Breakey, 1991; Johnson & Barrett, 1995; North, Thompson, Pollio, Ricci, & Smith, 1997).

As studies continued to document the problem of mental illness among homeless individuals, other researchers were exploring why these rates were unusually high. Koegel demonstrated that childhood experiences increase adults’ vulnerability to homelessness and that adults’ vulnerability to homelessness could be affected by factors that include age, gender, and race/ethnicity (Koegel et al., 1995). Variables that were the strongest predictors included the number of stressful events before becoming homeless, age, current life satisfaction, psychopathology, and prior mental hospitalization (Calsyn
Variables, including the availability of social and economic resources, were also associated with homelessness (Johnson et al., 1997).

Other studies suggested that resource problems may determine homelessness. Individuals that were homeless and diagnosed with a mental illness had reduced protection afforded by social networks and increased impact of disaffiliation (Sosin & Bruni, 1997). Sullivan et al. (2000) found that mental illness may play a role in initiating homelessness for some but that it is unlikely in and of itself to be a sufficient risk factor for homelessness.

**Intervention Designs and Service Provision for the Homeless**

As homeless populations were being studied, so were methods to address their needs. Researchers discovered that conventional methods of treatment for those homeless persons diagnosed with a mental illness were not always effective.

Indeed, effective approaches to address the needs of this population were thought to require significant modifications of traditional techniques and changes in the implementation of specific interventions (Calsyn & Morse, 1991). However, according to Wenzel et al. (1996), homeless persons appear to have no less commitment to achieving treatment goals than their nonhomeless counterparts. Furthermore, the life-in-homelessness cycle might actually inhibit the success of traditional treatment methods; for some homeless persons with a mental illness, the homeless shelters, programs, jails, and prisons were found to function as a makeshift alternative to inpatient care or supportive housing and thus possibly to reinforce the marginalization of the population.
(Haugland et al., 1997). In a study that determined access to treatment for the homeless adult population, Koegel, Sullivan, Burnam, Morton, and Wenzel (1999) found that only one-fifth of those who had either a chronic substance abuse disorder or chronic mental illness received treatment for those disorders within a 60-day period.

In the Center for Mental Health Services’ Access to Community Care and Effective Services and Supports (ACCESS) study, baseline and follow-up data on 1,828 homeless individuals were collected to evaluate the relationship between individuals’ socio-demographic and clinical characteristics, social support, and levels of formal service use. Social support was determined to be positively related to acquiring or accessing services (Lam & Rosenheck, 1999). According to the authors, social support was most strongly associated with improved access to an array of different services, and this improved access was determined to be an important need among the homeless population.

Other studies focused on prevention efforts. Olfson, Mechanic, Hansell, Boyer, and Walkup (1999), indicated that at the time of hospital discharge, psychiatric symptoms and impaired functioning posed a risk of homelessness among patients with schizophrenia. Researchers found that an enhanced community-based mental health system was not sufficient to prevent homelessness among high-risk persons with a serious mental illness, and 11% of their study sample experienced homelessness after referral to an extended acute care facility (Kuno, Rothbard, Averyt, & Culhane, 2000). The authors suggested that strategies to prevent homelessness should be considered,
perhaps at the time of discharge from the referring community hospital or extended acute care facility.

Considered a significant intervention methodology and utilized by community-based organizations for the provision of homeless services, transitional housing is meant to offer a temporary residence while program participants can work toward residential stability. Distinct from emergency shelters and permanent housing, transitional housing is viewed as an integral component of a community’s continuum of care for the homeless population.

_Transitional Housing_

Wide diversity exists among transitional housing program models. Transitional housing models are based upon differing philosophical and disciplinary traditions; they also target different subgroups, vary in physical structures and intensities of services, and place varying degrees of demands upon residents (Barrow & Rita, 1998). Research on the effectiveness of transitional housing is limited, in part, because of the various definitions of transitional housing. In addition, the effectiveness of transitional housing can be measured through a number of different domains: housing, employment, or service outcomes; provision or linkage to services; clinical status; or assessment of the immediate or long-term benefits of program participation (Barrow & Rita).

Early U.S. Government Accounting Office (GAO) reviews indicated that HUD’s transitional housing programs may be successful in reaching the intended target population, discharging residents to community independent housing, and increasing
participants’ income upon discharge (Homelessness: Transitional Housing Shows Initial Success but Long-Term Effects Unknown, 1991). However, it was noted in the GAO report that these results were from data collected from participants immediately after discharge from transitional housing. As the title of the report indicates, the long-term benefits were not studied.

Several earlier studies have shown transitional housing programs to be effective in linking homeless populations to independent living. Murray and Baier (1995) evaluated a transitional housing program for the homeless diagnosed with a mental illness and found that of the 228 participants in the sample, upon discharge 48% obtained and maintained permanent housing and secured income supports either through entitlements or employment. No association was found between psychiatric diagnosis and individual goal attainment (Murray & Baier). In the same sample, over 78% maintained housing one year after discharge; this group was more likely to have utilized psychiatric day programs while in transitional housing residence (Murray, Baier, North, Lato, & Eskew, 1997). In general, those most likely to complete the transitional housing program were more significantly involved in activities of the program (Murray, Baier, Lato, & Eskew, 1995). Although these studies may suggest that residents of transitional housing are more successful if the program is structured (with more activities and options for treatment), Carr, Murray, Harrington, and Oge (1998) found that satisfaction with a transitional housing program was inversely related to program structure. Regardless, there seems to be a relationship between success in transitional housing and the number or intensity of the services available in the program.
Vocational and housing assistance (Grella, 1993), a therapeutic milieu (Murray & Baier, 1993), comprehensive rehabilitative treatment (Prabucki, Wootton, McCormick, & Washam, 1995), and case management (Conrad et al., 1998) were all found to enhance transitional housing and increase participants’ likelihood of successful outcomes. Through observational studies, other researchers found that basic interventions (similar to transitional housing, that is, stressing stable housing, including provision of food and clothing, addressing physical health problems, and training individuals to minimize their risk of victimization) would most likely improve the quality of life of homeless persons with a mental illness (Sullivan, et al., 2000).

Several studies demonstrated the positive association between integrated services and residential care. Bebout, Drake, Xie, McHugo, and Harris (1997) studied residential outcomes of homeless adults with severe mental illness and found that if formerly homeless persons are provided integrated dual diagnosis treatment, they can gradually achieve stable housing. Drake, Yovetich, Bebout, Harris, and McHugo, (1997) examined the effects of integrating mental health interventions for homeless persons with severe mental illness and found positive quality of life outcomes. Integrating psychiatric treatment (Kasprow, Rosenheck, Frisman, & DeLella, 1999) and offering multidimensional treatment (Leda & Rosenheck, 1992) also increased the likelihood of positive outcomes from temporary housing programs. Rosenheck (2000) found that innovative programs for the homeless with mental illness are more effective than standard care.
Although most of the studies cited above are limited in scope and do not utilize an experimental design, they do provide some evidence of the effectiveness of the transitional housing model—or at least of the model type used in the particular research. However, these studies may also demonstrate the usefulness of the services associated with this model, in addition to, or rather than, demonstrating evidence of the effectiveness of transitional housing itself.

Many homeless advocates disagree with the concept of transitional housing, arguing that it stigmatizes populations utilizing the programs while institutionalizing a problem that can be solved by increasing the availability of affordable housing. More recently, studies have discussed the disadvantages of transitional housing and the advantages of housing-first models. In the late 1990s, several studies reported on the weaknesses of transitional housing programs. Hopper, Jost, Hay, Welber, and Haugland (1997) reported that institutional settings coupled with shelters provide a “circuit” for the mentally ill homeless that may prevent or substitute for more stable and appropriate housing.

Tsemberis, Moran, Shinn, Asmussen, and Shern (2003) showed that when homeless individuals diagnosed with a mental illness were placed directly into a housing-first model, that is, into permanent housing with supports, housing retention was remarkably high after six months. Although utilizing a small sample (n = 225), the authors found that 79% of those placed retained housing. A follow-up study (Tsemberis, Gulcur, & Nakae, 2004) on the same sample and additional research conducted in a similar program design model (Tsemberis & Eisenberg, 2000) yielded equally positive
housing retention results for those who were homeless and diagnosed with a mental illness.

Similar to the housing first model is supportive housing. Designed to be permanent independent housing, supportive housing programs utilize single occupancy apartments integrated within the community. Participants are provided with significant ongoing case management services to address a variety of needs. They can enter supportive housing from other programs (a distinction from the housing-first model), but when they are admitted directly to supportive housing, the program model takes the shape of the housing-first design. Mares, Kasprov, and Rosenheck (2004) found that there were no significant differences in outcomes between those who had received prior residential treatment and those placed directly in supportive housing. Supportive housing has been found to produce better outcomes than case management alone (Rosenheck, Kasprov, Frisman, & Liu-Mares, 2003), and, when associated with case management, the effectiveness of the model can be demonstrated (Kasprow, Rosenheck, Frisman, & DiLella, 2000). However, in the Mares et al. (2004) study, there did not seem to be an association between the participants’ preference for housing and housing outcome.

The discussion above provides evidence linking mental illness with homelessness. In addition, housing with treatment seems to offer this population an alternative to living on the streets and, in many cases, leads to more stable conditions with improved mental health. The review of the literature concerning effectiveness of transitional housing seems to reveal that assessment of the program model is limited. Past studies were moderate in scope, sample sizes were small, and perhaps most important, there was no
standardized comparison considering the diversity of program models and the various definitions of success. In addition, most studies did not discriminate to the extent necessary to demonstrate whether the program model or level of services led to successful outcomes.

*Homelessness and Veterans*

The VA reports that on any given night, nearly 200,000 veterans are homeless (*U.S. Department of Veterans Affairs Fact Sheet —Homeless Veterans*, 2005). In the mid-1990s, it was found that the overall proportion of veterans among homeless men was 41%, somewhat higher than the 34% of veterans in the general population (Rosenheck et al., 1994). Homeless veterans, as opposed to homeless nonveterans, are more likely to be white and older, to have higher education, and to be married or to have been married (Rosenheck & Koegel, 1993). No differences were found between homeless veterans and nonhomeless veterans in terms of residential instability, current social functioning, physical health, mental illness, or substance abuse (Rosenheck & Koegel, 1993). However, a subsequent study indicated that there may indeed be a higher rate of substance abuse and unemployment among homeless veterans than among nonhomeless veterans (Rosenheck et al., 1994). Perhaps the most significant difference between homeless veterans and homeless nonveterans was that veterans between the ages of 20 to 34 were 4.76 times more likely to be homeless than those who were nonveterans in the same age group (Rosenheck et al., 1994).
Findings from the National Survey of Homeless Assistance Providers and Clients (Homelessness: Programs and the People They Serve, 1999) showed that 33% of homeless adult men were veterans, and approximately 31% of nonhomeless adult men were veterans. Gamache, Rosenheck, and Tessler (2001) used the National Survey data to determine that the cohort at highest risk in earlier studies (ages 20 to 34), although now older, is still at highest risk.

Of all veterans, homeless veterans have an increased mortality risk, particularly those that are older (Kasprow & Rosenheck, 2000). Among all homeless veterans, African-American veterans were likely to be younger; they had more problems with drugs, but white homeless veterans were more likely to have diagnoses of alcohol abuse or serious psychiatric disorders (Leda & Rosenheck, 1995).

The VA Northeast Program Evaluation Center (NEPEC) compiles demographic data on veterans using specialized VA homeless programs. For federal fiscal year 2003, demographic characteristics for this sample (n = 41,696) can be summarized as follows: The average age was 49, and most served during the Vietnam era (46%). The next largest percentage was the post-Vietnam service era (40%). Of the total sample, 46% were African-American, and 45% were white; 45% were divorced, and 30% were never married; 29% were unemployed, and 29% were working part-time or held irregular employment. Only 44% received any public assistance or support (Health Care for Homeless Veterans Programs: The 17th Annual Report, 2004).

The impact of homeless veterans on the VA’s medical care can be highlighted by a 1998 survey, which found that 12% of all inpatients had been homeless at admission or
had lost their housing while in the hospital (Rosenheck & Seibyl, 1998). The VA’s response to serving the homeless veteran has been to establish specialized treatment programs to assist with housing and psychosocial treatment.

The Health Care for Homeless Veterans (HCHV) Program was established by Public Law 100-6 on February 12, 1987. The HCHV Program was developed to provide health and mental health care, and other needed services, to homeless veterans. Rosenheck and Fontana (1994) revealed that homeless veterans’ individual vulnerability to homelessness is most likely due to a multiplicity of psychiatric and nonpsychiatric factors. Close to 50% of the veterans enrolled nationally in HCHV programs manifested one or more severe psychiatric symptoms at screening (Rosenheck et al., 1989).

Particularly relevant to treatment was that participation in the programs was found to be associated with improvement in all areas of mental health and community adjustment. Additionally, improvement in psychiatric symptoms was associated with superior housing outcomes and improvement in community adjustment (Leda & Rosenheck, 1992).

Homeless veterans represent a sample not too dissimilar to the general homeless population. The differences highlighted above are evident (Rosenheck & Koegel, 1993; Rosenheck et al., 1994; Gamache et al., 2001), and adjusting for these differences could be accomplished with other samples. The homeless veteran population treated in VA services provides a national sample; they are a group of individuals who have been interviewed under consistent protocols and who are housed in programs with standardized admission and discharge data collection instruments. A study of this
population and the community-based transitional housing programs providing services to these individuals will provide useful information for the study of other homeless groups and/or services designed to address the causes and effects of homelessness.
CHAPTER III: RESEARCH METHODS

Sample

In 1994, the U.S. Department of Veterans Affairs, authorized by Public Law 102-590, initiated the Homeless Providers Grant and Per Diem (GPD) Program. The GPD Program provides grants and operational funds for nonprofit organizations to create and maintain transitional housing programs for homeless veterans. Since 1994, the GPD Program has funded over 200 organizations, creating more than 300 residential programs and establishing more than 7,000 community-based transitional housing beds nationally. The GPD-funded programs currently represent the nation’s largest integrated network of community-based transitional housing programs. Ranging from a three-bed, low-demand program for homeless who are disabled and diagnosed with a mental illness to a hundred-bed sober living facility for vocationally-oriented individuals, the programs are operated by the host organizations and monitored through standardized protocols developed by VA.

GPD-funded programs offer a viable and extensive transitional housing setting throughout the country. This sample reflects a diversity of transitional housing programs on a national level, with data available and collected utilizing consistent standards. Programs are required by federal law to operate transitional housing model designs. Data consistency is ensured by the practice of each participant being interviewed by a clinician
adhering to standardized monitoring protocols; services offered at each program are categorized by level and type using the same instrument. To date, no study has been conducted examining the relationships between participant characteristics, level of program services, and outcomes using Andersen’s behavioral model of service utilization as the theoretical framework in this setting.

This study was thus a secondary analysis of existing administrative data. In 2004 through 2005, approximately 21,908 homeless veterans were served in community-based transitional housing programs operated by nonprofit organizations funded by VA under the GPD Program. Programs exist nationally in 45 states and the District of Columbia.

*Study Inclusion Criteria*

Participant inclusion in the study was predicated on admission into one of the designated community-based transitional housing programs and a diagnosis of mental illness with no co-occurring drug or alcohol abuse diagnosis. Diagnosis was determined by a clinician at the time of the initial interview. Female veterans were less than 3% of the total population and were excluded. The sample for this study was $n = 2,502$.

*Measures*

At admission and discharge from community-based transitional housing, participant interviews were conducted by VA clinical staff designated as liaisons to community-based homeless provider organizations operating transitional housing projects for homeless veterans. Liaisons were advanced-degree staff, most often holding master’s degrees in social work or nursing curriculums. Structured interviews were
conducted using standardized procedures as delineated in monitoring protocols published by VA’s Northeast Program Evaluation Center (NEPEC). Program services information was documented by liaison staff on structured interview forms. These program assessments were completed by the VA liaisons in consultation with program managers of the community-based transitional housing organization.

For this study, data utilized were from the following three data sets:

1. Participant-level admission data: Admission data contained descriptive information on each participant, including standard demographic information as well as combat experience, employment status, level of public support, amount of income, length of homelessness, number of homeless episodes, current living situation, perceived mental illness in addition to clinically evaluated mental illness diagnosis (see Intake Form X, Appendix A).

2. Participant-level discharge data: Discharge data included the reason the participant left the program and the participant’s plans for living in the community (see Discharge Form D, Appendix B).

