Health Practices of Homeless Women
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HEALTH PRACTICES OF HOMELESS WOMEN

by

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ABSTRACT

HEALTH PRACTICES OF HOMELESS WOMEN

Margaret Chaney Wilson, PhD, RN

Homeless women and female-headed families represent the fastest growing subgroups of homeless individuals. To expand the body of knowledge and provide further insight into the complex area of homelessness and health, health practices of homeless women were investigated using a cross-sectional, descriptive, and non-experimental design using Pender’s Health Promotion Model as the theoretical framework. Homeless women (N=137) were recruited from five shelters in northeastern Indiana. Homeless women in this study were found to be highly educated, mostly unemployed, and primarily single. A greater number of African Americans than represented in the local population were found to be shelter residents. Health care access and effective utilization of services were evidenced in the sample. Homeless women were noted to practice health-promoting behaviors in all areas but scored the lowest on physical activity. Negative health behaviors related to tobacco use was widespread. Significant findings reflected women’s personal strengths and resources in the areas of spiritual growth and interpersonal relations.

Dissertation Advisor: L. Kathleen Sekula, PhD, RN
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This study is dedicated to the courageous women who taught me about living, strength, and dreams.

In loving memory of my Dad, William L. Chaney, 1923-2001
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I. INTRODUCTION

A. Background of the Study

Homelessness is a growing social, economic, and political problem that affects an alarming number of people in the United States. Although the exact number of homeless is difficult to determine, an estimated 2 million persons were homeless in 1999 with as many as 700,000 homeless on any given night. Homelessness affects a wide spectrum of communities and is no longer just a problem of large metropolitan areas. Homeless families represent the fastest growing subgroup of the homeless population, account for approximately 40% of those who become homeless, and are most often headed by single females (National Coalition for the Homeless, 1999b).

This rapidly growing segment of the homeless population faces a multitude of obstacles related to the lifestyle that accompanies homelessness. Homeless women and families face many barriers related to their own health care needs and the health care needs of their children including inadequate financial resources, lack of transportation, lack of knowledge, problems finding childcare, and marginalization by society (Craft-Rosenberg, Powell, & Culp, 2000; Johnson, 2001; Reimer, Van Cleve, & Galbraith, 1995; Schaffer, Mather, Gustafson, 2000; Stein, Andersen, & Koege, 2000; Weinreb, Goldberg, & Perloff, 1998). These many barriers may negatively influence their health.

Health problems of the homeless have been well documented and include acute and chronic physical disorders and mental health/emotional issues (Carter, Green, Green, & Dufour, 1994; Cousineau, 1997; Craft-Rosenberg et al., 2000; Bassuk, et al., 1996; Douglass, Torres, Krinke, & Dale, 1999; Reichenbach, McNamee, & Seibel, 1998; Sachs-Ericsson, Wise, Debrody, Paniucki, 1999; Schaffer et al., 2000; Wojtusik & White,
Children of homeless families suffer from a variety of conditions such as nutritional deficiencies, including anemia and malnutrition, increased risk of lead exposure, asthma, dental problems, poor utilization of health care services, rapid spread of infectious diseases, and respiratory infections (Burg, 1994; Craft-Rosenberg et al., 2000). Other consequences of family homelessness include compromised parenting practices and altered family relationships (Easterbrooks, & Graham, 1999; Hausman & Hammen, 1993; Koblinsky, Morgan, & Anderson, 1997; Lindsey, 1998; Metraux & Culhane, 1999; Reilly, 1993).

The homeless often delay seeking medical treatment until their symptoms become intolerable or severe. Sachs-Ericsson et al. (1999) found that homeless adults waited up to three months before seeking treatment for health problems, many of which were reoccurring problems. Homeless women have special needs in relationship to their health; they have poorer health when compared with the general population and experience an elevated prevalence of acute and chronic diseases (e.g. asthma, anemia, bronchitis, hypertension, and ulcer disease; Bassuk et al., 1996; Craft-Rosenberg et al., 2000; Weinreb et al., 1998). Additionally, limited access to affordable, high quality, and comprehensive health care and programs that include routine preventive and health promotion care is more difficult to obtain for homeless women than for men (Craft-Rosenberg et al., 2000; Clarke, Williams, Percy, & Kim, 1995) and exacerbates already serious health problems (Weinreb et al., 1998).

Current literature reports numerous studies that describe health practices in diverse populations; however, very few address positive health-promoting practices and lifestyles that support the health and wellness of vulnerable at-risk populations, especially
those who are homeless (Alley, Macnee, Aurora, Alley, & Hollifield, 1998; Pender, Murdaugh, & Parsons, 2002; Power et al., 1999; Reutter, Neufeld, & Harrison, 1998). The limited studies identified in the literature as health promotion behaviors primarily focus on specific disease entities and health practices such as Pap tests, mammograms, self-breast exams (Craft-Rosenberg et al., 2000), HIV testing, tuberculosis testing, and risky health behaviors (Nyamathi, Leake, Keenan, & Gelberg, 2000; Nyamathi, Stein, & Bayley, 2000; Nyamathi, Wenzel, Keenan, Leake, Gelberg, 1999), and do not focus on health promoting behaviors or lifestyles.

With the rapidly changing economic climate of society and the multitude of influences on vulnerable population groups, the need to discover new information about homeless mothers is timely and imperative. Lifestyle practices that include positive health-promoting behaviors in homeless women are important considerations for determining the level of wellness of this group and for the overall health of society. Health promotion and wellness care has become an important recognized concern in all age groups for diverse populations. Healthy People 2010 (U.S. Department of Health and Human Services, 2000) focuses on the health of all Americans, including vulnerable and underserved populations. This document provides direction for the elimination of socioeconomic disparities in health and includes primary level strategies aimed at health promotion and disease prevention care and services accessible to all Americans.

Relationships among the factors that describe homeless women and their health and wellness are not yet fully understood. Research is needed to better understand their complex characteristics, health and wellness needs, strengths and deficits related to their
health practices, and to provide direction for the development of effective programs and future research endeavors.

B. Purpose of the Study

The purpose of this study was to describe a population of sheltered homeless women in a specific geographical region in the Midwest in order to provide further insight into the complex area of homelessness and health.

C. Specific Aims

The specific aims of this study were as follows:

1. To describe a population of homeless women residing in shelters in terms of their socio-demographic characteristics.
2. Determine the level of involvement in specific health-related activities of sheltered homeless women.
3. Enhance awareness and understanding of homelessness in a specific geographical region.
4. To use the findings to assist in the establishment of funding priorities and multidisciplinary interventions to help increase the level of health of sheltered homeless women.

D. Research Questions

Three research questions were identified for investigation in this study:

1. What are the socio-demographic characteristics of homeless women?
2. What health-promoting behaviors do homeless women practice?
3. What relationships exist among selected socio-demographic characteristics and the choice for health promoting behaviors in homeless women?
E. Definition of Terms

**Homeless**

The definition of “homeless” has changed and evolved over time and has been directed by social, economic, and political influences. For this study the definition that is provided by the Stewart B. McKinney Homeless Assistance Act (Public Law 100-77) is utilized: “a homeless person is someone who lacks a fixed, regular, and adequate nighttime residence or someone whose primary nighttime residence is a supervised public or private shelter designed to provide temporary living accommodations” (HUD, 2002).

**Health-Promoting Behaviors**

Health promotion is theoretically defined as a multidimensional process in which behavior is motivated by the desire for positive changes and growth to reach a higher level of wellness. Health-promoting behaviors are not disease or condition specific, but represent an overall lifestyle that supports and expands the potential of the individual and positively contributes to quality of life (Pender, et al., 2002). Health-promoting behaviors are operationally defined as scores on the total scale and six subscales of the Health-Promoting Lifestyle Profile II (HPLP II) (Appendix A).

F. Assumptions

1. The practice of health-promoting behaviors in vulnerable populations is important to the profession of nursing.

2. Health-promoting behaviors are important to homeless women.

3. All people, regardless of socioeconomic status or other personal characteristics are able to engage in behaviors to enhance and support their health, well being, and contribute to their quality of life.
4. The participants will respond truthfully on all structured research instruments.

G. Significance to Nursing

The study will contribute to the body of knowledge of nursing through the exploration and discovery of critical information concerning the characteristics of homeless mothers, their participation in health-promoting behaviors, and how these variables interrelate. It is important that research studies comprehensively examine these concepts in order to describe and determine critical factors that contribute to health-promoting behaviors in this population.

Through careful description and study of socio-demographic characteristics and health-promoting behaviors, nursing clinical practice can be improved if more information is obtained about the multi-faceted characteristics of this special population group. Understanding the complex interrelationships that exist among diverse factors in the lives of homeless mothers may assist nursing practice in the design and implementation of effective strategies and interventions for homeless families aimed at their specific areas of need to assist this population in reaching a more optimal level of health. The discovery of strengths and deficits related to health promotion may aid all providers in strengthening current services and provide guidance for the development of new programs. Culturally appropriate interventions and programs that develop resiliency and strengthening of personal resources may positively impact the health of this unique at-risk group.

Nurses have unique opportunities to address the health care needs of the homeless and increase their level of health. The effects of newly discovered knowledge about homeless mothers will enhance nursing education by providing educators valuable
information regarding the strengths and deficits of health practices of homeless mothers.
Students will be challenged to utilize this important information to provide appropriate
nursing care to homeless mothers in a variety of clinical settings.

Research can serve as a method of advocacy for the homeless. Further research
questions will be generated based on the results of this study directing further exploration
of the complex interactions and relationships among the characteristics that describe this
population as well as interventional studies that explore innovative and creative methods.
A heightened awareness of the incidence of homelessness, especially in female-headed
families, along with a clearer understanding of their needs may result from this study.
This research may lead to social change through the increased understanding of the health
and wellness issues of homeless mothers. Policy-making could be influenced through the
promotion of legislation that promotes improved access to all levels of health services
and programs for members of society regardless of socioeconomic status.

The diverse role of health professionals with vulnerable clients is of critical
importance in the generation of new knowledge. Through the design and implementation
of effectual research, education, and practice activities, nursing can make positive
contributions in the lives of the homeless. Nursing must take a proactive role in the
investigation of aspects of the lives of homeless mothers in order to promote healthy
lifestyles and behaviors. These contributions may have a positive impact on the health of
homeless mothers, the health of their children, a reduction in their vulnerability, and
contribution to the overall health of society.
II. REVIEW OF LITERATURE

This chapter presents the theoretical framework for this investigation and a review of the salient literature related to homeless women in order to provide an understanding of identified research questions. First, Pender’s Health Promotion Model is introduced and explored as the theoretical framework for this study. Next, a review of the literature of homelessness is explored to provide a background for this proposed study. The literature is reviewed and structured to reflect the two major categories of influences on homelessness: individual and structural factors. Lastly, the literature review explores the state of research regarding health and health promotion in the homeless population, which provides support for the proposed investigation.