3. Program-level characteristics and services information: Program characteristics and services data included program certification status, whether the program was faith-based or secular, and the level of homeless-specific services offered (see Facility Survey Form, Appendix C).
Preliminary Data Analysis

A preliminary data analysis was performed on GPD participant and program data from 2004 to determine if the data set would provide a reasonable test of the study’s theoretical framework and to ascertain the feasibility of conducting the study as proposed.

An examination of program participant data from 2004 showed that 13% of the participants (1,641) had no substance abuse or mental health diagnosis; 39% (4,974) had no mental health diagnosis but were determined to have a substance abuse disorder; 39% were determined to have both a mental health and substance abuse disorder; and 9% (1,121), the portion of the sample under study, had a mental health disorder with no indications of substance abuse. To narrow the focus of this research on mental illness and homelessness, participants in the transitional housing programs diagnosed with a substance disorder or co-occurring disorders were excluded from the sample. As expected, the inclusion of 2005 data sample size approximately doubled program participant data (21,908). Of those 21,908 total program participants, 10% (2,189) had no substance abuse or mental health diagnosis; 77% (16,886) were determined to have a substance abuse disorder; and 13% (2,831), the sample under study, had a mental health disorder with no indications of substance abuse. It should be noted that this figure (2,831) represented episodes in transitional housing not individual participants; the number of participants was 2,502 when duplicates were removed.
The total number of operating programs surveyed in 2004 was 274; for 2004 and 2005 combined, the total number of programs was 288. The program-related variables of interest in this study included the program certification level, the program treatment philosophy, and the type of services provided. Of the programs surveyed in 2004, 13% had a state mental health license, 32% reported having a state public health or state board of health certification, and 15% of the programs had a national accreditation. Most programs reported their treatment philosophy as either a therapeutic community (23%) or adhering to a psychosocial rehabilitation model (20%). Other programs reported treatment philosophies including cognitive/behavioral models (15%) and 12-step models (16%). Sixty-seven percent of the programs were reported as secular or having no religious base; 33% were faith-based or historically a faith-based organization.

The 2004 data set indicated that a wide-range of services was offered in the GPD-funded programs. Services and the percentage of programs that offered services directly (as opposed to referral to other staff or agencies) are illustrated in Table 1, as follows: discharge planning, 88%; case management, 85%; group or individual therapy, 83%; housing assistance, 73%; money management, 70%; transportation assistance, 69%; social security assistance, 65%; outcome follow-up, 55%; vocational/educational counseling, 38%; aftercare counseling, 36%; family counseling, 27%; nutritional counseling, 19%; spiritual counseling, 18%; AIDS screening and counseling, 8%; payee services, 8%; and legal counseling 5%.
Table 1

Percentage of GPD Programs Offering Various Direct Services

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>% Direct Service</th>
</tr>
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<tbody>
<tr>
<td>Discharge Planning</td>
<td>88</td>
</tr>
<tr>
<td>Case Management</td>
<td>85</td>
</tr>
<tr>
<td>Group or Individual Therapy</td>
<td>83</td>
</tr>
<tr>
<td>Housing Assistance</td>
<td>73</td>
</tr>
<tr>
<td>Money Management</td>
<td>70</td>
</tr>
<tr>
<td>Transportation Assistance</td>
<td>69</td>
</tr>
<tr>
<td>Social Security Assistance</td>
<td>65</td>
</tr>
<tr>
<td>Outcome Follow-Up</td>
<td>55</td>
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<tr>
<td>Vocational/Educational Counseling</td>
<td>38</td>
</tr>
<tr>
<td>Aftercare Counseling</td>
<td>36</td>
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<tr>
<td>Family Counseling</td>
<td>27</td>
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<tr>
<td>Nutritional Counseling</td>
<td>19</td>
</tr>
<tr>
<td>Spiritual Counseling</td>
<td>18</td>
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<tr>
<td>AIDS Screening &amp; Counseling</td>
<td>8</td>
</tr>
<tr>
<td>Payee Services</td>
<td>8</td>
</tr>
<tr>
<td>Legal Counseling</td>
<td>5</td>
</tr>
</tbody>
</table>

The theoretical framework required variables to be regarded under the predisposing, enabling, and need factors and within those factors under the traditional and vulnerable population domains. Hypotheses were based upon the level of association between these various factors and domains. A review of the 2004 and 2005
data sets indicated that variability of the sample and the sample size were adequate and that establishing these categories of factors and domains was feasible.

Study Variables

Data sets from 2004 and 2005 were combined. Individual identifiers were removed and, because several fields contained limited responses, some variables were collapsed and reported in summary form. As described later in this section, creation and modification of several variables from the initial data set was required to establish bivariate relationships.

Based upon Andersen’s behavioral model (Andersen, 1995; Andersen & Aday, 1978), variables or individual determinants of service utilization are defined as predisposing, enabling, or need factors. Predisposing factors are those “preexisting” subject characteristics. Enabling factors are those personal, family, or community resources that affect care. Need factors are the perceived/subjective or professional/objective assessments of urgency for services or illness level. The enhancement of Andersen’s model by Gelberg et al. (2000), that is, the behavioral model for vulnerable populations, provides a distinction between the traditional and vulnerable domains to accommodate special populations. This enhanced model also allows the study of service utilization impact on health status outcomes. Using the Desai et al. (2003) and Gelberg et al. (2000) studies as a guide, variables were categorized according to factor and domain as illustrated in Table 2.
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Domains</th>
<th>Specific Factors</th>
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<td><strong>Predisposing:</strong></td>
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<td>Traditional:</td>
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<tr>
<td>Age</td>
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<td>Ethnicity</td>
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<td>Military Combat Status</td>
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<td>Employment</td>
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<td>Traditional:</td>
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<tr>
<td>Program Certification Status</td>
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<td>Treatment Model/Philosophy</td>
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<td>Vulnerable:</td>
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<tr>
<td>Level of Homeless-Specific Services Offered by Program</td>
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<tr>
<td><strong>Need:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressed Interest in Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vulnerable:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Independent Variables

<table>
<thead>
<tr>
<th>Domains</th>
<th>Specific Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables</td>
<td>Perceived Mental Illness</td>
</tr>
<tr>
<td></td>
<td>Mental Health Diagnosis</td>
</tr>
<tr>
<td></td>
<td>(as Determined by Clinical Interview)</td>
</tr>
<tr>
<td>Dependent Variables</td>
<td>Program Outcomes</td>
</tr>
<tr>
<td></td>
<td>Outcome 1: Participant Program Completion Status</td>
</tr>
<tr>
<td></td>
<td>(Clinical Assessment)</td>
</tr>
<tr>
<td></td>
<td>Outcome 2: Participant Housing Status at Discharge</td>
</tr>
<tr>
<td></td>
<td>(Subject Response)</td>
</tr>
</tbody>
</table>

### Independent Variables

**Predisposing Factor Variables**

The *predisposing-traditional domain variables* included the demographic characteristic variables related to the “propensity” of the individual to use transitional housing. These variables represented the participants’ characteristics existing before the illness, or in this case before the homeless episode, such as age, ethnicity, marital status, and military combat exposure.

The *predisposing-vulnerable domain variables* included those variables existing before seeking transitional housing and relevant for the study of homeless populations. Included in this domain were the variables representing the participants’ employment status, level of public support/entitlements, amount of income, length of homelessness, number of homeless episodes in the last three years, and current living situation.
Data Collection. Data for predisposing-traditional and -vulnerable domains were obtained from the following items on the program admission forms (see Form X, Appendix A): Questions 3 through 6, 8 through 10a, 27, and 29 through 34. This information was collected by the clinician interviewer at the time of contact with the participants and was used as screening for transitional housing programs. Time of contact with participants was usually within seven days of admission. Answers to all interview questions listed above were recorded as the subjects’ responses (see Table 3).
<table>
<thead>
<tr>
<th>Predisposing-Traditional Demographics</th>
<th>Measure</th>
<th>Type of Measure</th>
<th>Test</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: Years</td>
<td>Continuous</td>
<td>T-Test</td>
<td>Form X, #3</td>
<td></td>
</tr>
<tr>
<td>Ethnicity:</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #5</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital: Categorical</td>
<td>Chi-Square</td>
<td>Form X, #6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never Married</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combat:</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #8</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment: Days Worked</td>
<td>Continuous</td>
<td>T-Test</td>
<td>Form X, #27</td>
<td></td>
</tr>
<tr>
<td>Predisposing-Vulnerable Characteristics of Vulnerability</td>
<td>Measure</td>
<td>Type of Measure</td>
<td>Test</td>
<td>Data Source</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>---------</td>
<td>-----------------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Support: None</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #29-33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>One Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two Types</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Three Types</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of Income:</td>
<td>Income in Dollars</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #34</td>
</tr>
<tr>
<td></td>
<td>$ 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 - 49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 - 99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 - 499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 - 999</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000 +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length:</td>
<td>Days/Mos./Yrs.</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #10</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 – 29 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30 days –&lt;6 mos.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length:</td>
<td>Days/Mos./Yrs.</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #10</td>
</tr>
<tr>
<td></td>
<td>6 mos. - &lt;1 year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-&lt; 2 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 yrs + /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Enabling Factor Variables

Andersen (1978) describes the enabling factor as the variables that depict the means individuals have available for the use of services. In earlier studies that explored access to services using the behavioral model framework, this component was restrictively defined as individual, family, or other supportive resources to utilize services, in addition to the supportive aspects of the community. As discussed above, Gelberg et al. (2000) expanded the model to consider the actual utilization of services and its impact on outcome measures. This study defined the enabling factors not as the
supportive resources of the individual, family, or community but as the actual level of “services provided by the service,” which is transitional housing. This concept of the enabling factor is evident in a number of earlier studies that incorporated the use of provider-related variables in the behavioral model framework as illustrated in Figure 5 (Phillips et al., 1998).

![Figure 5. Enabling Factors as Services](image)

**Figure 5.** Enabling Factors as Services

The *enabling-traditional domain variables* for this study included the variables that represent the certification status of the community-based transitional housing program, the treatment model, and any religious basis of the organization that operates the program.

The *enabling-vulnerable domain variables* included the variables that represent the level of services offered specifically for the homeless in each of the transitional
housing programs. These variables were described in the Preliminary Data Analysis section.

Data collection. The following program categories were retained for analysis: program certification status, treatment model, religious basis, and level of program services (see Facility Survey form items: VII. 1.a. through 1.i.; VI. 1.; VIII 2.; and V. 1 through 23, Appendix C). Levels of certification were subset to create four levels of certification: no certification; state mental health licensed; national accreditation; and a sum category of multiple state licensing and/or national accreditations. Treatment models included eight categories: Medical Model; Therapeutic Community; Cognitive-Behavioral Model; 12-Step Model; Psychosocial Rehabilitation Model; Faith-Based/Moral Training; Supportive Housing; and “Other.” Religious basis was further categorized as no religious base; a historical but not current religious base; and a clear religious orientation. A numerical score, which was calculated for the level of services offered, reflected the number of types of different services provided in the program (see Table 4). As described in the preceding Measures section, program services information was documented by VA staff on structured interview forms. Information gathered on the Facility Survey form included the types of services offered in the GPD-funded program and whether the services were offered directly by the program or through referral to another agency. The numerical score calculated to obtain the “level of services offered” was the total number of the various types of services that were provided directly by staff on-site at the GPD-funded program.
Table 4

Independent Variables, Enabling Factors (Program Characteristics) (Facility Survey Data Set)

<table>
<thead>
<tr>
<th>Enabling-Traditional</th>
<th>“Program Services – Nonspecific”</th>
<th>Measure</th>
<th>Type of Measure</th>
<th>Test</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification Status:</td>
<td>Categorical Chi-Square Fac. Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>VII. #1 a-i</td>
</tr>
<tr>
<td>State License</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nat’l. Accreditation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple sum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment Model:</td>
<td>Categorical Chi-Square Fac. Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>VI. #1</td>
</tr>
<tr>
<td>Therapeutic community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive behavioral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-step</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychosocial rehab</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faith-based/moral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious Basis:</td>
<td>Categorical Chi-Square Fac. Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>VII. #2</td>
</tr>
<tr>
<td>Historical not current</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear religious base</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enabling-Vulnerable</th>
<th>“Program Services – Specific”</th>
<th>Measure</th>
<th>Type of Measure</th>
<th>Test</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services Offered:</td>
<td>Total Score = Number of direct services</td>
<td>Continuous T-Test</td>
<td>Fac. Survey</td>
<td>V. #1-23</td>
<td></td>
</tr>
</tbody>
</table>
*Need Factor Variables*

Andersen refers to the need factor as the illness level interpreted to be the most immediate cause of health care use. A distinction in both the early model and later revisions of Andersen’s theory was the “need” as perceived by the individual and the “need” as evaluated by the delivery system. The *need-traditional domain variables* represent a measure of the participants’ perceived need, that is, the subjects’ stated interest in the transitional housing service.

The *need-vulnerable domain variables* included the variables relevant to the homeless population diagnosed with a mental illness: the subjects’ perceived mental illness as well as the clinically evaluated mental illness diagnosis.

*Data Collection.* The participants’ stated interest in the transitional housing service was indicated by coded item 59 on admission data (see Form X, Appendix A). Perceived mental illness data were also gathered from Form X admission data according to the participants’ responses to item VI 23. The participants’ diagnosis is determined by items VIII 37 through 45 (see Table 5).
## Table 5

**Independent Variables, Need Factors (Admission Data Set)**

<table>
<thead>
<tr>
<th>Need-Traditional</th>
<th>“Expressed Interest in Program”</th>
<th>Measure</th>
<th>Type of Measure</th>
<th>Test</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject’s Interest:</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, cd #39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Did not talk, was not interested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Interested in only basic services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Interested in full range of services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need-Vulnerable</th>
<th>“Mental Illness”</th>
<th>Measure</th>
<th>Type of Measure</th>
<th>Test</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Perception:</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #VI 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need-Vulnerable</th>
<th>“Mental Illness”</th>
<th>Measure</th>
<th>Type of Measure</th>
<th>Test</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinician Diagnosis:</td>
<td>Type of Disorder</td>
<td>Categorical</td>
<td>Chi-Square</td>
<td>Form X, #10</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other psychotic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTSD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Psychiatric</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dependent Variables

Outcomes

As defined by Gelberg et al. (2000), outcomes transcend the predisposing, enabling, and need factors. Outcome measures included two program measures related to success: how or under what circumstances the subject left the program and the subject’s housing status upon discharge. Each outcome measure and association with the independent variables was reported separately. The first measure indicated the clinician’s evaluation of the course of the individual’s participation in the program, and the second represented the housing status upon discharge from transitional housing as reported by the subject. These two measures were used to further distinguish between and offer a discussion of any differences between the clinician’s assessment of success and the subject’s stated anticipated plans for housing upon discharge from a program.

Data Collection. A program outcome was determined as either successful or nonsuccessful. Success was determined in two ways, subset into the following two outcome categories:

Outcome 1: Participant Completion Status at Program Discharge (Completion Status):
Success was defined by the VA clinician and indicated on question 11 (see Form D, Appendix B) if Number 1 was selected. The question reads as follows:

The veteran ended the program because:

1. Successful completion of the program;
2. Veteran violated the program rules;
3. Veteran left the program on own decision without staff approval;
4. Veteran became too ill to continue the program;

5. Contract was terminated; and

6. Other.

VA monitoring protocol states that if a program participant made substantial progress toward a documented treatment plan then, at the clinician’s discretion, that subject may be determined successful in the program. Upon discovery of limited responses in Numbers 5 and 6, these fields were collapsed into one field defined as “Other.”

**Outcome 2: Participant Housing Status at Program Discharge (Housing Status):**

The second determination of success in the program was the program participant’s response to Question 16, anticipated living situation after discharge. *Single room, halfway house, apartment, or other institution* was defined as a successful outcome while *no residence or leaving the program without indication of a residence* was considered unsuccessful (see Table 6).
Table 6

*Outcomes of Program Discharge (Report of Discharge Data Set)*

<table>
<thead>
<tr>
<th>Program Outcomes</th>
<th>Measure</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>“How and under what circumstances the subject left the program.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outcome 1: Program Completion Status - Clinician Assessment</strong></td>
<td></td>
<td>Form D III. #11</td>
</tr>
<tr>
<td>Successful completion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violation of rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own decision without staff advice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Became too ill to continue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outcome 2: Housed Upon Program Completion – Subject response</strong></td>
<td></td>
<td>Form D #13</td>
</tr>
<tr>
<td>Apartment, room, institution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No residence, no response</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Statistical Analysis and Results**

*Level One Analysis*

Frequencies of distribution were conducted for both the independent and dependent variables to provide a descriptive analysis of the study group, that is, male homeless veterans who were diagnosed with a mental illness with no co-occurring substance abuse disorders and who utilized GPD-funded transitional housing throughout
the country for 2004 and 2005. For veterans who enrolled in a program more than once (329), their first episode of enrollment was utilized for the sample. Also included in this analysis were the characteristics of the programs that provided these services and the program outcomes.