A. Theoretical Framework

The theoretical framework for this study is based upon Pender’s revised Health Promotion Model (Pender et al., 2002) as depicted in Figure 1. The Health Promotion Model (HPM) provides a framework for understanding the numerous influences that affect a person as they seek an improved state of health. The HPM illustrates that each person is a multidimensional holistic individual who continually interacts with both interpersonal and physical environments. The model also emphasizes the active role of the individual in the achievement of an improved healthy state. The initial version of the HPM (Pender, 1982) was proposed in the early 1980s and presented in the nursing literature to provide an early biopsychosocial framework to explain how motivated individuals sought to improve their health potential (Pender et al., 2002).
The HPM has been revised and further developed because of extensive empirical studies of the model constructs and behavioral outcome of health promoting behaviors (Pender, 1987; 1996). The most recent revision of the HPM includes the addition of three new variables: activity-related affect, commitment to a plan of action, and immediate competing demands and preferences. Deleted from the previous edition of the
model were importance of health, perceived control of health, and cues to action, which
had not been empirically supported in several research studies. The model was then
reorganized to reflect these changes, the multiple interrelationships among the variables,
and the re-categorization of personal factors to include the constructs of definition of
health, perceived health status, and demographic and biologic characteristics from the
previous model (Pender, 1996).

The theoretical basis for the HPM is derived from the integration of expectancy-value
theory, social cognitive theory, and a nursing perspective of holistic human functioning
(Pender et al., 2002). Both expectancy-value theory and social cognitive theory are
interactional change models based on the outcome of goal-directed behavior.
Expectancy-value theory states that motivational direction for change is guided by
subjective influences. In order for goal achievement to be successful, individuals must
perceive the goal as attainable, have some type of positive personal value, and feel that
actions will lead to success. Social cognitive theory recognizes the dynamic relationship
and interaction among environmental factors, personal factors, and individual behavior.
Behavior is directed by a combination of influences that represent both individual forces
and external stimuli. Critical to successful mastery of behaviors is the concept of self-
beliefs that are comprised of the person’ ability for self-attribution, self-evaluation, and
self-efficacy. A holistic nursing perspective takes into account the influences of all
components of the holistic person: physical, psychological, spiritual, and socio-cultural
(Pender et al., 2002).

The HPM is based on seven assumptions, which reflect both nursing and behavioral
science perspectives:
1. Persons seek to create conditions of living through which they can express their unique human health potential.

2. Persons have the capacity for reflective self-awareness, including assessment of their own competencies.

3. Persons value growth in directions viewed as positive and attempt to achieve a personally acceptable balance between change and stability.

4. Individuals seek to actively regulate their own behaviors.

5. Individuals in all their biopsychosocial complexity interact with the environment, progressively transforming the environment and being transformed over time.

6. Health professionals constitute a part of the interpersonal environment, which exerts influence on persons throughout their life span.


The revised model is organized to reflect the interrelationships among individual characteristics and experiences, behavior-specific cognitions and affect, commitment to a plan of action, immediate competing demand and preferences, and a behavioral outcome of health promoting behavior. The model illustrates that individual characteristics and experiences influence behavior-specific cognitive and affective processes that lead to a commitment of a plan of action. Commitment to a plan of action results in the practice of health-promoting behavior but may be modified by competing demands and preferences.

Individual characteristics and experiences reflect the uniqueness of each person. The frequency of a prior or related behavior has been empirically supported in predicting
subsequent behavior and has influences on health-promoting behavior through self-efficacy, benefits, barriers, and activity-related affect. Personal factors have a holistic perspective including biological, psychological, and sociocultural components. These factors exert influences on cognitions, affect, and health behaviors and, although not all personal factors can be changed, they can be targeted for nursing interventions.

Behavior-specific cognitions and affect are represented by a major portion of the model and are major motivators for health-promoting behaviors, and therefore the critical target for nursing interventions. These include perceived benefits of action, perceived barriers to action, perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences. Perceived benefits and barriers to action represent individual feelings one has toward the health-promoting behaviors and perceived self-efficacy explains that a behavior is more likely to be performed if the individual has a strong belief that he/she can be successful. Activity-related affect consists of both positive and negative subjective feelings associated with a behavior and can enhance self-efficacy. Sources of interpersonal influences include family, peers, and health providers, have a strong influence of health-promoting behaviors, and include norms, social support, and modeling.

Situational influences are also a strong influence on health behaviors and include environmental conditions and options available to the individual. The commitment to a plan of action includes both the behavioral action along with a formalized planned action strategy. Critical to the success of the plan is the ability of the client to identify key strategies that will energize, reward, and reinforce positive health behaviors. This plan of action should lead to the practice of the intended behavior unless there is interference
from competing demands and preferences. These competing demands and preferences are represented by situations that occur prior to the planned health behavior and can interrupt the plan of action that the individual has committed to for positive health behaviors. Individuals often have little control of competing demands that interfere with the action plan such as work or family commitments or other responsibilities. However, a high level of control can be exerted on competing preferences depending on the person’s self-control and their ability to self-regulate themselves but may be affected by developmental and biological components. An example of a competing preference would be avoiding a scheduled exercise session because of the desire to do something more enjoyable such as shopping. The behavioral outcome, health-promoting behavior, is directed toward positive health outcomes for the individual and is aimed at raising the overall level of health in all areas of their life (Pender, et. al, 2002).

The HPM is a competence or approach-oriented model. Each individual has an active role in determining and continuing positive health behaviors. Projected threats or fears intended to serve as motivators for health behavior are not found in the HPM. This lack of personal threat as a motivator adds to its usefulness in diverse populations across the lifespan including adolescents, older adults, and other vulnerable populations (Pender, et. al, 2002).

The health promotion movement has great support from both a national and international perspective. Healthy People (U.S. Department of Health and Human Services, 1979), the Surgeon General’s first report on health promotion and disease prevention, recognized the importance of this concept and provided direction and identification of health promotion needs of the nation. Healthy People 2010 (U.S.
Department of Health and Human Services, 2000) reflects progress, additional goals and challenges for increasing the health and well being of our nation and reemphasizes the need to reduce disparities among populations affected by social and economic barriers. Although there are no specific objectives that are directed toward the homeless population, numerous objectives are directed toward low-income individuals and can be readily applied to the homeless.

The World Health Organization (WHO) has also emphasized the importance of health promotion through the goal of *Health for All* established as a worldwide goal (WHO, 1978). This important initiative acknowledged the special needs of the underserved and high-risk groups, re-emphasized a holistic definition of health, and provided direction for the provision of primary health care that reflects principles of accessibility, affordability, acceptability, uses appropriate strategies and resources to promote community participation, and encourages interdisciplinary collaboration. The current health care system is reflective of the trend to shift from hospital-based illness care to community-based wellness care. Health promotion and disease prevention strategies are critical foundational components needed to increase the health of society.

### B. Homelessness

Homelessness is conceptualized in the current body of literature through the perspective of two levels of influences: individual and structural. Individual level issues and problems are represented by one’s personal characteristics that contribute to vulnerability and the risk of homelessness. These personal characteristics include numerous psychosocial issues such as adverse early childhood experiences, mental/emotional illness and health, substance abuse, domestic violence and socio-
demographic factors such as gender, age, level of education, and ethnicity (Phelan & Link, 1999; Strehlow & Amos-Jones, 1999). Structural issues occur at a societal level and contribute to the risk of homelessness. They include conditions of poverty, unemployment, lack of affordable housing, gender-related problems, insufficient income for recipients of public assistance or unskilled labor, inadequate social services and healthcare, and an increase of female-headed families (National Coalition of the Homeless, 1999c; Toro & Warren, 1999; U.S. Conference of Mayors, 2001).

**Individual Factors: Socio-demographic Characteristics**

Throughout history, the magnitude of homelessness has fluctuated in response to current economic, political, and social environments. Society has observed homelessness change and evolve from a primarily male-oriented population to a more heterogeneous group. Today, the demographic scope of homelessness includes a rapidly growing segment of young single women, alone or accompanied by their children (Baumohl, 1996; National Coalition of the Homeless, 1999c). The current literature is comprised of studies that examine and describe the diverse characteristics of this at-risk population group in the United States. One landmark national survey (N = 2,974), the National Survey of Homeless Assistance Providers and Clients (U.S. Census Bureau, 1999), was conducted in October and November of 1996 to examine the characteristics of a nationally representative sample of the homeless population in the United States. This study surveyed service providers regarding individuals who used homeless services such as shelters, soup kitchens, transitional housing programs, outreach programs, and physical and mental health programs. Service providers were selected from 76 geographical areas representing urban, rural, and suburban areas across the United States.
Researchers collected data on numerous variables including socio-demographic characteristics, physical health, mental health, substance abuse, and history of homelessness. Analysis of the data revealed the following socio-demographic characteristics of the surveyed homeless population. A single homeless person was most likely to be a white male, 25-54 years, living in an urban area. Specifically, 85% of homeless clients were single, 77% were male and 23% female. Of these single adults, 81% were between the ages of 25-54 years; 77% were male, 23% female; 41% white, 40% African American, 10% Latino, 8% Native American, and 1% other races. Sixty-nine percent lived in urban areas, 20.2% in suburban locales, and 8.1% in rural areas.

Demographics differ somewhat for the homeless who were represented by family households. Families were most commonly headed by single African American mothers ages 25-54 with 2.2 minor children. Specifically, families were represented by single females (84%) with 60% of them having children ages 0-17 years. The majority (74%) was ages 25-54 and had never been married (41%). Homeless families represented an ethnically diverse group: 38% white, 43% African American, 15% Hispanic, 3% Native American, 1% other races. Their education level reveals that most have less than a high school education (53%) but 21% have completed high school and 27% have some education beyond this level. This survey, while comprehensive in nature, only includes data about those who have sought out services from service providers. Prior to this survey, the last national study, which was conducted in 1989 by the Urban Institute, was limited in scope, and only included shelters and soup kitchens in U.S. cites with populations of 100,000 or more. In comparison of these two national studies, demographic trends are noted to include a homeless population that is more likely to be
African American, single, and to have completed high school and some education beyond high school (U.S. Census Bureau, 1999).

Slightly different demographics were reported by the U.S. Conference of Mayors (2001) survey of 27 major metropolitan cities. This yearly study seeks information and estimates about homelessness, hunger, available services and programs, housing, requests for services, and ability of agencies to meet these special needs. Demographics from the 2001 survey documented that 40% of the homeless population was represented by single men, 14% by single women, 4% by unaccompanied minors, and 40% by families with children. One area that has steadily increased in these surveyed cities is the growing number of families with children (National Coalition for the Homeless, 1999b). The variations in these demographic statistics could be accounted for by differences between the dates of data collection and the fact that the U.S. Conference of Mayors’ survey was limited to metropolitan areas only.