Table 7 represents a demographic analysis utilizing the independent predisposing variables and provides subject profiles that reflect population types and characteristics of the study group (n = 2,502). For comparison, the table also includes subject profiles of those without a mental illness diagnosis in the population housed in these transitional programs. Most study participants were between the ages of 40 to 49 or 50 to 59 (35.7% and 40.7%, respectively). A majority were white (58.8%); most were divorced (48.7%) or never married (29.5%); and 20.6% reported being in combat while in the military.
Table 7

_Predisposing Variable Frequencies (Admission Data Set)_

<table>
<thead>
<tr>
<th>Predisposing-Traditional Demographics</th>
<th>Field Study Participants</th>
<th>No Mental Illness Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n = 2,502$ % No Response</td>
<td>$n = 2,189$ % No Response</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>69 2.8</td>
<td>66 3.0</td>
</tr>
<tr>
<td>30-39</td>
<td>252 10.1</td>
<td>240 11.0</td>
</tr>
<tr>
<td>40-49</td>
<td>894 35.7</td>
<td>847 38.7</td>
</tr>
<tr>
<td>50-59</td>
<td>1019 40.7</td>
<td>766 35.5</td>
</tr>
<tr>
<td>60-69</td>
<td>212 8.5</td>
<td>201 9.2</td>
</tr>
<tr>
<td>70-79</td>
<td>41 1.6</td>
<td>57 2.6</td>
</tr>
<tr>
<td>80+</td>
<td>15 0.6</td>
<td>12 0.5</td>
</tr>
<tr>
<td>Ethnicity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>135 5.4</td>
<td>138 6.3</td>
</tr>
<tr>
<td>White</td>
<td>1470 58.8</td>
<td>975 44.5</td>
</tr>
<tr>
<td>Black</td>
<td>810 32.4</td>
<td>984 45.0</td>
</tr>
<tr>
<td>Asian</td>
<td>10 .4</td>
<td>13 0.6</td>
</tr>
<tr>
<td>Am. Indian</td>
<td>37 1.5</td>
<td>37 1.7</td>
</tr>
<tr>
<td>Other</td>
<td>36 1.4</td>
<td>37 1.7</td>
</tr>
<tr>
<td>Predisposing-Traditional Demographics</td>
<td>Field Study Participants</td>
<td>No Mental Illness Group</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Marital:</td>
<td>6 (.2%)</td>
<td>5 (.2%)</td>
</tr>
<tr>
<td>Married</td>
<td>124 5.0</td>
<td>135 6.2</td>
</tr>
<tr>
<td>Separated</td>
<td>322 12.9</td>
<td>237 10.8</td>
</tr>
<tr>
<td>Divorced</td>
<td>1219 48.7</td>
<td>1006 46.0</td>
</tr>
<tr>
<td>Never</td>
<td>739 29.5</td>
<td>739 33.8</td>
</tr>
<tr>
<td>Married</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>92 3.7</td>
<td>67 3.1</td>
</tr>
<tr>
<td>Combat:</td>
<td>0</td>
<td>16 (7%)</td>
</tr>
<tr>
<td>Yes</td>
<td>515 20.6</td>
<td>354 16.2</td>
</tr>
<tr>
<td>No</td>
<td>1987 79.4</td>
<td>1819 83.1</td>
</tr>
<tr>
<td>Employment:</td>
<td>9 (.3%)</td>
<td>10 (.5%)</td>
</tr>
<tr>
<td>None</td>
<td>1936 77.3</td>
<td>1504 68.7</td>
</tr>
<tr>
<td>1-10</td>
<td>261 10.4</td>
<td>274 12.5</td>
</tr>
<tr>
<td>11-20</td>
<td>201 8.0</td>
<td>245 11.2</td>
</tr>
<tr>
<td>21-31</td>
<td>95 3.7</td>
<td>156 7.1</td>
</tr>
<tr>
<td>Public Support:</td>
<td>3 (.1%)</td>
<td>5 (.2%)</td>
</tr>
<tr>
<td>None</td>
<td>1269 50.7</td>
<td>1402 64</td>
</tr>
<tr>
<td>1Type</td>
<td>999 39.9</td>
<td>709 32.4</td>
</tr>
<tr>
<td>2 Types</td>
<td>208 8.3</td>
<td>67 3.1</td>
</tr>
<tr>
<td>3 Types</td>
<td>23 .9</td>
<td>6 0.3</td>
</tr>
<tr>
<td>Predisposing-Vulnerable Characteristics of Vulnerability</td>
<td>Study Participants</td>
<td>No Mental Illness Group</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>Amount of Income:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0</td>
<td>803 32.1</td>
<td>793 36.2</td>
</tr>
<tr>
<td>1-49</td>
<td>85 3.4</td>
<td>89 4.1</td>
</tr>
<tr>
<td>50-99</td>
<td>90 3.6</td>
<td>103 4.7</td>
</tr>
<tr>
<td>100-499</td>
<td>583 23.3</td>
<td>554 25.3</td>
</tr>
<tr>
<td>500-999</td>
<td>667 26.7</td>
<td>456 20.8</td>
</tr>
<tr>
<td>1000 +</td>
<td>255 10.3</td>
<td>176 0.8</td>
</tr>
<tr>
<td><strong>Length:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 days</td>
<td>184 7.4</td>
<td>150 6.9</td>
</tr>
<tr>
<td>1 - 29 days</td>
<td>686 27.4</td>
<td>673 30.7</td>
</tr>
<tr>
<td>30 days - &lt;6 months</td>
<td>752 30.1</td>
<td>729 33.3</td>
</tr>
<tr>
<td>6 months - &lt;1 year</td>
<td>300 12.0</td>
<td>231 10.6</td>
</tr>
<tr>
<td>1 - &lt;2 years</td>
<td>208 8.3</td>
<td>142 6.5</td>
</tr>
<tr>
<td>2 years +</td>
<td>367 14.7</td>
<td>234 10.7</td>
</tr>
<tr>
<td>Unknown</td>
<td>0 0.0</td>
<td>15 0.7</td>
</tr>
<tr>
<td><strong>Episodes: (last three years)</strong></td>
<td>1502 (60%)</td>
<td>1392 (63.6)</td>
</tr>
<tr>
<td>0</td>
<td>119 4.8</td>
<td>105 4.8</td>
</tr>
<tr>
<td>1</td>
<td>577 23.1</td>
<td>485 22.1</td>
</tr>
<tr>
<td>2</td>
<td>167 6.7</td>
<td>131 6.0</td>
</tr>
<tr>
<td>3</td>
<td>72 2.9</td>
<td>37 1.7</td>
</tr>
<tr>
<td>4</td>
<td>25 1.0</td>
<td>12 0.5</td>
</tr>
<tr>
<td>5+</td>
<td>40 1.6</td>
<td>28 1.3</td>
</tr>
</tbody>
</table>
Under the predisposing factors in the vulnerable domain—those characteristics that represent vulnerability to homelessness—the percentage of those reporting no employment within the last thirty days was 77.3%; 50.7% reported receiving no public support, and 32.1% reported no income prior to admission to a program. Over 29% in the study group were homeless between 30 days and 6 months prior to admission (29.7%); 27.4% were homelessness 1 to 29 days before entering a GPD-funded program. The study group was not likely to have multiple episodes of homelessness: less than 13% reported two or more episodes in the last three years.\(^1\) More than half of the study group reported living in a shelter or institution at the time of the interview (59.6%).

The enabling-traditional and enabling-vulnerable domains of the study included those variables that represented characteristics of the transitional housing programs utilized by the study participants. In 2004 and 2005, 288 programs were surveyed (Table 8). Over 46% of the programs surveyed had no state or national certification or license.

---

\(^1\) “Episodes of homelessness” was added as a survey category in early 2004. Data collection instruments were not distributed nationally for use until the end of the study period.
Of the remaining programs, 50.0% reported having state licensure, and 13.5% reported having a national accreditation. Most frequently reported program treatment philosophies were therapeutic communities (23.6%); cognitive-behavioral (15.3%), 12-step (15.6%), or psychosocial models (20.8%); or supportive housing (14.6%). A majority of the programs had no religious basis (66%); 18% had a historical religious basis but were not currently a religious model, and only 14.9% had a clear and current religious base. Under the enabling-vulnerable domain, program services offered directly to and specifically for the study group were calculated as a services quotient—the sum of services provided within the program offered specifically for the sample and only directly by program staff. Most programs’ service quotient was in the range of 31-40 (41.0%). The next highest frequency was in the range of 41-50 (31.4%).
<table>
<thead>
<tr>
<th>Certification Status:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>134</td>
</tr>
<tr>
<td>State license</td>
<td>144</td>
</tr>
<tr>
<td>Nat'l. accreditation</td>
<td>39</td>
</tr>
<tr>
<td>Multiple sum</td>
<td>153</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment Model:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>6</td>
</tr>
<tr>
<td>Therapeutic</td>
<td>68</td>
</tr>
<tr>
<td>Cognitive behavioral</td>
<td>44</td>
</tr>
<tr>
<td>12-step</td>
<td>45</td>
</tr>
<tr>
<td>Psychosocial rehab</td>
<td>60</td>
</tr>
<tr>
<td>Faith-based/moral</td>
<td>9</td>
</tr>
<tr>
<td>Supportive housing</td>
<td>42</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious Basis:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>190</td>
</tr>
<tr>
<td>Historical but not current</td>
<td>52</td>
</tr>
<tr>
<td>Clear religious base</td>
<td>43</td>
</tr>
</tbody>
</table>

Table 8

*Enabling Variable Frequencies (Facility Survey Data Set)*

<table>
<thead>
<tr>
<th>Enabling-Traditional</th>
<th>“Program Services – nonspecific”</th>
<th>Measure</th>
<th>No of programs utilized</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certification Status:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>134</td>
</tr>
<tr>
<td>State license</td>
<td>144</td>
</tr>
<tr>
<td>Nat'l. accreditation</td>
<td>39</td>
</tr>
<tr>
<td>Multiple sum</td>
<td>153</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment Model:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>6</td>
</tr>
<tr>
<td>Therapeutic</td>
<td>68</td>
</tr>
<tr>
<td>Cognitive behavioral</td>
<td>44</td>
</tr>
<tr>
<td>12-step</td>
<td>45</td>
</tr>
<tr>
<td>Psychosocial rehab</td>
<td>60</td>
</tr>
<tr>
<td>Faith-based/moral</td>
<td>9</td>
</tr>
<tr>
<td>Supportive housing</td>
<td>42</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious Basis:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>190</td>
</tr>
<tr>
<td>Historical but not current</td>
<td>52</td>
</tr>
<tr>
<td>Clear religious base</td>
<td>43</td>
</tr>
</tbody>
</table>

1 missing (.3%)

2 missing (.7%)

3 missing (1.0%)
The traditional and vulnerable domains of the need factor frequencies are represented in Table 9. Need was determined by the subject’s interest in the program (traditional domain) and the subject’s perceived mental health as well as the clinician’s diagnosis (vulnerable domain). Most of those interviewed in the study group (78.8%) expressed an interest in a full range of homeless services; and 64.3% of those interviewed reported that they believed they had a “current psychiatric or emotional problem other than alcohol or drug use.” A majority of the study group was diagnosed with a mood disorder (56.8%). The next most recurring diagnosis was an adjustment disorder (39.3%). The remaining diagnostic frequencies were “other” psychiatric disorders (15.5%), post traumatic stress disorder (PTSD, 10.9%), schizophrenia (8.7%), “other” psychotic disorder (7.6%), and personality disorder (7.6%).
Table 9

*Need Variable Frequencies (Admission Data Set)*

<table>
<thead>
<tr>
<th>Need-Traditional “Expressed Interest in Program”</th>
<th>Measure</th>
<th>Study Frequency</th>
<th>%</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject’s Interest:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Did not talk, was not interested</td>
<td>12</td>
<td>.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Interested in only basic services</td>
<td>292</td>
<td>11.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Interested in full range of services</td>
<td>1971</td>
<td>78.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>9.1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need-Vulnerable “Mental Illness”</th>
<th>Measure</th>
<th>Study Frequency</th>
<th>%</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject’s Assessment:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1610</td>
<td>64.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>892</td>
<td>35.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Clinician Diagnosis: Type of Disorder

- Schizophrenia: 217 (8.7%)
- Other psychotic: 189 (7.6%)
- Mood: 1421 (56.8%)
- Personality: 189 (7.6%)
- PTSD: 272 (10.9%)
- Adjustment: 983 (39.3%)
- Other psychiatric: 388 (15.5%)
The outcomes measures from the transitional housing programs were the dependent variables (Table 10). Outcomes were recorded as both program participant completion status as determined by VA staff (Outcome 1) and housing status at discharge as reported by the participant (Outcome 2). A majority of those in the study group discharged from GPD-funded programs left successfully as measured by Outcome 1 (52.2%). A relatively equal number of participants left either because of a violation of rules (17.5%) or by their own decision (18.5%). Only 6.9% became too ill to continue the program. As measured by housing status upon discharge (Outcome 2), 84.4% of the participants stated that they would be living in an apartment, room, or other institution/program upon discharge; 15.4% reported they had no residence upon discharge or did not respond.
Table 10

Outcome Variable Frequencies (Report of Discharge Data Set)

<table>
<thead>
<tr>
<th>Program Outcomes</th>
<th>Measure</th>
<th>Study Frequency n</th>
<th>%</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome 1:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Participant Completion Status</td>
<td>Successful completion</td>
<td>1307</td>
<td>52.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Violation of rules</td>
<td>438</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Own decision without staff advice</td>
<td>463</td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Became too ill to continue</td>
<td>172</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>122</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant Housing Status at Discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apartment, room, institution</td>
<td>2112</td>
<td>84.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No residence, no response</td>
<td>385</td>
<td>15.4</td>
<td></td>
</tr>
</tbody>
</table>

Variable frequencies were also examined for those participants in the programs who were not diagnosed with a mental illness or co-occurring substance abuse disorder. As indicated in Table 7, populations of the study group and those program participants not diagnosed with a mental illness were similar. The study group had a larger percentage between the ages of 50 and 59 (40.7% as opposed to 35.5% in the group without a diagnosis of mental illness). A larger percentage of those in the study group were white (58.8%) as opposed to those in the group with no mental illness (44.5%).
Those in the study group were less likely to have worked prior to admission to the program; as expected, however, more of those in the study group reported receiving public support. Frequencies of the number of episodes of homelessness in the last 3 years between the two groups were similar as were the frequencies reported on respondents’ current living situation.

**Summary, Level One Analysis**

The sample size for this study was 2,502. Most subjects were between the ages of 40-49 or 50-59; the majority were white, and most had been divorced or never married. Similar to nonhomeless veterans, 20% reported experiencing combat while in the military. Most were not employed prior to being admitted to one of the GPD-funded programs and about one-half received some type of public support. A majority were homeless between 1 to 29 days or 30 days to 6 months, and more than half reported living in a shelter prior to admission.

Almost half of the programs reported no state or national certification, license, or accreditation. Of those that had some type of independent review or certification, most were licensed by the state. Slightly more than 10% had an accreditation by a national accrediting body. With the exception of medical models or the faith-based/moral training program models, the various program treatment philosophies were equally represented in the sample. Most programs reported no clear or specific religious basis. A majority of the programs had a mid-range services-quotient score (31-40). Approximately one-third of the sample was represented by programs with the next higher-range services-quotient (41-50).
Most of those interviewed in the study group expressed an interest in the full range of services available. As expected, frequencies were high in both the subjects’ self-report of perceived mental illness as well as in all diagnostic categories reported by the clinicians.

The cumulative analysis of the dependent variables offers a summary of the outcomes of GPD-funded transitional housing programs. Later sections of this dissertation provide discussion on the usefulness of these programs for the sample population. Outcome summaries also will add to discussions on program-design-effectiveness assumptions of the transitional housing model for addressing homelessness.

*Level Two Analysis*

The second level analysis included tests of bivariate association for each hypothesis as described in Table 3. Aneshensel (2002) emphasizes the importance of the bivariate analysis. The author states that, although often overlooked on the way to multivariate methodology, the multivariate design rests upon the foundation laid through analysis of the two-variable model. A deliberate bivariate analysis linked with each of the hypotheses of this study provided specific levels of significance of the prime theoretical “variables of interest” rather than estimates. In addition, this analysis contributed to the development of *focal relationships* as recognized by Aneshensel:

The first analytic step is to establish that the focal relationship is feasible, that two variables may be related to one another. This goal is realized by demonstrating that the two variables are
empirically associated with one another [...] … further analysis serves to evaluate whether the focal relationship is indeed a relationship or merely an association (p. 11).

The hypothesis testing that follows uses bivariate analysis (Table 11). Analysis was conducted on data sets with and without duplicates removed. The data set without duplicates removed provided analysis of associations with dependent variables and an enrollment episode in a program without regard to subject. When duplicates were removed, the data set represented associations with dependent variables and individual subjects; tests consisted of participant outcomes, not episode outcomes. For participants who had more than one transitional housing experience, only the first enrollment episode was included in the sample. To develop odds ratios for significant relationships, program completion status (Outcome 1) was subset into two categories to reflect successful or nonsuccessful completion of the program. Success was determined as the first response on Question 11 and nonsuccess by Questions 2 through 5, Form D (see Appendix B). This redefined Outcome 1 was used in further analyses of hypotheses later in this section and is referred to as Outcome 1a. Several independent variables were subset to calculate odds ratios and, in some cases, to compensate for limited responses in several fields.
Table 11

*Study Hypotheses and Behavioral Model Factors*

<table>
<thead>
<tr>
<th>Participant-Level Hypotheses</th>
<th>Factors and Domains</th>
<th>Specific Factor</th>
<th>Association with Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Predisposing -</td>
<td>Subject Demographics</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td></td>
<td>Association</td>
</tr>
<tr>
<td>Two</td>
<td>Predisposing -</td>
<td>Vulnerability of homelessness</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three</td>
<td>Need - Traditional</td>
<td>Expressed interest in program</td>
<td>Positive</td>
</tr>
<tr>
<td>Four</td>
<td>Need - Vulnerable</td>
<td>Perceived mental illness</td>
<td>Positive</td>
</tr>
<tr>
<td>Five</td>
<td>Need - Vulnerable</td>
<td>Mental health diagnosis</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Association</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program-Level Hypotheses:</th>
<th>Factors and Domains</th>
<th>Specific Factor</th>
<th>Association with Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six</td>
<td>Enabling - Traditional</td>
<td>Program certification status</td>
<td>Positive</td>
</tr>
<tr>
<td>Seven</td>
<td>Enabling - Traditional</td>
<td>Treatment model</td>
<td>No</td>
</tr>
<tr>
<td>Eight</td>
<td>Enabling - Traditional</td>
<td>Religious Basis</td>
<td>No</td>
</tr>
<tr>
<td>Nine</td>
<td>Enabling - Vulnerable</td>
<td>Homeless-specific services offered</td>
<td>Positive</td>
</tr>
</tbody>
</table>

*Participant-Level Hypotheses*

*Hypothesis One*. There is no significant association between participant demographics and successful completion of community-based transitional housing.
The category of Participant Age was gathered on the collection instrument by recording the Date of Birth. Other demographic variables of Ethnicity, Marital Status, and Military Combat were collected as categorical level data. Levels of association between program outcomes and date of birth were determined through t-tests; chi-square was utilized to determine levels of association between program outcomes and the categorical independent variables.

No statistically significant relationships were found between participant age and either of the program outcomes for the sample without duplicates removed. Significant associations existed between ethnicity and Outcome 1 (program completion status) \(X^2(20, n = 2,831) = 63.27, p < .05\)] as well as ethnicity and Outcome 2 (housing status) \(X^2(5, n = 2,831) = 12.178, p < .05\]). Ethnicity was categorized as Hispanic, White, Black, Asian, American Indian, and Other. Considering that several cells had limited responses (Asian, American Indian, and Other), this variable was further subset into White versus Nonwhite. When reexamining the variable of race dichotomously with the duplicates removed, significant associations were found between both Outcome 1a (dichotomous variable representing program completion status) \(X^2(1, n = 2,502) = 7.05, p < .05\] and Outcome 2 \(X^2(1, n = 2,502) = 6.27, p < .05\]). A significant association was also found between participants’ combat experience and Outcome 1a \(X^2(1, n = 2,502) = 5.17, p < .05\]. As determined by Outcome 1a, whites had a 24% better chance of being successful from a GPD-funded program than nonwhites. As determined by Outcome 2, whites were 32% more likely to be housed at discharge from the program. Participants who experienced combat while in the military were 25% more likely to be successful in the
programs as opposed to those who did not experience combat, as determined by Outcome 1a. At the $p < .05$ level of significance, there was no association between combat and participants likelihood of being housed at discharge from the program (Outcome 2).

Hypothesis Two. There is a negative association between participant severity of homelessness and successful completion of community-based transitional housing.

The characteristics of vulnerability to homelessness were determined as follows: The category of Employment was represented by the number of days worked in the last 30 days. The category of Public Support - Entitlements was subset into the following:

- None;
- VA, Social Security, or other public supports;
- In receipt of two of the types of public support; and
- In receipt of all three types.

Amount of Income was divided into categories represented by the dollar amount of income received in the last 30 days. Length of Homelessness was recorded according to the following categories:

- Not homeless;
- At least one night but less that one month;
- At least one month but less than six months;
- At least six months but less than one year;
- At least one year but less than two years; and
- Two years or more.
Episodes of Homelessness were recorded as the number of separate episodes the participant experienced in the last 3 years, one to five episodes (or more). Current Living Situation was subset into the following categories:

- Own apartment, room, or house or sharing with friend or family;
- Institution or shelter/temporary housing program; and
- No residence, living outdoors or in an abandoned building.

Levels of association between employment (days worked) and both outcomes were determined by t-tests. Levels of association with categorical independent variables and program outcomes were determined by conducting tests of chi-square.

The number of sources of public support participants reported before admission to the program was statistically significant with Outcome 1 (program completion status) \(X^2 (12, n = 2,831) = 21.70, p < .05\)]. However, when this variable was further separated into public support versus no public support and duplicate participants were removed, this variable was not significantly associated with Outcome 1a (the dichotomous variable representing program completion status). The amount of income in the last thirty days was significantly associated with Outcome 1 \(X^2 (20, n = 2,831) = 36.05, p < .05\) but no significance was found between this independent variable and Outcome 1a with the non-duplicated sample. Chi-square values for length of homelessness and current living situation before admission to the program were not statistically significant with either Outcome 1 or 1a.

Statistically significant relationships were found between several predisposing factors in the vulnerable domain with a participant’s housing status upon discharge from
the program (Outcome 2). Although employment was not statistically significant for this outcome, a significant relationship was evident between public support and Outcome 2 when the public support variable was expressed in bivariate form (none versus any) and duplicates were removed \( \chi^2 (6, n = 2,502) = 4.34, p < .05 \). Those participants who reported any public support before admission to a GPD-funded program were 26% more likely to be housed upon discharge. A significant relationship was also evident between length of homelessness and Outcome 2 \( \chi^2 (6, n = 2,831) = 22.99, p < .05 \). This variable was further subset into dichotomous categories of length of homelessness (0-30 days versus 31 days or more) and duplicates were removed. For this dichotomous variable, a significant association withOutcome 2 was evident \( \chi^2 (1, n = 2,502) = 7.75, p < .05 \). As determined by Outcome 2, participants in the program were 29% less likely to be housed when leaving the transitional housing if they were homeless more than 30 days prior to program admission. The current living situation of the participant at the time of the interview was significantly associated with Outcome 2 \( \chi^2 (2, n = 2,831) = 17.05, p < .05 \). However, when this relationship was subset and expressed in bivariate form and duplicates were removed, no statistically significant association was evident.

**Hypothesis Three.** There is a positive association between participant expressed interest in program utilization and successful completion of community-based transitional housing.

The participants’ Expressed Interest in Program utilization was separated into categories that represent a measure of interest as follows:

- Did not talk to interviewer or not interested in services;
• Interested in only basic services; and
• Interested in a full range of services for the homeless.

Association with categorical outcome measures and expressed interest in the program was determined through chi-square.

A significant association existed between expressed interest in the program and both dependent variables, program completion status (Outcome 1) \[X^2 (8, n = 2,831) = 26.25, p < .05]\] and housed upon discharge (Outcome 2) \[X^2 (2, n = 2,831) = 26.10, p < .05]\]. This variable was further categorized as either those who expressed interest in basic services or no interest in the program, or those who expressed interested in a full-range of services. When duplicates were removed, significant associations were found between this dichotomous variable with both Outcome 1a (the dichotomous variable representing program completion status) \[X^2 (1, n = 2,502) = 14.86, p < .05]\] and Outcome 2 (housing status upon program discharge) \[X^2 (1, n = 2,502) = 9.12, p < .05]\].

As determined by both Outcome 1a and Outcome 2, those who expressed interest in a full range of services were 46% more likely to be successful as well as housed after participation in GPD-funded programs.

_Hypothesis Four._ There is a positive association between participant perceived mental illness and successful completion of community-based transitional housing.

The category of Perceived Mental Illness was recorded and measured by the participant’s response to interviewer’s questions as a “yes” or a “no.” Chi-square was the method of analysis to determine association with the outcome measures.
No significant association was found between perceived mental illness and either dependent variable.

_Hypothesis Five._ There is no significant association between participant mental health diagnosis and successful completion of community-based transitional housing.

Mental Health Diagnosis, determined by a clinician at the time of interview, was categorized as one of the following seven diagnostic typologies:

1. Schizophrenia;
2. Other Psychotic Disorder;
3. Mood Disorder;
4. Personality Disorder;
5. Post-Traumatic Stress Disorder (PTSD) from Combat;
6. Adjustment Disorder; and
7. Other Psychiatric Disorder.

The association of Mental Health Diagnosis with outcome measures was determined utilizing chi-square.

Several diagnostic variables were associated with both dependent variables. For Outcome 1 (program completion status), schizophrenia $[X^2 (4, n = 2,831) = 20.99, p < .05]$; mood disorder $[X^2 (4, n = 2,831) = 11.66, p < .05]$; PTSD $[X^2 (4, n = 2,831) = 12.21, p < .05]$; and adjustment disorder $[X^2 (4, n = 2,831) = 13.13, p < .05]$ were found to be statistically significant. To express the relationship between diagnosis and program success in bivariate form, Outcome 1a (the dichotomous variable representing program completion status) was used as the dependent variable, and duplicates were
removed. Significant associations were found for schizophrenia \(X^2 (1, n = 2,502) = 11.03, p < .05\) and for adjustment disorder \(X^2 (1, n = 2,502) = 4.72, p < .05\). As determined by Outcome 1a, those diagnosed with schizophrenia were 38% less likely to be successful in a GPD-funded program. However, those who were diagnosed with adjustment disorder had a 19% greater chance of success in the program.

For Outcome 2 (housing status upon program discharge), both mood disorder \(X^2 (1, n = 2,502) = 4.42, p < .05\)] and other psychiatric disorder \(X^2 (1, n = 2,502) = 5.39, p < .05\) were statistically significant. For those who were diagnosed with a mood disorder, there was a 26% greater chance of being housed upon discharge from a GPD-funded program. However, those participants diagnosed as “other” psychiatric disorders were 28% less likely to be housed after a GPD-funded program than those participants not diagnosed as such.
Table 12

*Dichotomous Variable Frequencies*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
<th>No Response</th>
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<td>Completion Status (Outcome 1a):</td>
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<td></td>
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<tr>
<td>Success</td>
<td>1307</td>
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<td></td>
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<tr>
<td>Nonsuccess</td>
<td>1195</td>
<td>47.8</td>
<td></td>
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<tr>
<td>Housing Status (Outcome 2):</td>
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<td>5 (.2)</td>
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<td>Housed</td>
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<tr>
<td>Not Housed</td>
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<tr>
<td>Ethnicity:</td>
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<td>Nonwhite</td>
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<td>Marital Status:</td>
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<td>Income:</td>
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<td></td>
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<td>n</td>
<td>%</td>
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<td><strong>Length of Homelessness:</strong></td>
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<td>0-30 days</td>
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<td>870</td>
<td>34.8</td>
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<td>31 days or more</td>
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<td>1627</td>
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<td><strong>Living Situation:</strong></td>
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<td>Room, institution, shelter</td>
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<td><strong>Program Certification:</strong></td>
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<td>Any</td>
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<td><strong>Religious Base:</strong></td>
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<td>None</td>
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<td>190</td>
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<tr>
<td>History or current</td>
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<td>95</td>
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Table 13

*Program Completion Status (Outcome 1a): Hypotheses One Through Five*

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<th></th>
<th>n = 2,502</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Odds Ratio</th>
<th>95% Confidence Intervals</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>White/Nonwhite</td>
<td></td>
<td>7.056</td>
<td>b</td>
<td>.008</td>
<td>1.241</td>
<td>1.058 - 1.456</td>
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<tr>
<td>Combat</td>
<td></td>
<td>5.172</td>
<td>b</td>
<td>.023</td>
<td>1.254</td>
<td>1.032 - 1.524</td>
</tr>
<tr>
<td>Interest in Program</td>
<td></td>
<td>14.863</td>
<td>b</td>
<td>.000</td>
<td>1.459</td>
<td>1.203 - 1.769</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td></td>
<td>11.033</td>
<td>b</td>
<td>.001</td>
<td>.622</td>
<td>.469 - .825</td>
</tr>
<tr>
<td>Adjustment Disorder</td>
<td></td>
<td>4.716</td>
<td>b</td>
<td>.030</td>
<td>1.195</td>
<td>1.017 - 1.404</td>
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<tr>
<td>N of Valid Cases</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2502</td>
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</table>

83
Table 14

**Housing Status upon Program Discharge (Outcome 2): Hypotheses One through Five**

<table>
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<tr>
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<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Odds Ratio</th>
<th>95% Confidence Intervals</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
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<tr>
<td>White/Nonwhite</td>
<td>6.272 (b)</td>
<td>1</td>
<td>.012</td>
<td>1.321</td>
<td>1.062</td>
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<tr>
<td>Public Support</td>
<td>4.339 (b)</td>
<td>1</td>
<td>.037</td>
<td>1.261</td>
<td>1.013</td>
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<tr>
<td>Length of Homelessness</td>
<td>7.747 (b)</td>
<td>1</td>
<td>.005</td>
<td>.714</td>
<td>.562</td>
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<tr>
<td>Interest in Program</td>
<td>9.119 (b)</td>
<td>1</td>
<td>.003</td>
<td>1.465</td>
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<tr>
<td>Mood Disorder</td>
<td>4.419 (b)</td>
<td>1</td>
<td>.036</td>
<td>1.263</td>
<td>1.016</td>
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<tr>
<td>Other Psychiatric Disorder</td>
<td>5.398 (b)</td>
<td>1</td>
<td>.020</td>
<td>.719</td>
<td>.544</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>2502</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Summary, Level Two Analysis**

Statistical associations were found in several of the above bivariate relationships between the dependent outcome variables and those independent variables represented as the predisposing and need factors in both the traditional and vulnerable domains (Tables 13 and 14). To express odds ratios for Outcome 1 (program completion status), a dichotomous variable was constructed (Outcome 1a). Also, when indicated, duplicate participants were removed from the sample to determine outcomes based on individuals rather than on episodes, and selected independent variables were subset dichotomously in order to express odds ratios or because limited responses existed in multiple fields. Significant relationships were found between both ethnicity and combat experience for program completion status (Outcome 1a) and ethnicity for housing status upon discharge.
(Outcome 2). Those participants who were white and reported experiencing combat in the military had a greater likelihood of success in GPD-funded programs. Those who received public support and those who were homeless less than 30 days prior to admission were more likely to be housed upon discharge from a GPD-funded program (Outcome 2).

Participants who expressed an interest in a full range of services were more likely to be successful in GPD-funded programs and more likely to be housed upon discharge. No association was found between perceived mental illness and either dependent variable. However, several diagnostic independent variables were associated with both dependent variables. For Outcome 1a, those who had a diagnosis of schizophrenia were less likely to be successful; those diagnosed with adjustment disorder had a greater chance of success. As determined by Outcome 2, those diagnosed with mood disorder had a greater chance of being housed upon discharge from a GPD-funded program; participants diagnosed with “other” psychiatric disorders were less likely to be housed.

Level Three Analysis

The third level of statistical analysis provided the data necessary to assess the theoretical framework of this study. This study proposed to test a revised framework of the behavioral model of utilization for vulnerable populations theory and to explore the assumptions of the utilization of the transitional housing model for addressing homelessness. To pursue this theoretical discussion, the Level Three Analysis focused on and examined the influence of program certification, program philosophy, and program
services on transitional housing outcomes as well as participant characteristics and mental health diagnostic predictors of transitional housing program completion.