Variations in the socio-demographic characteristics of the homeless are also noted in published research studies that are limited to specific geographical locations. For example, DeMallie, North, and Smith (1997) studied 900 homeless adults residing in day and nighttime shelters and on the streets in St. Louis and found that 70% were males, 87% were age 50 or younger (mean age 31 years), 79% were African American, and 20.3% were white. Similar demographics were described in another urban study in New York City (Herman, Susser, & Struening, 1994). This sample of 1,849 sheltered homeless adults revealed that 80% were male, 71% were 18-39 years, 73% were African American, 14.1% Latino, and 4% white.
As the incidence of homelessness continues to rise in all areas across America there is a trend toward a change in demographics to include a rapidly increasing number of women, both single and those accompanied by children (National Coalition for the Homeless, 1999b). Homelessness occurs in all types of communities but the majority of the homeless live in central cities (71%) while fewer live in the suburbs (21%), and only 9% in rural areas (U.S. Census Bureau, 1999). Several significant research studies have focused on homeless women and have revealed critical descriptive information concerning the characteristics of this growing homeless group in the United States. The Worcester Family Research Project, conducted in 1996, studied both sheltered homeless and low-income housed mothers in the community of Worcester, Massachusetts and has resulted in several published studies documenting socio-demographic, health care utilization, physical health, and mental health characteristics of the study population (Bassuk, et al., 1996; Bassuk, et al., 1997; Browne & Bassuk, 1997; Weinreb, et al., 1998). Homeless women in this study sample had a mean age of 26.2 years and represented a racially and ethnically diverse group: 32.7% White, 36.8% Puerto Rican, 22.7% African American, and 6.4% other Hispanic. They were found to be significantly younger than their housed counterparts (26.2 years homeless versus 28.5 years housed) and less likely to have completed a high school education or received a general equivalency diploma (GED). However, in the homeless sample, 42.8% had completed high school/GED and 10.8% had completed some college. Additional results of these studies will be reviewed in following sections related to the variables studied.

To gain a comprehensive view of the socio-demographic characteristics of homeless women in varying geographical areas of the United States, Table 1 is presented.
Table 1

*Comparison of Socio-demographic Characteristics of Homeless Women in the United States from Published Research Studies*

<table>
<thead>
<tr>
<th>Study</th>
<th>Geographic Location</th>
<th>Mean Age</th>
<th>Education</th>
<th>Ethnic</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weinreb, et al. (1998)</td>
<td>East Coast Urban</td>
<td>26.2 yrs N = 220</td>
<td>53.6 % High School graduate/GED or some college</td>
<td>33% White 37% Puerto Rican 23% Black</td>
<td>Not reported</td>
</tr>
<tr>
<td>Alley, et al. (1998)</td>
<td>Midwest Urban</td>
<td>35 yrs N = 59</td>
<td>Mean 11 years</td>
<td>Not reported</td>
<td>80% single</td>
</tr>
<tr>
<td>Craft-Rosenberg, et al. (2000)</td>
<td>Midwest Rural</td>
<td>35.5 yrs N = 31</td>
<td>6% High School graduate</td>
<td>80% White</td>
<td>84% single</td>
</tr>
<tr>
<td>Cummins, First, &amp; Toomy (1998)</td>
<td>Midwest Rural &amp;</td>
<td>27 yrs N = 473</td>
<td>54.9 % high school graduate or more</td>
<td>87% White 8.9% Black</td>
<td>74% single</td>
</tr>
<tr>
<td>Smith &amp; North (1994)</td>
<td>Midwest Urban</td>
<td>29 years N = 300</td>
<td>11.6 years of education (average)</td>
<td>76% Black</td>
<td>58% never married; 83% of married now single 45.4 % single</td>
</tr>
<tr>
<td>Nyamathi, et al. (2000)</td>
<td>West Coast Urban</td>
<td>33 years N = 1302</td>
<td>Mean of 11.2 years of education</td>
<td>48% Black 21% White 31% Latinos</td>
<td>Not reported</td>
</tr>
<tr>
<td>Rosengard, Chambers, Tulsky,</td>
<td>West Coast Urban</td>
<td>41 years N = 105</td>
<td>77% High School/GED</td>
<td>41% White 37% Black 5% Hispanic 4% Native American 1% Asian 12% Other</td>
<td>Not reported</td>
</tr>
</tbody>
</table>

Table 1 compares characteristics of populations of homeless women among studies conducted in diverse locations in the United States. Categorized by geographic location,
age, education, ethnicity, and marital status, the information presented in the Table reflects similarities and differences across the study populations. Comparatively, across the United States, homeless women are single with a mean age of 30.2 years. Nearly 50% have attained at least a high school education with college level education being completed by some. As noted in the table, ethnic representation varies among studies and appears to be influenced by geographical location. Differences noted among the cited study populations reflect the diversity of homeless women across the United States supporting that homeless women represent a heterogeneous group.

**Individual Factors: Adverse Childhood Experiences**

In addition to socio-demographic factors that influence individual level factors related to homelessness, the most commonly cited issues in the literature include adverse childhood experiences, interpersonal violence, mental/emotional disorders, and substance abuse. These significant problems frequently occur in combination with each other as well as with other structural level factors that contribute to the state of homelessness. Adverse childhood experiences are identified by a variety of situations including physical and sexual abuse, out-of-home care (foster, group, institutional), and inadequate care.

Families of origin have been shown to have critical influences on adult homelessness. The prevalence of adverse childhood experiences has been explored in several diverse studies. Adverse childhood experiences that included a combination of lack of care, physical abuse, and/or sexual abuse during childhood dramatically increased the risk of adult homelessness, depression, and substance abuse (Browne, 1993; Buckner, Bassuk, & Zima, 1993; Goodman, Dutton & Harris, 1995; Herman, Susser, Struening, & Link, 1997; Nyamathi, Stein, et al., 2000; Styron, Janoff-Bulman, & Davidson, 2000).
However, in a qualitative study of seven sheltered homeless women who were homeless due to adult physical violence, Clark, Pendry, and Kim (1997) reported that adverse childhood experiences were present but no specific patterns were identified.

The effects of adverse childhood experiences were studied using a large sample of homeless adults (N = 1,849) in New York City that excluded those with severe mental disorders (Herman, et al., 1994). Those who had experienced childhood out-of-home care (foster, group, institutional care) were significantly more likely to report severe depressive symptoms at age 30 and older. Other variables significantly related to depression included African American ethnicity, drug abuse, and alcohol abuse. Non-significant variables included age, male gender, education, and homeless history.