As described previously, the level of services offered (program certification status and program services) and type of overall service philosophy (treatment model and religious basis) were considered the enabling factors of the behavioral utilization model. Gelberg et al. (2000) examined impact of services on outcomes. In this analysis, services were enabling factors. As such, this study explored the implications for defining services as enabling factors as well as the influence of these factors on the relationships between predisposing and need factors with participant success in the program.

Hypotheses Six through Nine begin the discussion regarding the effects of both the traditional and vulnerable enabling factor domains on the associations between domains representing program participant characteristics and mental health diagnoses with outcomes. First, bivariate associations between the enabling factors and outcomes were examined.

Program-Level Hypotheses

**Hypothesis Six.** There is a positive association between program certification status and participants’ successful completion of community-based transitional housing.

The category of Program Certification Status was subset to represent a graduated level of certification as follows:

1. None;
2. State licensed;
3. National accreditation; and
4. State license and national accreditation.

Chi-square was utilized to determine association with the outcome variables. No statistical significance was found between the above program certification status variable with either Outcome 1 or 2 at the $p < .05$ level. This variable was further analyzed by re-categorizing the programs as having any certification/accreditation or having none. No significant relationships were revealed under this dichotomous categorization.

*Hypothesis Seven.* There is no significant association between the type of treatment model of a community-based transitional housing program and participants’ successful completion.

The Treatment Model was subset to represent a categorical level variable as follows:

- Medical model;
- Therapeutic community;
- Cognitive-behavioral therapy or social learning model;
- 12-Step model;
- Psychosocial rehabilitation model;
- Faith-based/moral training model;
- Supportive housing with no specific treatment philosophy; and
- Other.

Chi-square was utilized to determine associations with outcome variables. Several significant associations were found between program treatment models and Outcome 1 (program completion status): therapeutic community model $\chi^2 (4, n =$
cognitive behavioral model \[ X^2 (4, n = 2,831) = 9.97, p < .05 \]; 12-step model \[ X^2 (4, n = 2,831) = 14.13, p < .05 \]; and psychosocial rehabilitation model \[ X^2 (4, n = 2,831) = 20.07, p < .05 \]. Treatment categories of the medical model and faith-based/moral training model yielded limited frequencies \( n = 6; n = 9 \), respectively) and were excluded from this analysis. To express these relationships in bivariate form, Outcome 1a (the dichotomous variable representing program completion status) was utilized, and duplicate participants were removed; the following statistically significant relationships were determined: therapeutic community model \[ X^2 1, n = 2,502) = 9.77, p < .05 \]; cognitive behavioral model \[ X^2 1, n = 2,502) = 8.43, p < .05 \]; 12-step model \[ X^2 1, n = 2,502) = 9.23, p < .05 \]; and psychosocial rehabilitation model \[ X^2 1, n = 2,502) = 11.08, p < .05 \]. As opposed to other programs models, participants were 27% less likely to be successful if they were enrolled in a therapeutic community model and 38% less likely to be successful if enrolled in a 12-step model program. Those that were admitted to a cognitive behavioral model program had a 40% greater chance of success and those admitted to a psychosocial rehabilitation model program had a 35% greater chance of achieving success as determined by Outcome 1a.

No associations were found between program models and program participants’ likelihood of being housed upon discharge (Outcome 2).

**Hypothesis Eight.** There is no significant association between the religious basis of a community-based transitional housing program and participants’ successful completion.

The program Religious Basis represented a categorical level variable as follows:
• A private or public secular agency with no religious base or history;
• A private agency that at one time had a religious orientation but has evolved into an agency that is largely secularly based; and
• A private agency that continues to have a clear religious base and orientation.

Chi-square was utilized to determine associations between a program’s religious basis with outcome variables. No statistically significant relationship was determined between the program’s religious basis and Outcome 1 (program completion status). However, a significant association existed between this independent variable and Outcome 2 (housing status upon discharge) \( X^2 (2, n = 2,831) = 9.43, p < .05 \). The variable was further divided by categorizing programs as either faith-based (as determined by current faith-based status or a historical orientation of being faith-based) versus those programs that were identified as secular. Statistical significance was determined between Outcome 2 and this dichotomous variable \( X^2 (1, n = 2,502) = 4.05, p < .05 \). Participants in faith-based programs were 19% less likely to be housed upon discharge than participants in secular programs.

**Hypothesis Nine.** There is a positive association between the level of homeless-specific program services and participants’ successful completion of community-based transitional housing.

The levels of Homeless-Specific Services were determined by the total score of the number of different services directly provided within each program. T-tests were utilized to examine significance of associations with outcomes.
No statistical significance was observed between services and either of the two outcome measures. This variable was further defined categorically in dichotomous fields (below/above total score of 41), and utilizing chi-square, no statistically significant association with Outcome 2 was determined.

Table 15

Program Completion Status (Outcome 1a): Hypotheses Six Through Nine

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Odds Ratio</th>
<th>95% Confidence Intervals</th>
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<tbody>
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<td>Therapeutic Community</td>
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<td>.002</td>
<td>.727</td>
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<td>Cognitive Behavioral</td>
<td>8.432</td>
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<td>.004</td>
<td>1.403</td>
<td>1.116 - 1.766</td>
</tr>
<tr>
<td>12- Step</td>
<td>9.230</td>
<td>1</td>
<td>.002</td>
<td>.621</td>
<td>.456 - .846</td>
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<tr>
<td>Psychosocial Rehabilitation</td>
<td>11.080</td>
<td>1</td>
<td>.001</td>
<td>1.348</td>
<td>1.130 - 1.607</td>
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N of Valid Cases 2502

Table 16

Housed Upon Program Discharge (Outcome 2): Hypotheses Six Through Nine

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<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
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<td>Religious Basis</td>
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<td>.045</td>
<td>.807</td>
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N of Valid Cases 2502
Summary, Hypotheses Six through Nine

Hypotheses Six through Nine were tested by exploring bivariate associations between both outcome variables and independent variables categorized as the enabling factors in both the traditional and vulnerable domains (Tables 15 and 16). No statistical significance was found between program certification status and either outcome. Several significant associations were found between program treatment models and Outcome 1a (dichotomous program completion). Those participants in cognitive behavioral or psychosocial rehabilitation models were more likely to achieve success; those in therapeutic community or 12-step models were more likely to be unsuccessful. It is interesting to note that these same treatment model associations were not evident in associations with housing at discharge (Outcome 2). No statistically significant relationship was determined between a program’s religious base and Outcome 1a; however, an association existed between the religious basis of a program with Outcome 2. Participants were less likely to be housed at discharge if they were enrolled in faith-based programs.

Within the vulnerable domain, no statistical significance was observed between level of services offered in the programs and the two outcome measures.

Logistic Regression Models

The bivariate analyses of the study hypotheses performed above were a deliberate effort to identify the prime theoretical “variables of interest.” As discussed by Aneshensel (2002), this analytic step is necessary to establish the focal relationships
through which further analysis serves to evaluate whether these relationships are “indeed relationships or merely associations” (p. 11). Additionally, as suggested by Gelberg et al. (2000), enabling factors influence services utilization and therefore are potential effectors of outcomes. For the purposes of the Level Three Analysis, these transitional housing services are enabling factors that may contribute to the subject’s improved outcome. However, as evidenced above, utilizing bivariate tests of significance, the effects of program philosophy and services (the enabling factors) on successful outcomes may not be as evident as theorized. Additionally, participant characteristics and mental health diagnosis may not be obvious predictors of success in transitional housing outcomes. To investigate these relationships further, logistic regression models were established.

Logistic regression was used to test associations while controlling for variables identified in the bivariate analyses. Models were constructed for both Outcome 1a (the dichotomous variable representing program completion status) and Outcome 2 (housing status upon discharge from a GPD-funded program). Table 17 illustrates variables of interest that were the focus of this analysis.
Table 17

*Bivariate Significance with Outcomes 1a and 2*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Domain</th>
<th>Outcome 1a</th>
<th>Outcome 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predisposing</td>
<td>Traditional</td>
<td>White/Nonwhite</td>
<td>White/Nonwhite</td>
</tr>
<tr>
<td>Combat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vulnerable</td>
<td>(none)</td>
<td>Public support</td>
<td>Length homelessness</td>
</tr>
<tr>
<td>Need</td>
<td>Traditional</td>
<td>Interest in program</td>
<td>Interest in program</td>
</tr>
<tr>
<td>Vulnerable</td>
<td>Schizophrenic</td>
<td>Mood disorder</td>
<td>Other psychiatric disorder</td>
</tr>
<tr>
<td>Enabling</td>
<td>Traditional</td>
<td>Therapeutic community</td>
<td>Faith-based (history)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cognitive behavioral</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12-Step</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psychosocial rehab</td>
<td></td>
</tr>
<tr>
<td>Vulnerable</td>
<td>(none)</td>
<td>(none)</td>
<td></td>
</tr>
</tbody>
</table>

The first model of logistic regression (Table 18) represents variables of interest identified in the bivariate analysis with Outcome 1a.
Table 18

*Program Completion Status (Outcome 1a): Logistic Regression Model*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95.0% CI for EXP (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>.183</td>
<td>1</td>
<td>.030</td>
<td>1.201</td>
<td>1.018 - 1.416</td>
</tr>
<tr>
<td>Combat</td>
<td>.205</td>
<td>1</td>
<td>.043</td>
<td>1.228</td>
<td>1.007 - 1.498</td>
</tr>
<tr>
<td>Interest in Program</td>
<td>.351</td>
<td>1</td>
<td>.000</td>
<td>1.420</td>
<td>1.168 - 1.727</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>-.389</td>
<td>1</td>
<td>.008</td>
<td>.678</td>
<td>.507 - .905</td>
</tr>
<tr>
<td>Adjustment Disorder</td>
<td>.126</td>
<td>1</td>
<td>.136</td>
<td>1.135</td>
<td>.961 - 1.340</td>
</tr>
<tr>
<td>Therapeutic Community</td>
<td>-.135</td>
<td>1</td>
<td>.253</td>
<td>.874</td>
<td>.693 - 1.102</td>
</tr>
<tr>
<td>Cognitive Behavioral</td>
<td>.355</td>
<td>1</td>
<td>.007</td>
<td>1.427</td>
<td>1.103 - 1.845</td>
</tr>
<tr>
<td>12-Step Program</td>
<td>-.309</td>
<td>1</td>
<td>.071</td>
<td>.734</td>
<td>.525 - 1.027</td>
</tr>
<tr>
<td>Psychosocial Rehab</td>
<td>.320</td>
<td>1</td>
<td>.003</td>
<td>1.376</td>
<td>1.118 - 1.695</td>
</tr>
</tbody>
</table>

As indicated in Table 18, several variables were significantly associated with Outcome 1a (program completion status) when controlling for various predisposing, enabling, or need factors. This model indicated that whites were 20% more likely to be successful in GPD-funded programs than nonwhites. Those who experienced combat while in the military were 23% more likely to be successful, and those who were interested in a full range of services when interviewed for transitional housing were 42% more likely to be successful. In this model, only schizophrenia was a significant predictor when controlling for other variables. Those diagnosed with schizophrenia were 32% less likely to be successful. And, unlike the bivariate analysis where several
program models were determined to either improve or lessen the likelihood of success in
the program, only the cognitive behavioral and psychosocial rehabilitation models were
significantly associated with success when controlling for other variables in these logistic
regression tests. Participants enrolled in cognitive behavioral programs were 43% more
likely to be successful, and those enrolled in psychosocial rehabilitation programs were
38% more likely to achieve success as determined by Outcome 1a.

The second model of logistic regression (Table 19) represents those variables of
interest identified in the bivariate analysis and their significance with housing status upon
program discharge (Outcome 2).

Table 19

_Housed Upon Program Discharge (Outcome 2): Logistic Regression Model_

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95.0% CI for EXP (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Nonwhite</td>
<td>.281</td>
<td>1</td>
<td>.015</td>
<td>1.324</td>
<td>1.057 - 1.659</td>
</tr>
<tr>
<td>Public Support</td>
<td>.263</td>
<td>1</td>
<td>.023</td>
<td>1.301</td>
<td>1.037 - 1.632</td>
</tr>
<tr>
<td>Length of Homelessness</td>
<td>-.337</td>
<td>1</td>
<td>.006</td>
<td>.714</td>
<td>.560 - .910</td>
</tr>
<tr>
<td>Interest in Program</td>
<td>.364</td>
<td>1</td>
<td>.005</td>
<td>1.439</td>
<td>1.117 - 1.854</td>
</tr>
<tr>
<td>Mood Disorder</td>
<td>.142</td>
<td>1</td>
<td>.220</td>
<td>1.153</td>
<td>.918 - 1.447</td>
</tr>
<tr>
<td>Other Psychiatric Disorder</td>
<td>-.277</td>
<td>1</td>
<td>.060</td>
<td>.758</td>
<td>.568 - 1.014</td>
</tr>
<tr>
<td>Faith-Based</td>
<td>-.215</td>
<td>1</td>
<td>.066</td>
<td>.807</td>
<td>.642 - 1.014</td>
</tr>
</tbody>
</table>
Similar to associations with Outcome 1a and bivariate tests, the variables of ethnicity, public support, length of homelessness before admission to the program, and interest in the program were statistically significant. Whites were 32% more likely to be housed upon discharge than nonwhites. Those that received any public support prior to admission to a program were 30% more likely to be housed when discharged. Those that were homeless more than 30 days prior to admission were 29% less likely to be housed, and those that expressed interest in a full range of services were 44% more likely to be housed upon discharge from a GPD-funded program than those interested in basic or no services. As was determined in the bivariate analysis, no diagnostic categories were statistically significant with housing status. Additionally, no statistical significance was revealed between program models and this housing outcome. Although in the bivariate analysis it was determined that those participants in faith-based programs were less likely to be housed, this logistic regression model revealed only marginal significance at p < .06 (19% less likely to be housed upon discharge from a GPD-funded program).

**Generalized Estimating Equation (GEE) Models**

Generalized Estimating Equation (GEE) models were constructed to further analyze predictors of successful outcomes from GPD-funded programs. GEE procedures recognize the possibility of repeated or clustered data and provide a “method for analyzing data collected in groups where observations within a group may be correlated but observations in separate groups are independent” (Lumley, 2007, p. 475). GEE models were constructed for this study’s “variables of interest” identified in the bivariate
analysis for both Outcomes 1a and 2. The sample tested was the enrolled GPD-funded program participants; the first admission was used for those participants that enrolled in a GPD-funded program more than once during the study period ($n = 2502$). The subject variable for GEE analysis purposes was the individual program identification code.

Table 20

*Program Completion Status (Outcome 1a): Generalized Estimating Equation Model*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>B</th>
<th>Std. Error</th>
<th>Lower</th>
<th>Upper</th>
<th>Wald Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Nonwhite</td>
<td>.183</td>
<td>.0963</td>
<td>-.006</td>
<td>.372</td>
<td>3.613</td>
<td>1</td>
<td>.057</td>
</tr>
<tr>
<td>Combat</td>
<td>.205</td>
<td>.0972</td>
<td>.015</td>
<td>.396</td>
<td>4.467</td>
<td>1</td>
<td>.035</td>
</tr>
<tr>
<td>Interest in Program</td>
<td>.351</td>
<td>.1106</td>
<td>.134</td>
<td>.568</td>
<td>10.055</td>
<td>1</td>
<td>.002</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>-.389</td>
<td>.1477</td>
<td>-.678</td>
<td>-.099</td>
<td>6.934</td>
<td>1</td>
<td>.008</td>
</tr>
<tr>
<td>Adjustment Disorder</td>
<td>.126</td>
<td>.1027</td>
<td>-.075</td>
<td>.328</td>
<td>1.514</td>
<td>1</td>
<td>.218</td>
</tr>
<tr>
<td>Therapeutic Community</td>
<td>-.135</td>
<td>.1497</td>
<td>-.428</td>
<td>.158</td>
<td>.814</td>
<td>1</td>
<td>.367</td>
</tr>
<tr>
<td>Cognitive Behavioral</td>
<td>.355</td>
<td>.1364</td>
<td>.088</td>
<td>.623</td>
<td>6.792</td>
<td>1</td>
<td>.009</td>
</tr>
<tr>
<td>12-Step Program</td>
<td>-.309</td>
<td>.1848</td>
<td>-.671</td>
<td>.054</td>
<td>2.789</td>
<td>1</td>
<td>.095</td>
</tr>
<tr>
<td>Psychosocial Rehab</td>
<td>.320</td>
<td>.1906</td>
<td>-.054</td>
<td>.693</td>
<td>2.810</td>
<td>1</td>
<td>.094</td>
</tr>
</tbody>
</table>

Results (Table 20, Outcome 1a) indicated that most variables identified as statistically significant in the logistic regression model remained significant when compensating for clustered participant data in the GEE analysis. Perhaps somewhat revealing was that the earlier identified statistically significant relationship between white
participants and the likelihood of success in the program decreased (p = .057). In addition, GEE analysis indicated that if participants were enrolled in a psychosocial rehabilitation model program, they were no more likely to achieve success at discharge than those participants enrolled in other program models. Through logistic regression analysis, it was indicated that enrollment in this type of program was a significant predictor of success. Consistent with bivariate and logistic regression models, if a participant showed interest in the program at the time of the initial interview or reported experiencing combat while in the military, the participant would more likely be successful. The diagnosis of schizophrenia remained significantly associated with nonsuccessful program completion in both the logistic regression and GEE model, and adjustment disorder was no longer statistically significant with Outcome 1a in the GEE analysis.
Table 21

_Housed Upon Program Discharge (Outcome 2): Generalized Estimating Equation Model_

<table>
<thead>
<tr>
<th>Parameter</th>
<th>B</th>
<th>Std. Error</th>
<th>Lower</th>
<th>Upper</th>
<th>Wald Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Nonwhite</td>
<td>.277</td>
<td>.1322</td>
<td>.018</td>
<td>.536</td>
<td>4.403</td>
<td>1</td>
<td>.036</td>
</tr>
<tr>
<td>Public Support</td>
<td>.258</td>
<td>.1045</td>
<td>.053</td>
<td>.463</td>
<td>6.093</td>
<td>1</td>
<td>.014</td>
</tr>
<tr>
<td>Length of Homelessness</td>
<td>-.336</td>
<td>.1290</td>
<td>-.589</td>
<td>-.084</td>
<td>6.805</td>
<td>1</td>
<td>.009</td>
</tr>
<tr>
<td>Interest in Program</td>
<td>.361</td>
<td>.1348</td>
<td>.097</td>
<td>.626</td>
<td>7.180</td>
<td>1</td>
<td>.007</td>
</tr>
<tr>
<td>Mood Disorder</td>
<td>.138</td>
<td>.1046</td>
<td>-.067</td>
<td>.343</td>
<td>1.736</td>
<td>1</td>
<td>.188</td>
</tr>
<tr>
<td>Other Psychiatric Dis.</td>
<td>-.290</td>
<td>.1608</td>
<td>-.605</td>
<td>.025</td>
<td>3.248</td>
<td>1</td>
<td>.072</td>
</tr>
<tr>
<td>Faith-Based</td>
<td>-.212</td>
<td>.1733</td>
<td>-.552</td>
<td>.127</td>
<td>1.502</td>
<td>1</td>
<td>.220</td>
</tr>
<tr>
<td>Days Worked</td>
<td>-.005</td>
<td>.0080</td>
<td>-.021</td>
<td>.011</td>
<td>.426</td>
<td>1</td>
<td>.514</td>
</tr>
</tbody>
</table>

Results illustrated in Table 21 for Outcome 2 (housing status upon discharge) indicated that, when bivariate models are utilized, participant clustering may inaccurately determine predictor determination. However, the GEE models constructed with Outcome 2 showed similar statistically significant relationships with those identified in logistic regression models. Not statistically significant in the above GEE analysis was the relationship between housing status at discharge and enrollment in faith-based programs. Logistic regression indicated that participants in faith-based programs may be less likely to be housed upon discharge; this relationship was not evident in Table 21.
Days in Residence and Outcomes

This study was limited to those participant and program factors that may be predictors of success in transitional housing. Success was defined as completion status, as determined by VA staff (Outcome 1a), and housing status upon discharge from the program (Outcome 2) as reported by the participant. The influence or effect of length of stay in the transitional housing on program outcomes was not fully examined within the context of this study. However, a preliminary cross tab and chi-square analysis of length of stay versus outcomes was performed: the results may indicate that this dose-response approach to determining factors that influence success in transitional housing programs could be revealing and a consideration for future research. The data set utilized for this study included the number of days in residence of each participant. Length of stay was subset into 0-90; 91-180; 181-270; and 271+ days. Without duplicates removed, the percentage of those successfully completing and housed upon discharge increased with each subset days-in-residence variable. The percentage of participants determined to have successful completion status (Outcome 1a) increased in each subset (0-90 days: 39%; 91-180 days: 62%; 181-270 days: 68 %; and 271 days or greater: 72 %). For those housed upon discharge (Outcome 2), the same trend was revealed (0-90 days: 78%; 91-180 days: 90%; 181-270 days: 91%; and 271 days or greater: 93%). When length of stay was further subset into a dichotomous variable (less than 180 days versus 181 days or greater), a positive correlation existed between both program success (Outcome 1a) and housed upon discharge (Outcome 2). For both groups, veterans were at least 62% more
likely to be successful and housed upon discharge if their length of stay in a GPD-funded program was 181 days or more.

Discussion

Homelessness is identified as a significant public health issue attributed to societal changes as well as to the social and behavioral aspects of the homeless individual. Frequently, homeless programs are developed to address a community’s immediate gaps rather than homeless individuals’ needs. One of the most common types of homeless program is transitional housing offering a stable place to live for up to two years while providing an overlay of social support and services. As discussed herein, there is documented evidence of the increased prevalence of mental illness in the homeless population. The purpose of this study was to examine the associations between participant- and program-level factors with community-based transitional housing. This study used a revised framework of the behavioral model of utilization and explored the assumptions of the utilization of the transitional housing design for addressing homelessness. The following is a summary of the research objectives and hypotheses of this study. A general discussion will follow addressing the implications for theory and public mental health.
Research Objectives

Objective One

Provide a descriptive analysis of participant characteristics in a national sample subset of the homeless population diagnosed with a mental illness, utilizing community-based transitional housing programs.

The Department of Veterans Affairs operates the country’s largest network of homeless transitional housing programs under the Homeless Providers Grant and Per Diem Program. This paper examined GPD Program data sets from 2004 and 2005. Frequencies were categorized under the predisposing-traditional and predisposing-vulnerable domains of utilization theory. Study inclusion was based on admission into the program and a mental health diagnosis, excluding substance abuse. An examination of demographic frequencies provided the characteristics of the study group.

Objective Two

Examine and assess the intensity and types of services of community-based transitional housing utilized by a national sample subset of the homeless population diagnosed with a mental illness.

Transitional housing service intensity and type was examined under the enabling-traditional and the enabling-vulnerable domains of the utilization theory. Although almost half of the programs surveyed had no certification or accreditation, it was evident that there was considerable intensity and variety of services offered to participants. More than two-thirds of the programs’ service quotient scores were between 30 and 50, representing a high level of services on-site, offered directly to the participants while
enrolled in housing. The Preliminary Data Analysis section of this study delineated the types of services offered, while the Level One Analysis provided the frequencies of services and program type, as categorized under the domains of the utilization theory. Treatment philosophies in the programs differed; however, those programs that were therapeutic communities or supporting housing or programs that followed principals of the cognitive behavioral, 12-step, and psychosocial rehabilitation models were relatively equally represented.

**Objective Three**

Examine the associations between program participant characteristics and mental health diagnosis, with community-based transitional housing outcomes.

Associations between participant characteristics and community-based housing outcomes were examined through bivariate tests and structured within the study’s participant-level hypotheses (Hypotheses One through Five) discussed below.

**Hypothesis One.** There is no significant association between participant demographics and successful completion of community-based transitional housing.

Statistically significant associations were determined through the use of bivariate tests between participant ethnicity and combat experience with completion of the programs.

**Hypothesis Two.** There is a negative association between participant severity of homelessness and successful completion of community-based transitional housing.

Bivariate tests demonstrated statistically significant associations between outcomes and participants’ receipt of public support and their length of homelessness
before admission. Several characteristics of vulnerability to homelessness, as determined by these variables, were negatively associated with success in the program.

*Hypothesis Three.* There is a positive association between participant expressed interest in program utilization and successful completion of community-based transitional housing.

As measured by bivariate tests, there was a positive association between participant expressed interest in the program and successful completion.

*Hypothesis Four.* There is a positive association between participant perceived mental illness and successful completion of community-based transitional housing.

No association was found between the participants’ perceived mental illness status and program outcomes through bivariate analysis.

*Hypothesis Five.* There is no significant association between participant mental health diagnosis and successful completion of community-based transitional housing.

Significant associations were determined through the use of bivariate tests between participants’ mental health diagnosis and outcome. However, these associations differed depending on the outcome measure. Schizophrenia and adjustment disorder were associated with program completion status (Outcome 1a) while mood disorder and other psychiatric disorder were associated with housing status (Outcome 2).

*Objective Four*

Examine the effects of program-level services on the associations between program participant characteristics and mental health diagnosis with community-based transitional housing outcomes.
Effects of program-level services on the association between program participant characteristics and mental health diagnoses were examined through t-tests and bivariate methods and structured within this study’s program-level hypotheses (Hypotheses Six through Nine) discussed below.

**Hypothesis Six.** There is a positive association between program certification status and participants’ successful completion of community-based transitional housing.

No statistically significant association was found between program certification status and program outcomes.

**Hypothesis Seven.** There is no significant association between the type of treatment model philosophy of a community-based transitional housing program and participants’ successful completion.

Through the use of bivariate tests, statistically significant associations with Outcome 1a (program completion) were determined with therapeutic communities, cognitive behavioral, 12-step, and psychosocial rehabilitation program models.

**Hypothesis Eight.** There is no significant association between the religious basis of a community-based transitional housing program and participants’ successful completion.

A statistically significant association existed between Outcome 2 (housing status) and those programs that were determined to be faith-based or those programs operated by an organization with religious origins.
Hypothesis Nine. There is a positive association between the level of program services and participants’ successful completion of community-based transitional housing.

No statistically significant association was found between the level of program services and program outcomes through the use of bivariate analysis.

Associations reported above in Hypotheses One through Nine and the significance of the relationships between the predisposing, enabling, and need factors with transitional housing program outcomes were initially discussed and tested in this study within the context of bivariate analysis or performing t-tests. These tests, discussed as part of the methodology section of this paper in the Level Two Analysis and the first portion of the Level Three Analysis, promoted further examination through additional analytic methods. Logistic regression models were developed to further explore any associations that were determined and to more accurately delineate any differences between each of the dependent variables. As discussed in the Level Three Analysis, significant relationships existed between various participant and program characteristics as revealed by the regression models.

According to logistic regression model interpretation, those in the study group that were more likely to be successful in the transitional housing programs and more likely to be housed upon discharge were white. Participants that reported experiencing combat while in the military were more likely to be successful, but there was no evidence that they would more likely be housed at discharge. Those participants who were homeless less than 30 days before admission or received public support were more likely
to be housed upon program discharge. Those that were not diagnosed with schizophrenia were more likely to be successful, and those that showed an interest in the program were more likely to be successful and housed upon program discharge. Participants enrolled in cognitive behavioral or psychosocial rehabilitation model programs had a better likelihood of success. And, participants were more likely to be housed upon discharge if they were in programs that were not religious or had no religious history. There was no indication through t-test or bivariate analysis that the services offered directly by the program, on-site, were associated with success.

GEE models were utilized in this study to compensate for subject clustering. These models, based on variables of interest from the bivariate and logistic regression tests, demonstrated typical risks of inaccurate study assumptions. Limited statistically significant associations with both outcomes were revealed through the use of this analysis. White participants in the program were more likely to be successful and housed as were those participants who showed an interest in program services upon admission. Participants who reported combat experience while in the military were more likely successful, but there was no relationship to combat and housing upon discharge. Schizophrenia was the only diagnostic category that was significantly associated with program success. Additionally, GEE analysis demonstrated that only those participants in cognitive behavioral programs had a greater chance of success than those in other program types. If participants were homeless less than thirty days before admission or received public support, they were more likely to be housed upon discharge. Through further cross tab analyses, it appeared that whites were less likely to be diagnosed with
schizophrenia and more likely to be enrolled in cognitive behavioral model programs; nonwhites were more likely to be enrolled in programs with lower level services.

**Objective Five**

Develop and offer recommendations as to what types of community-based transitional housing programs may be best suited to meet the needs of the homeless population diagnosed with a mental illness.

The tests performed through this study did not demonstrate conclusive evidence that would indicate what types of community-based transitional housing program may be best suited to meet the needs of the homeless population diagnosed with a mental illness. Evidence provided suggests there may be a likelihood that programs offering cognitive behavioral or psychosocial rehabilitation models are better suited for the homeless population. However, this could not be confirmed when comparing outcomes as measured by both dependent variables and through GEE analysis. The two participant characteristics consistently associated with positive program outcomes in bivariate, logistic regression, and GEE tests were participant ethnicity and interest in the program. Those that were white and those that expressed an interest in the program were more likely to be successful as measured by both outcomes. And, although a focus of this study was to determine if program services were related to positive outcomes, considering that program services were not associated with either outcome, this assumption could not be supported.
Implications for Public Mental Health

This study examined the relationship between participant characteristics and completion of transitional housing programs. Additionally, this research explored the possibility of program-level factors affecting participants’ success. Assumptions of the behavioral utilization theory proposed by Andersen (1995) suggest that factors, both individual- and program-level, traditional and vulnerable, could be predictors of care-outcomes. Through this study’s various statistical tests revealed limited factors influencing outcomes from transitional housing programs. Those significant factors, initially demonstrated through first level analysis, were not confirmed by further tests instituting statistical controls. Participants who showed an interest in the program prior to admission were those that would most likely be successful and housed upon discharge. When implementing a number of statistical tests to control for variables and compensate for clustered data, interest in the program was consistently associated with positive outcomes as measured by both outcome measures.

This study also proposed to explore the models of transitional housing. As a preferred method to address a community’s immediate need, transitional housing has been a foundation of most local areas’ homeless assistance plans. Success in the programs studied was measured by two outcomes. Frequencies of success for 2 years of data were 52% (clinician determination of completion status) and 84% (subject report of housing status upon discharge). Although limited associations were revealed between participant- or program- level characteristics, simple frequency reports supported by this
study’s large sample size would sustain the argument that transitional housing is a supportable and reasonable method to provide care for homeless populations.

A series of articles regarding the need for national mental health services was featured in the *American Journal of Public Health* (2006). A number of studies cited earlier in this study reference the increased incidence and prevalence of mental health diagnoses in the homeless population, the chronicity of mental illness among the homeless, and the difficulty in performing outreach to or providing mental health care for those on the streets. The health of a particular population can be seen as dependent and interdependent on various levels of connections with and among components of its environment. The implications for public mental health become an uncertain and infrequently studied mix of mental illness, homelessness, and access to or provision of treatment. Accessing services for this population equates to seeking “primary care,” which in many cases actually becomes a pursuit of housing. Homeless service providers are becoming the mental health care institutions for an increasingly larger segment of this nation’s population—the homeless diagnosed with a mental illness.

It was expected that the results of this study would assist the providers who struggle with helping the homeless, the researchers who study this social phenomena, as well as the decision makers who influence the allocation of resources. Program designs for transitional housing should be developed specifically for the population and the individual, as those that show an interest in the program will more likely be successful. However, it appears services are not always equally distributed, as programs studied did not seem to offer the same services to all populations. Providers need to ensure that
services offered to participants who are nonwhite equal those provided to white populations. Although not conclusive, there is an indication that programs more aligned with cognitive behavioral or psychosocial rehabilitation approaches have better outcomes with the homeless population. Finally, at least as demonstrated by one of the outcome measures, participants in secular as opposed to faith-based programs were more likely to find housing when reintegrating into the community.

Protection of Human Subjects

The individual subject data used in this study was obtained through a survey of existing records. These records and the compiled data are maintained by the Department of Veterans Affairs Northeast Program Evaluation Center under authority of the U.S. Department of Veterans Affairs. Individual identifiers were not queried for this study. This study, submitted under the title *Utilization of Community-Based Transitional Housing by Homeless Veteran Populations Diagnosed with a Mental Illness*, was determined as *exempted* by the Institutional Review Board (IRB), University of South Florida, Tampa Florida (See Appendix D).
REFERENCES


APPENDICES
Appendix A: NEPEC Intake Assessment (Form X)

FORM X

HEALTH CARE FOR HOMELESS VETERANS

CONTACT FORM

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Staff Member’s Name

Office Use Only DO NOT CODE

Date of Intake (mm, dd, yy) ........................................................ ........................................ (5)

VA Facility Code .................................................................................................................. (12)

I. VETERAN DESCRIPTION

1. VETERAN’S NAME (LASTNAME, FIRST INITIAL) (PLEASE PRINT)

2. Social Security Number .................................................................................................... (41)

3. Date of Birth (mm/dd/yyyy) ........................................................................................... (47)

4. Sex ................................................................................................................................... (48)

5. Ethnicity (check only one)

   □ 1. Hispanic, white □ 4. Black, not Hispanic □ 7. Pacific Islander
   □ 2. Hispanic, black □ 5. Asian □ 8. Other
   □ 3. American Indian or Alaskan □ 6. White, not Hispanic

6. What is your current marital status (check only one)?

   □ 1. Married □ 2. Widowed □ 5. Divorced
   □ 2. Remarried □ 4. Separated □ 0. Never Married

CONTACT WITH VETERAN

Where did this interview take place (check only one)?