Building on this study, Herman, et al., (1997) compared 92 adults who had been previously homeless with a never homeless comparison group (N = 395) to assess if childhood adversity (physical abuse, sexual abuse, and inadequate parental care) was a risk factor for adult homelessness. A higher prevalence in all areas of adverse childhood experiences was noted in the previously homeless than the never homeless sample. Additionally, women reported a significantly higher experience of lack of care than men. The risk of adult homelessness was greatly increased when a combination of childhood lack of care and physical or sexual abuse had occurred. However, results of this study may be affected by recall bias as data were collected through telephone interviews with those who had experienced homelessness at sometime during their life.

Predictors of adult homelessness were also studied in a sample of 220 homeless and 216 low-income housed mothers (Worcester Family Research Project). Overall, the homeless mothers reported a higher incidence of adverse childhood experiences than the
low-income housed mothers, although both reported high occurrences. Foster care and drug use by the primary female caretaker during childhood were found to be the most significant predictors of adult homelessness (Bassuk, et al., 1997).

Others have also reported a high rate of adverse childhood experiences in homeless women. In a descriptive study of 99 formerly homeless women with serious mental illness, 87% reported physical abuse and 65% reported sexual abuse in childhood with over 80% of this total abuse rated as severe. During childhood and adulthood, 92% of the total sample had been physically or sexually abused, or both (Goodman, et al., 1995). Browne and Bassuk (1997) studied homeless and poor housed women from the Worcester Family Research Project and found history of high rates of violence in both groups. In this sample, physical violence by childhood caretakers was reported in 66.5% of the homeless sample as compared to 59.5% of the housed sample. This childhood violence was found to be a strong predictor of violence in adulthood by an intimate male partner in this study population. However, lower incidence of adverse childhood experiences were noted in the data from the National Survey of Homeless Assistance Providers and Clients (U.S. Census Bureau, 1999). Twenty-seven percent of the homeless clients in this study had been subjected to out-of-home experiences before their 18th birthday, had experienced multiple placements, and 29% reported abuse or neglect during childhood.

In a qualitative study of 29 homeless adults, Morrell-Bellai, Goering, & Boydell (2000) identified adverse childhood experiences (abuse, neglect, poverty) and adulthood problems (substance abuse, mental health issues, poor support systems, interpersonal conflicts, inadequate emotional and social support) as precipitating and sustaining factors
for homelessness. Similarly, themes of poverty, neglect, abuse, conflicted interpersonal relationships and mental health concerns were identified from the life stories of 34 homeless women residing in a shelter in New York City (Styron, et al., 2000).

**Individual Factors: Violence**

The presence of adulthood violence is also a critical factor in relationship to homelessness as the outcome of violence against women has been identified as a major risk factor for homelessness (Brown, 1993; Brown & Bassuk, 1997; Nyamathi, Leake, Y Gelberg, 2000, U.S. Conference of Mayors, 2001). Women who experience adulthood physical abuse often must choose between the abusive relationship and homelessness (Brown, 1993; Brown & Bassuk, 1997; Clark, et al., 1997; National Coalition for the Homeless, 1999a). A qualitative study of seven sheltered homeless women explored lifetime experiences of abuse to gain a better understanding of the phenomenon of homelessness (Clark, et al., 1997). Narratives of the participants revealed definite patterns of violence related to adulthood abuse and evidence of childhood abuse, but no consistent patterns were noted related to these adverse childhood experiences. Patterns of current violence were documented and described in four phases: a) Camelot and broken promises, b) isolation/shame/harassment/humiliation, c) power, placate, and terror, and d) freedom-seeking behaviors. From the final phase of freedom-seeking behaviors, a theory emerged that clearly illustrated the complex and often lengthy process of survival in situations of domestic violence. In addition to these experiences of violence, all women in the study reported significant drug or alcohol abuse during their lifetimes.

Browne and Bassuk (1997) also reported the prevalence and patterns of intimate violence in the lives of 220 sheltered homeless and 216 low-income housed mothers from
the Worcester Family Research Project and found childhood violence in their past to be the strongest predictor of violence by a male intimate partner. Although data showed few differences between the comparison groups for physical violence by childhood caretakers or child sexual molestation, a high percentage of both groups were found to have experienced violence during their lifetime; 60% of the total sample was found to have experienced childhood violence, 42.2% reported child sexual abuse, and over 60% had experienced severe physical violence by male intimate partners. However, using this same sample from the Worcester Family Research Project, Bassuk, et al., (1997) found that violent victimization was not a risk factor for homelessness but was present to a high degree in both groups. Homeless women who have serious mental illness are at much greater risk for continued violent victimization such as rape and physical battery (Goodman, et al., 1995; Nyamathi, Wenzel, Lesser, Flaskerud, & Leake, 2001; Wenzel, Leake, & Gelberg, 2001).

**Individual Factors: Mental Health and Substance Abuse**

Generally, the homeless have been found to report a high prevalence of alcohol and drug abuse/dependence and mental/emotional illness (Carter, Cuvar, McSweeney, Storey, & Stockman, 2001; Caton, et al., 2000; Clark, et. al, 1997; Kushel, Vittinghoff, & Haas, 2001; Lam & Rosenheck, 1999; O’Toole, Gibbon, Hanusa, & Fine, 1999; Wagner, Menke, & Ciccone, 1994, 1995; Weinreb, et al., 1998). Although the occurrence of mental/emotional illness and substance abuse reported in the literature varies, prevalence of mental illness has been estimated ranging from 20% to 50% of the adult homeless population (Baumohl, 1996; Shern, Tsemberis, Anthony, & Lovell, 2000; U.S. Census Bureau, 1999; Wojusik & White, 1998). Substance abuse often includes a combination
of alcohol and illegal drugs, incorporates both current usage and lifetime problems, and generally ranges from 37% to 75% (Carter, et al., 2001; Caton, et al., 2000; Kushel, et al., 2001; Lam & Rosenheck, 1999; O’Toole, et al., 1999; Weinreb, et al., 1998). These statistics may vary widely due to methodology issues, including sampling differences, inconsistent definitions used to define the variables studied, and geographical location of the study (Buckner, Bassuk, & Zima, 1993).