   □ 1. Shelter or temporary housing for homeless □ 6. At special program for homeless
   □ 2. Street, Park, Outdoors (Specify) ................................................................................ (51)
   □ 3. Doug Kitchen □ 7. Prison or jail
   □ 4. VA Medical Center □ 8. Other
   □ 5. Vet Center

   Office Use Only DO NOT CODE

How was contact with this program initiated (check only one)?

   □ 1. Outreach initiated by VA staff □ 5. Veteran came to Vet Center
   □ 2. Referred by shelter staff or other non-VA staff working in a program for the homeless
   □ 6. Self-referral
   □ 3. Referral from VAMC inpatient unit □ 7. Through VA presence at special program for homeless (specify)
   □ 4. Referral from VAMC outpatient unit □ 8. Other

   Office Use Only DO NOT CODE

Veteran’s response to contact (check only one)?

   □ 1. Would not talk to VA staff □ 4. Is interested in full range of VA services for the homeless
   □ 2. Talked, not interested in any services □ 5. Other
   □ 3. Only interested in basic services

* Do not use this category unless the specific program has been officially identified a special program for the homeless by VA’s Northeast Program Evaluation Center

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II. MILITARY HISTORY

7. Period of Service (check longest one)?
   □ 2. WW II (12/41-12/45)  □ 5. Between Korean and Vietnam War (2/65-7/64)
   □ 3. Pre-Korean (1/47-6/50)  □ 6. Persian Gulf (8/90-)

7a. Did you serve in the theatre of operations for any of the following military conflicts?
   a. World War II ................................................................. □ 0 □ 1 □ Yes (61)
   b. Korean War ................................................................. □ 0 □ 1 □ Yes (62)
   c. Vietnam War ............................................................... □ 0 □ 1 □ Yes (63)
   d. Persian Gulf War (Operation Desert Storm) .................. □ 0 □ 1 □ Yes (64)
   e. Afghanistan (Operation Enduring Freedom) ................... □ 0 □ 1 □ Yes (65)
   f. Iraq (Operation Iraqi Freedom) ....................................... □ 0 □ 1 □ Yes (66)
   g. Other peacekeeping operations or military interventions such as Lebanon, Panama, Somalia, Bosnia, Kosovo .......................................................... □ 0 □ 1 □ Yes (67)

8. Did you ever receive hostile or friendly fire in a combat zone?
   □ 0 □ 1 □ Yes (68)

III. LIVING SITUATION

9. Where did you sleep last night? (check only one)
   □ 1. Own apartment, room or house  □ 4. No residence (e.g., outdoors, abandoned building) (69)
   □ 2. Apartment, room or house of family member or friend  □ 5. Institution (hospital, residential treatment facility)
   □ 3. Shelter/Temporary Housing Program (or minimal tx)  □ 6. Prison or jail (70)

10. How long have you been homeless? (check only one)
    □ 0. Not currently homeless  □ 3. At least 6 months but less than 1 year (71)
    □ 1. At least one night but less than one month  □ 4. At least one year but less than 2 years
    □ 2. At least one month but less than 6 months  □ 5. Two years or more
    □ 6. Unknown

10a. How many separate episodes of homelessness have you experienced in the last three years? (check only one)
    0  □ 1 □ 2 □ 3 □ 4 □ 5 or more (72)

11. During the past 30 days (1 month), how many days did you sleep in the following kinds of places? (Note: Estimates may often be necessary here. In such cases, make sure the number of days adds up to 30)
    a. Own apartment, room or house .................................... (73)
    b. Someone else's apartment, room or house ....................... (74)
    c. Hospital or nursing home (include detox centers with medical staff on site) .................... (75)
    d. Domiciliary ............................................................... (76)
    e. VA contracted halfway house programs (ATL-WH or HCHV contract) ........................... (77)
    f. Non-VA halfway house program .................................. (78)
    g. Hotel, Single Room Occupancy (SRO), boarding house .......... (79)
    h. Shelter for the homeless (including detox centers with no medical staff on-site) ......... (80)
    i. Outdoors (sidewalk, park), abandoned building ................ (81)
    j. Automobile, truck, boat .............................................. (82)
    k. Prison, jail .................................................................... (83)
IV. MEDICAL

12. Do you feel you have any serious medical problems (veteran's perception)?
   ☐ 0 = No  ☐ 1 = Yes (04)

13. Does the veteran have or has the veteran complained of any of the following medical problems (check one box for each question)?
   a. Oral/dental problems. ☐ 0 = No  ☐ 1 = Yes (05)
   b. Eye problems (other than glasses). ☐ 0 = No  ☐ 1 = Yes (06)
   c. Hypertension. ☐ 0 = No  ☐ 1 = Yes (07)
   d. Heart or cardiovascular problems. ☐ 0 = No  ☐ 1 = Yes (08)
   e. COPD/emphysema. ☐ 0 = No  ☐ 1 = Yes (09)
   f. TB. ☐ 0 = No  ☐ 1 = Yes (100)
   g. Gastrointestinal problems. ☐ 0 = No  ☐ 1 = Yes (101)
   h. Liver disease. ☐ 0 = No  ☐ 1 = Yes (102)
   i. Seizure disorder. ☐ 0 = No  ☐ 1 = Yes (103)
   j. Orthopedic problems. ☐ 0 = No  ☐ 1 = Yes (104)
   k. Significant skin problems. ☐ 0 = No  ☐ 1 = Yes (105)
   l. Significant trauma. ☐ 0 = No  ☐ 1 = Yes (106)
   m. Other. ☐ 0 = No  ☐ 1 = Yes (107)
   (specify) ______
   Office Use Only DO NOT CODE ______ (109)

V. SUBSTANCE ABUSE

14. Do you have a problem with alcohol dependency now (veteran's perception)?
   ☐ 0 = No  ☐ 1 = Yes (110)

15. Have you had a problem with alcohol dependency in the past?
   ☐ 0 = No  ☐ 1 = Yes (111)

16. Have you ever been hospitalized for treatment of alcoholism?
   ☐ 0 = No  ☐ 1 = Yes (112)

17. During the past 30 days, how many days would you say that you used any alcohol at all? (If none, skip to number 18).
   ____________ ☐ 0 = No  ☐ 1 = Yes (114)

17a. During the past 30 days, how many days would you say that you drank to intoxication?
   ____________ ☐ 0 = No  ☐ 1 = Yes (116)

18. Do you have a problem with drug dependency now (veteran's perception)?
   ☐ 0 = No  ☐ 1 = Yes (117)

19. Have you had a problem with drug dependency in the past?
   ☐ 0 = No  ☐ 1 = Yes (118)

20. Have you ever been in a residential treatment program or hospitalized for treatment of drug dependency?
   ☐ 0 = No  ☐ 1 = Yes (119)
21. During the past 30 days, how many days would you say that you used any other drugs, such as heroin or methadone, barbiturates (downers); cocaine or crack; amphetamines, (speed); hallucinogens, like acid or inhalants, like glue or nitrous oxides? (If none, skip to number 23) ..............................................................  

22. During the past 30 days, how many days would you say you used more than one kind of drug? ........................................................................................................ ...  

23. Do you think that you have any current psychiatric or emotional problem(s) other than alcohol or drug use? ........................................................................................................  

24. Have you ever been hospitalized for a psychiatric problem? (Do not include substance abuse treatment)? ..............................................................  

25. Have you used the VA medical system for medical and/or psychiatric care in the past 6 months? ........................................................................................................  

26. Now I'm going to ask you about some psychological or emotional problems you might have had in the past 30 days. You can just say "yes" or "no" for these. During the past 30 days, have you had a period that was not the direct result of alcohol or drug use in which you... (Check one answer for each item; blank responses will not be considered a "no" response) 

   a. experienced a serious depression ..........................................................  
   b. experienced serious anxiety or tension ..................................................  
   c. experienced hallucinations ...................................................................  
   d. experienced trouble understanding, concentrating, or remembering ....  
   e. had trouble controlling violent behavior ..............................................  
   f. had serious thoughts of suicide ..............................................................  
   g. attempted suicide ..............................................................................  
   h. took prescribed medication for a psychological/emotional problem ......  

27. Which best describes your employment pattern in the past 3 years? (check only one)  

   1. Full time (40 hrs/wk) ........................................................................  
   2. Full time (irregular) .........................................................................  
   3. Part time (regular hours) .................................................................  
   4. Part time (regular daywork) .............................................................  

28. How many days did you work for pay in the past 30 days? .........................  

29-33. Do you receive any of the following kinds of public financial support? (check one box for each question)  

   20. Service Connected/Psychiatry ............................................................  
   21. Service Connected/Other .................................................................  
   22. NSC pension ..................................................................................  
   23. Non-VA disability (eg SSI) ...............................................................  
   34. Other public support (including cash and in-kind services) ...............  

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34. Overall, how much money did you receive in the past thirty days from all sources of income: work, disability payments, panhandling, plasma donations etc.? (check only one)
   □ 1. No income at all □ 2. $1-49 □ 3. $50-999 □ 4. $100-499 □ 5. $500-999 □ 6. $1000 or more

VIII. INTERVIEWER OBSERVATIONS
35. Does this veteran need psychiatric or substance abuse treatment at this time? □ 0 = No □ 1 = Yes (144)
36. Does this veteran need medical treatment at this time? □ 0 = No □ 1 = Yes (145)
37-46. Which of the following psychiatric diagnoses apply to this veteran (check one box for each question)?
   37. Alcohol Abuse/Dependency .......................................................... □ 0 = No □ 1 = Yes (146)
   38. Drug Abuse/Dependency ............................................................. □ 0 = No □ 1 = Yes (147)
   39. Schizophrenia .............................................................................. □ 0 = No □ 1 = Yes (148)
   40. Other Psychotic Disorder ............................................................. □ 0 = No □ 1 = Yes (149)
   41. Mood Disorder ............................................................................. □ 0 = No □ 1 = Yes (150)
   42. Personality Disorder (DSM-IV Axis 2) ............................................. □ 0 = No □ 1 = Yes (151)
   43. PTSD from Combat ...................................................................... □ 0 = No □ 1 = Yes (152)
   44. Adjustment Disorder ................................................................... □ 0 = No □ 1 = Yes (153)
   45. Other Psychiatric Disorder ........................................................... □ 0 = No □ 1 = Yes (154)

46-60. What are your immediate plans for referral or treatment of the veteran at this time? (check one box for each question)?
   49. Basic services (food, shelter, clothing and financial assistance) ........ □ 0 = No □ 1 = Yes (155)
   50. VA medical services ...................................................................... □ 0 = No □ 1 = Yes (156)
   51. Non-VA medical services .............................................................. □ 0 = No □ 1 = Yes (157)
   52. VA psychiatric or substance abuse services .................................... □ 0 = No □ 1 = Yes (158)
   53. Non-VA psychiatric or substance abuse services ............................ □ 0 = No □ 1 = Yes (159)
   54. VA pension or disability application .............................................. □ 0 = No □ 1 = Yes (160)
   55. Contract residential treatment through HCHV program ............... □ 0 = No □ 1 = Yes (161)
   56. VA Domiciliary Program ............................................................... □ 0 = No □ 1 = Yes (162)
   57. Upgrading of military discharge ................................................... □ 0 = No □ 1 = Yes (163)
   58. Legal assistance ........................................................................... □ 0 = No □ 1 = Yes (164)
   59. Social vocational assistance .......................................................... □ 0 = No □ 1 = Yes (165)
   60. Other (Including HUD-YASH and Grant and Per Diem) ................. □ 0 = No □ 1 = Yes (166)

   \[ X \] (167)
Appendix B: NEPEC Discharge Report (Form D)

FORM D (1)

REPORT OF DISCHARGE FROM RESIDENTIAL PROGRAM

Use this form only for veterans who are being discharged from a VA Homeless Providers Grant and Per Diem program (GPD) or a contracted residential program, under the auspices of the HCHV program. Complete a new report any time a veteran is formally discharged from the program.

1. Staff member completing this report
   ☐ 1. non-VA provider staff ☐ 2. GPD program liaison ☐ 3. VA case manager
   OFFICE USE ONLY _____ (2)

1A. VA Staff member reviewing this report
   ☐ 1. GPD program liaison
   ☐ 2. VA case manager
   ☐ 3. HCHV Program coordinator
   OFFICE USE ONLY _____ (7)

2. VA Facility Code
   _____ _____ 123 (PREPRINTED) (10)

I. VETERAN INFORMATION

3. VETERAN'S NAME

4. Social Security Number
   __ __ - __ __ - __ __ (19)

5. Veteran's Date of Birth (code mm/dd/yy)
   __ / __ / __ (25)

II. RESIDENTIAL TREATMENT STAY

6. What is the source of payment for the days of residential treatment covered by this report?
   ☐ 1. HCHV Grant and Per Diem funds
   ☐ 2. Contract funded by medical center or VISN
   ☐ 3. Other please specify:
   OFFICE USE ONLY _____ (28)

7. Name of Residential Provider
   PROVIDERS NAME PREPRINTED
   OFFICE USE ONLY 1 2 3 4 5 6 7 (PREPRINTED) (37)

8. Period covered by this report
   (Code date: mm/dd/yy)
   Beginning: __ / __ / __ (43)
   Ending: __ / __ / __ (49)

9. Number of days
   __ __ (52)

10. Cost of treatment under this provider (Round to nearest dollar)
    $ __ __ __ (57)
III. Status at End of Treatment

11. The veteran ended residential treatment because
   - 1. Successful completion of the program
   - 2. Veteran was asked to leave because of violation of program rules
   - 3. Veteran left the program by his/her own decision, without medical advice
   - 4. Veteran became too ill (mentally or physically) to complete the program
   - 5. Other ______ (DO NOT CODE) (60)

12. If the veteran ended residential treatment because of a rule violation, what was the most important reason?
   - 1. Threatened/actual violence to self or others
   - 2. Use of alcohol or drugs
   - 3. Other ______ (DO NOT CODE) (63)

13. The veteran’s living situation at discharge is:
   - 0. No residence
   - 1. Single room occupancy
   - 2. Halfway house/transitional living program
   - 3. Institution (hospital, nursing home or domiciliary)
   - 4. Apartment, room or house
   - 5. Veteran left program without giving indication of living arrangement
   - 6. Prison or jail
   - 7. Other ______ (DO NOT CODE) (66)

14. With whom will the veteran be living at discharge?
   - 0. No residence
   - 1. Alone
   - 2. With spouse and or children
   - 3. With parents, with siblings, and/or with other family
   - 4. With friends
   - 5. With strangers
   - 6. Veteran left program without giving indication of living arrangement

15. What is the veteran's arrangement for employment at the time of discharge?
   - 0. Disabled or retired
   - 1. Unemployed
   - 2. Part-time or temporary employment
   - 3. Full-time employment
   - 4. VA’s IT or CWT (VI)
   - 5. Other vocational training
   - 6. Unpaid volunteer
   - 7. Student
   - 8. Veteran left program without giving indication of employment arrangement

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16a. What is the veterans arrangement for receipt of VA financial benefits (disability payments or pension) at the time of discharge?
- 0. Currently receiving VA benefits and will continue
- 1. Has pending application for VA financial benefits
- 2. Is planning to apply for VA financial benefits
- 3. Is neither receiving nor planning to apply for any VA financial benefits
- 4. Do not know veteran's status with respect to VA financial benefits

16b. What is the veterans arrangement for receipt of non-VA financial benefits (disability payments or other support) at the time of discharge?
- 0. Currently receiving non-VA benefits and will continue
- 1. Has pending application for non-VA financial benefits
- 2. Is planning to apply for non-VA financial benefits
- 3. Is neither receiving nor planning to apply for any non-VA financial benefits
- 4. Do not know veteran's status with respect to non-VA financial benefits

17-21. Changes in clinical status: Consider the following clinical problem areas and select the best description of the change in the veteran's clinical status from the beginning of residential treatment to the time of discharge.