The number of homeless afflicted by mental illness in the United States has been greatly affected by the changes in the mental health system that began in the 1950s as care provided by mental health facilities was scrutinized and new ideas for more humane treatment were proposed (Grob, 1994). Large-scale deinstitutionalization of patients in state mental hospitals into local communities occurred in the 1950s and 1960s, but it was not until the 1980s when a large increase in mentally ill homeless adults was noted in the population. Most communities were ill equipped to provide the needed services for the mentally ill living independently, even though community mental health centers were built to provide community-based services. Additional contributing situations that increased the homeless population included decreasing incomes and housing options during this era and the fact that many mentally ill persons were not hospitalized as previously and were left to find care in the local communities (National Coalition of the Homeless, 1999a; Walker, 1998).

The prevalence and complexity of mental health and substance abuse problems is evident in examination of the data from the National Survey of Homeless Assistance Providers and Clients, as the majority of this sample population suffered from a combination of mental health conditions and alcohol and drug abuse. Some type of a
mental health condition and alcohol and drug abuse was experienced by 37% to 45% of the sample. Furthermore, the data show that these conditions occurred by themselves for 14.7% for mental health condition, 11.7% for alcohol abuse only, and 6.6% for drug abuse only (Kushel, et. al, 2001).

Depression has been cited as a common problem in the homeless but it is unclear if it serves as a precursor or consequence to this stressful situation (Bassuk, et. al., 1996; Caton, et. al, 2000; Craft-Rosenberg, et. al, 2000; Nyamathi, Flackerud, & Leake, 1997; Nyamathi, Stein, et. al, 2000; Walker, 1998). In a large study conducted in New York City (N=1849) exploring the relationships associated with adverse childhood experience and adulthood depression, 11.2% of the total sample exhibited severe depressive symptoms (Herman, et al., 1994). Differences were noted between genders in the study with women experiencing a higher percentage of depressive symptoms (12.7%) than men (10.2%). Significant relationships were found between out-of-home care, self-rated health status of poor or fair, and the presence of severe depressive symptoms.

Housing status has also been found to affect mental health status. In comparing homeless mothers who were sheltered (N = 64) and housed mothers living in apartments or their own home and receiving public assistance (N = 59) in three Midwestern cities, significant differences were found among the variables of stress, coping, and depressed mood. Significantly higher stress scores, depressed mood scores, and use of avoidant coping methods were found in the homeless mothers as compared to the housed mothers. The most stressful situations reported by the homeless group included residing in a high crime area, physical abuse by a partner, being a crime victim, inability to access social supports, family alcohol problems, and income problems. Race/ethnicity (African
American) was also significantly related to depressed mood. Older women in both groups reported lower usage of avoidant coping. In the homeless group, higher depression scores were related to high stress scores and greater use of avoidance coping. In the housed group, those with lower incomes had higher stress scores, greater use of active-cognitive coping. Total stress scores were not significantly related to depression or coping and ethnic minority groups reported lower stress scores (Banyard & Graham-Bermann, 1998).

Data from the Worcester Family Research Project documented higher lifetime prevalence of specific mental health issues for homeless mothers when compared to the low-income housed mothers and the general female population. Forty-five percent of the homeless mothers had a major depressive disorder as compared to 43% of housed mothers and 21% of the general female population. Lifetime prevalence of post-traumatic stress disorder was reported by 36% of the homeless mothers, 34% of the housed mothers as compared to 13% of the general female population. When compared to their housed counterparts in the study, higher numbers of homeless mothers reported alcohol or drug dependency at some time in their lives when (41% vs. 35%), and 31% had attempted suicide at least once, primarily during adolescence (26% of housed mothers). Additionally, a significantly higher number of homeless mothers had been hospitalized for emotional problems or substance abuse than the housed mothers (Bassuk, et al., 1996).

Non-sheltered homeless women may also be at risk for adverse outcomes as compared to their sheltered counterparts. In a comparison of sheltered and non-sheltered homeless women in Los Angeles, Nyamathi, Leake, and Gelberg (2000) examined
several variables including substance use and mental health status. Major depression, general affective disorders, anxiety disorders, and substance use (frequency, recent, and lifetime usage of various substances including alcohol and illegal drugs) were studied in this sample of 1,051 women. Significant findings in comparing the two groups included poor mental health (48% of sheltered, 93.2% non-sheltered) and substance use for alcohol or non-injection drug use in the past 6 months (56.2% sheltered, 79.6% non-sheltered).

Other researchers have examined the complex relationships among mental status and other variables including differences in age and gender and interpersonal relationships. In a study that described the association between intimate relationships and the health and well-being of sheltered homeless women (N = 558), those in nonconflictive relationships reported significantly greater psychological well-being, self-esteem, and life satisfaction, less hostility, and non-injection drug use than those with conflictive relationships or those without an intimate partner. Those with conflicted relationships were significantly more anxious and depressed than those with nonconflicted relationships (Nyamathi, et al., 1999).