17. Alcohol problems:
- 0. Not a problem area for this veteran
- 1. Substantial deterioration
- 2. Some deterioration
- 3. No change
- 4. Some improvement
- 5. Substantial improvement
- 6. Do not know if veteran has this clinical problem
- 7. Veteran has this clinical problem, but do not know change in clinical status

18. Drug problems:
- 0. Not a problem area for this veteran
- 1. Substantial deterioration
- 2. Some deterioration
- 3. No change
- 4. Some improvement
- 5. Substantial improvement
- 6. Do not know if veteran has this clinical problem
- 7. Veteran has this clinical problem, but do not know change in clinical status

19. Mental health problems (other than drug or alcohol):
- 0. Not a problem area for this veteran
- 1. Substantial deterioration
- 2. Some deterioration
- 3. No change
- 4. Some improvement
- 5. Substantial improvement
- 6. Do not know if veteran has this clinical problem
- 7. Veteran has this clinical problem, but do not know change in clinical status
20. Medical problems
   □ 0. Not a problem area for this veteran
   □ 1. Substantial deterioration
   □ 2. Some deterioration
   □ 3. No change
   □ 4. Some improvement
   □ 5. Substantial improvement
   □ 6. Do not know if veteran has this clinical problem
   □ 7. Veteran has this clinical problem, but do not know change in clinical status

21. Social or vocational skill deficits
   □ 0. Not a problem area for this veteran
   □ 1. Substantial deterioration
   □ 2. Some deterioration
   □ 3. No change
   □ 4. Some improvement
   □ 5. Substantial improvement
   □ 6. Do not know if veteran has this clinical problem
   □ 7. Veteran has this clinical problem, but do not know change in clinical status

IV. Follow-up Arrangements:

22. Alcohol problems
   □ 0. None
   □ 2. Arrangements made for treatment
   □ 3. Veteran already receiving treatment and will continue

23. Drug problems
   □ 0. None
   □ 2. Arrangements made for treatment
   □ 3. Veteran already receiving treatment and will continue

24. Mental health problems (other than drug or alcohol)
   □ 0. None
   □ 2. Arrangements made for treatment
   □ 3. Veteran already receiving treatment and will continue

25. Medical problems
   □ 0. None
   □ 2. Arrangements made for treatment
   □ 3. Veteran already receiving treatment and will continue

26. Social or vocational skill deficits
   □ 0. None
   □ 2. Arrangements made for treatment
   □ 3. Veteran already receiving treatment and will continue
Appendix C: NEPEC Facility Survey Form

FACILITY SURVEY
GRANT AND PER DIEM / PER DIEM ONLY PROGRAMS

Date: ___________________  Project number: ________ - ________ - ________ - ________

Name of Residential Program: _________________________________________________________

Address: __________________________________________________ (number and street)
          __________________________________________________ (city, state)
          __________________________________________________ (zip code)

Name of Organization (if different): _____________________________________________________

HCHV Staff completing this form: ______________________________________________________

OFFICE USE ONLY ______

I. Size of program

1. How many residents (veterans and non-veterans) are living on site in the program at the present time?  
   □  □  □

2. How many veterans are living in VA-funded program beds at the present time?  
   □  □  □

3. Including the non-VA beds, how many beds does the program have overall?  
   □  □  □

II. Location and type of program building

1. Where is the program building located [CHECK ONLY ONE]?  
   □  1. City residential area  □  4. Suburban industrial or commercial area
   □  2. City industrial or commercial area  □  5. Rural area
   □  3. Suburban residential area  □  6. Other (please specify): ______________________________

   OFFICE USE ONLY ______

2. In what type of building is the program located? [CHECK ONLY ONE]  
   □  1. Private residence or house  □  5. Converted dormitory
   □  2. Converted storefront office  □  6. Building on VA grounds
   □  3. Apartment building  □  7. Other (please specify): ______________________________

   OFFICE USE ONLY ______
FACILITY SURVEY
GRANT AND PER DIEM / PER DIEM ONLY PROGRAMS

Date: ____________  Project number ___ ___ - ___ ___ ___ - ___ ___

Name of Residential Program: __________________________________________

Address: __________________________ (number and street)
                      __________________________ (city, state)
                      __________________________ (zip code)

Name of Organization (if different): _______________________________________

HCHV Staff completing this form: _________________________________________

OFFICE USE ONLY _____ _____

I. Size of program

1. How many residents (veterans and non-veterans) are living on site in the program at the present time? [ ] [ ] [ ]

2. How many veterans are living in VA-funded program beds at the present time? [ ] [ ] [ ]

3. Including the non-VA beds, how many beds does the program have overall? [ ] [ ] [ ]

II. Location and type of program building

1. Where is the program building located [CHECK ONLY ONE]? [ ] [ ] [ ]
   - 1. City residential area
   - 2. City industrial or commercial area
   - 3. Suburban residential area
   - 4. Suburban industrial or commercial area
   - 5. Rural area
   - 6. Other (please specify) __________________________

OFFICE USE ONLY _____ _____

2. In what type of building is the program located? [CHECK ONLY ONE]
   [ ] [ ] [ ]
   - 1. Private residence or house
   - 2. Converted storefront office
   - 3. Apartment building
   - 4. Converted industrial building
   - 5. Converted dormitory
   - 6. Building on VA grounds
   - 7. Other (please specify) __________________________

OFFICE USE ONLY _____ _____

GFD Program Survey, rev. 3/13/93
IV. Substance abuse policy and procedures

1. Is a resident asked to leave the program if he or she drinks alcohol when it is not allowed?  □ 0 = No  □ 1 = Yes
2. Is a resident asked to leave the program if he or she uses illicit drugs?  □ 0 = No  □ 1 = Yes
3. Are residents tested for alcohol use while they are in this program?  □ 0 = No  □ 1 = Yes
   [IF NO, SKIP QUESTION 3a]
3a. If yes, under what conditions are residents tested for alcohol use? [CHECK ONLY ONE]
   □ 1. Residents are tested only if staff suspect a problem
   □ 2. Testing is done randomly
   □ 3. All residents are tested on a regular basis
   □ 4. Residents are tested regularly, with additional random testing
   □ 5. Other (please specify __________________________)  ____________________________________________________________
   OFFICE USE ONLY ________ ________
4. Are residents tested for drug use while they are in this program?  □ 0 = No  □ 1 = Yes
   [IF NO, SKIP QUESTION 4a]
4a. If yes, under what conditions are residents tested for drug use? [CHECK ONLY ONE]
   □ 1. Residents are tested only if staff suspect a problem
   □ 2. Testing is done randomly
   □ 3. All residents are tested on a regular basis
   □ 4. Residents are tested regularly, with additional random testing
   □ 5. Other (please specify __________________________)  ____________________________________________________________
   OFFICE USE ONLY ________ ________

V. Services

Using the following categories, indicate how each of the treatment modalities listed below is provided by this program. In addition, in the last column, please indicate the percent of residents, on average, who receive each type of treatment at least once in a TYPICAL MONTH. [CHECK ONE BOX AND, IF SERVICE IS PROVIDED, ENTER A % FOR EACH ITEM.]

<table>
<thead>
<tr>
<th>Service</th>
<th>Directly by Staff</th>
<th>Indirectly by Other Staff</th>
<th>Indirectly through links</th>
<th>Not at all</th>
<th>% of residents who receive this treatment at least once in a typical month (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religious or spiritual counseling</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td></td>
</tr>
<tr>
<td>2. Legal advice or counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Vocational / educational counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Nutritional counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GPD Program Survey, rev. 5/13/03

133
<table>
<thead>
<tr>
<th></th>
<th>Directly by Staff</th>
<th>Indirectly by Other Staff</th>
<th>Indirectly through links</th>
<th>Not at all</th>
<th>% of residents who receive this treatment at least once in a typical month (0-100)</th>
</tr>
</thead>
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<tr>
<td>5.</td>
<td>AIDS screening and counseling</td>
<td>(3)</td>
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<td>6.</td>
<td>Assistance with spending money, banking or other financial matters</td>
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<td>7.</td>
<td>Representative payee services</td>
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<td>8.</td>
<td>Transportation or assistance using public transportation</td>
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<td>9.</td>
<td>Comprehensive substance abuse assessment / diagnosis</td>
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<td>10.</td>
<td>Comprehensive mental health assessment / diagnosis (for example, psychological / psychiatric evaluation and testing)</td>
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<td>11.</td>
<td>Family counseling</td>
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<td>12.</td>
<td>Group therapy, not including relapse prevention</td>
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<td>13.</td>
<td>Individual therapy</td>
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<td>14.</td>
<td>Relapse prevention groups</td>
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<td>15.</td>
<td>Aftercare counseling</td>
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<td>16.</td>
<td>Assistance with obtaining social services (for example, Medicaid, WIC, SSI, SSDI)</td>
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<td>17.</td>
<td>Discharge planning</td>
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<td>18.</td>
<td>Housing assistance</td>
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<td>19.</td>
<td>Referral to other transitional services</td>
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<td>20.</td>
<td>Case management services</td>
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<td>21.</td>
<td>Child care</td>
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<td>22.</td>
<td>Domestic violence – family/pastor violence services (physical, sexual and emotional abuse)</td>
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<td>23.</td>
<td>Outcome follow-up (post discharge)</td>
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</table>
VI. Program treatment philosophy and phases

1. Which of the following best summarizes the primary treatment philosophy of the program? 
   [see descriptions on page 7 of the survey] 
   [CHECK ONLY ONE]
   - 1. Medical model
   - 2. Therapeutic community (T.C. models)
   - 3. Cognitive-behavior therapy or social learning model
   - 4. Twelve-step model
   - 5. Psychosocial rehabilitation model
   - 6. Faith-based model training model
   - 7. Supportive housing with no specific treatment philosophy
   - 8. Other (please specify)

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2. Does the program have clearly defined program phases, that are given to or shared with residents, with each phase having specific tasks a resident must complete in order to progress through the program?
   - 0 = No
   - 1 = Yes

VII. Licensing/approval/certification/accreditation

1. Does this facility or program have licensing, approval, certification, or accreditation from any of the following organizations?
   • Only include facility-level licensing, accreditation, etc., related to the provision of homeless or substance abuse treatment services.
   • Do not include general business licenses, fire marshal approvals, personal-level credentials, food services licenses, etc.

   [CHECK ONE BOX FOR EACH ITEM.]
   a. State substance abuse agency
   b. State mental health department
   c. State public health department/Board of health
   d. Hospital licensing authority
   e. JCAHO (Joint Commission on Accreditation of Healthcare Organizations)
   f. CARF (The Rehabilitation Accreditation Commission)
   g. NCQA (National Committee for Quality Assurance)
   h. COA (Council on Accreditation for Children and Family Services)
   i. Another state/local agency or other organization (specify: ____________________________)

   OFFICE USE ONLY
VIII. Faith-based program characteristics

COMPLETE THESE 3 ITEMS FOR ALL PROGRAMS.

Faith-based organizations (FBOs) are not defined in law but are commonly described as follows:

FBOs are religious organizations or religiously affiliated not-for-profit entities. FBOs that may provide social services could be classified into two major categories:

- Sectarian: "Pervasively religious" organizations, such as churches, temples, synagogues, mosques, and congregations.
- Non-Sectarian: Separate, secular organization created by a religious organization to provide social services, such as Jewish Family Services, Catholic Charities USA, Lutheran Social Services, and the Salvation Army.

1. What is the program agency’s tax-exempt status? [CHECK ONLY ONE]
   - 1. 501(d), religious organization
   - 2. 501(c)(3), non-profit organization
   - 3. public agency (state or local government agency or department)
   - 4. private for-profit organization
   - 5. other - please specify: ______________________________

   OFFICE USE ONLY _____ _____

2. Which statement best describes the residential program? [CHECK ONLY ONE]
   - 1. a private or public secular agency with no religious base or history
   - 2. a private agency that at one time had a religious orientation but today has evolved into an agency that is largely secularly based
   - 3. a private agency that continues to have a clear religious base and orientation

3. If the program at one time had or continues to have a religious orientation, would you describe that orientation as? [CHECK ONLY ONE]
   - 1. Orthodox Jewish
   - 2. Reform Jewish
   - 3. Conservative Jewish
   - 4. Catholic
   - 5. Protestant denominational. Which denomination: ______________________________

   OFFICE USE ONLY _____ _____

   - 6. Protestant interdenominational: evangelical
   - 7. Protestant interdenominational: Mainstream Protestant or liberal Protestant
   - 8. Mormon
   - 9. Muslim/Islam
   - 10. Other - Please specify: ____________________________________________

   OFFICE USE ONLY _____ _____

THANK YOU FOR COMPLETING THIS SURVEY
PLEASE FAX COVER SHEET AND PAGES 1-6 TO NEPEC, (203)937-3463

GPD Program Survey, rev: 3/11/03

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Primary treatment philosophies*:

1. **Medical**: Emphasis on using medications to decrease withdrawal; symptoms and on using formal diagnoses as the basis of treatment plans.

2. **Therapeutic Community**: Emphasis on accepting personal responsibility for decisions and actions and on assigning patients chores or duties as part of treatment.

3. **Cognitive Behavioral**: Emphasis on developing confidence in coping with high risk situations for relapse and on helping patients identify alternative responses to using drugs or alcohol. **Social**: Emphasis on improving communication and interpersonal skills and on teaching patients how to enhance assertiveness and communication skills.

4. **AA/12 Step**: Emphasis on Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) goals and activities such as helping patients accept that they are powerless over the abused substance and working through the 12 Steps.

5. **Psychosocial rehabilitation**: Emphasis on consumer choice with supported housing services provided through an assertive community treatment team format, and on use of harm reduction approach to drug abuse.

6. **Faith-based moral training**: Emphasis on or loss of meaning in life where clients are “students” who take classes that focus on aspects of character according to the Bible and are engaged in work alongside their training classes.

*These are intended to be very general guidelines. There are probably no definitions of these models that definitively distinguish one from the other, and in practice, one type of model may incorporate aspects of other models. A particularly good example of this is that most programs incorporate an AA component, while residential programs rarely operate solely in an AA model.

The objective, then, is to designate the program according to its “primary” treatment model.
Appendix D: IRB Exemption Certification

July 31, 2006

Roger Casey, MSW
MHC2330

RE: Exempt Certification for Application for Exemption
IRB#: 104856F
Title: Utilization of Community-Based Transitional Housing By the Homeless Veteran Population Diagnosed With A Mental Illness

Dear Mr. Casey:

On July 19, 2006, the Institutional Review Board (IRB) determined that your Application for Exemption MEETS FEDERAL EXEMPTION CRITERIA. It is your responsibility to ensure that this research is conducted in a manner consistent with the ethical principles outlined in the Belmont Report and in compliance with USF IRB policies and procedures.

Please note that changes to this protocol may disqualify it from exempt status. It is your responsibility to notify the IRB prior to implementing any changes.

The Division of Research Compliance will hold your exemption application for a period of five years from the date of this letter or until a Final Review Report is received. If you wish to continue this protocol beyond the five-year exempt certification period, you will need to submit an Exemption Certification Request form at least 30 days before this exempt certification expires. The IRB will send you a reminder notice prior to expiration of the certification; therefore, it is important that you keep your contact information current. Should you complete this study prior to the end of the five-year period, you must submit an Application for Final Review.

Please reference the above IRB protocol number in all correspondence to the IRB or the Division of Research Compliance. In addition, we have enclosed an Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities when conducting human subjects research. Please read this guide carefully.
We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to the Human Research Protections Program. If you have any questions regarding this matter, please call 813-974-9343.

Sincerely,

Paul G. Stiles, J.D., Ph.D.
USF Institutional Review Board

Enclosures: IRB Quick Reference Guide

Cc: Susan Dovhey-Phillips, Ph.D., USF IRB Professional Staff
Bruce L. Levin, Ph.D.
JAH-VAH

IA-EC-05-01
ABOUT THE AUTHOR

Roger Casey earned a Bachelor’s degree from Colorado State University and a Master’s in Social Work from the University of South Florida. Upon graduation, Dr. Casey was employed in the Homeless Chronically Mentally Ill (HCMI) Veterans Program at the James A. Haley Veterans Administration Medical Center, Tampa, Florida. Designed to provide outreach, case management, and residential treatment, the HCMI Program received permanent authorization in 1992. In 1994, Dr. Casey was invited to VA Central Office, Mental Health Strategic Health Care Group in Washington, D.C., to implement and manage the VA Homeless Providers Grant and Per Diem (GPD) Program. Working with nonprofit organizations, federal and state government agencies, and veterans’ service groups, Dr. Casey developed the GPD program into the nation’s largest integrated homeless residential services program: GPD serves over 15,000 homeless veterans annually at more than 300 community-based residential sites in every state, Washington, D.C., Puerto Rico, and Guam.