DeMallie and colleagues (1997) studied 900 homeless adults in St. Louis to determine if differences between older (≥ 50 years) and younger subgroups existed. Seventeen percent of the younger women reported alcohol abuse/dependence in comparison to 1% of the older subgroup of women. Drug abuse/dependence was reported by 23.3% of younger women compared to 1% of older women. Men reported significantly higher rates of alcohol, drug use in both age groups than the women; sixty percent of younger men and 80.8% of older men were noted for alcohol use/dependence,
and drug abuse/dependence was 43.5% of younger subgroup of men compared to 15.8% of older men.

Other gender differences were found in a study of 178 homeless adults residing in shelters in Maryland as women were found to be less in need of alcohol and drug rehabilitation than their male counterparts. Significant differences between unaccompanied homeless mothers and those with children were noted in several areas. Unaccompanied women were less likely than to have been hospitalized for mental disorders. Those with children had significantly higher requests for multiple services including childcare, education, finding housing, job finding, and job training (DiBlasio & Belcher, 1995).

Geographical location may have some influence on the reporting or occurrence of mental health issues. Wagner, et al. (1995) assessed the mental health status of rural homeless mothers. In this sample only 7% reported that they had been hospitalized for a psychological problem and 75% perceived their mental health to be fine or ok. However, substance use by this group of homeless mothers was high: 28% reported illegal drug use, 49% reported regular alcohol consumption and 74% smoked cigarettes. In another study of 413 rural homeless women, low incidence of mental illness and substance abuse were noted. Of the total sample, 16.1% reported psychiatric hospitalization during their lifetime, 5.3% demonstrated serious psychiatric symptoms, and 5.3% displayed severe behavioral problems. Substance abuse and alcohol use were also low with 8% having a severe alcohol problem with 51.2% indicating little or no alcohol use, 4.4% a severe drug problem, and 56.7% with no drug use (Cummins, et al., 1998).
Another descriptive rural study found higher rates of depression in a sample of 31 rural sheltered homeless women. Thirty-eight percent of this group was found to have varying rates of depression with one third previously never being diagnosed with depression. Other mental illnesses reported included manic depression, schizophrenia, panic disorder, and obsessive-compulsive disorder. Additionally, the data showed that approximately one third of the women had a history of alcohol abuse, illegal drug use was low (10%), and a high number (70%) currently smoked cigarettes (Craft-Rosenberg, et al., 2000). Others have also reported a high occurrence of tobacco abuse in the homeless (Bassuk, et al., 1996; Carter, et al., 1994; Sach-Ericsson, et al., 1999; Wagner, et al., 1994, 1995; Weinreb et al., 1998).

**Structural Factors: Poverty**

Poverty has been identified as a primary cause of homelessness in the United States and is affected by numerous factors that impact income levels (National Coalition of the Homeless, 1999c; U.S. Conference of Mayors, 2001). In 2000, approximately 31 million people had incomes below the federal poverty level (U.S. Census Bureau, 2001). Currently, poverty rates vary significantly based on age, gender, and ethnicity. Both Blacks and female-headed households experienced their lowest rates of poverty in 2000. The poverty rate for female-headed households was 24.7% as compared to the overall rate of 11.3%; the rate for Blacks was 22.1%, Hispanics 21.2%, White non-Hispanics 7.5, and older adults (over 65 years) 10.2%.

The homeless, especially women, have annual incomes well under the federal poverty level and rely on support from a variety of sources (Cummins, et al., 1998; Weinreb, et al., 1998; Wojtusik & White, 1998). For example, in a comparison of homeless and
housed mothers in the Worcester Family Research Project, significant differences were found in comparison of annual incomes. Forty-six percent of homeless mothers had yearly incomes less than $7000 as compared to 17% of housed mothers. Primary sources of income in this sample were similar to other studies and came from a variety of government benefits (72.3% AFDC, 55% Women, Infants, and Children) and 29.6% from jobs. However, unemployment was extremely high as only 0.9% reported currently working at a paid job (Bassuk, et al., 1996).

Similar high rates of unemployment have been cited in other studies that included both genders. Caton, et al., (2000) studied homeless adults in New York City and found that over 85% of this sample was unemployed. Other urban studies have also described elevated unemployment rates ranging from 70% of homeless adults in Allegheny County, Pennsylvania (O’Toole et. al., 1999) to 87% in a sample of 128 homeless adults in San Francisco (Wojtuski & White, 1998). This study, which included both sheltered and unsheltered homeless, noted that 16% had no income at all and the remainder relied on other sources of income such as public assistance including food stamps, Supplemental Security Income, and General Assistance. Significant differences were found in the comparison of unemployment rates between homeless men and women in a study conducted in 25 Maryland shelters. DiBlasio and Belcher (1995) found that women experienced a much higher rate of unemployment (81%) as compared to men (52%).

Geographical location does not appear to have great influences on the economic status of the homeless. Rural studies have also cited high rates of unemployment and assistance from various government agencies. For example, primary sources of income of a rural sample of homeless women with children in Ohio came from welfare assistance
(48.2%) and earnings from current and recent jobs (32.2%; Cummins, et al., 1998). In another rural study of homeless women (Wagner, et al., 1994; 1995) 75% of the study sample was unemployed and 46% were receiving AFDC. Similar economic poverty was noted in another study of Midwestern rural homeless sheltered women whose monthly income ranged from none to $1200 with 48.4% reporting less than $400 per month. Low levels of employment status were also reported in this sample with only 25% employed on a part time basis (Craft-Rosenberg, et al., 2000).

Data from the National Survey of Homeless Assistance Providers and Clients (N=2,974; U.S. Census Bureau, 1999) reported that the income of homeless clients was at only 51% of the federal poverty level but a higher number had been employed at least during the past month prior to data collection. Although 44% of the homeless clients performed paid work, only 20% worked in a job lasting or expected to last at least three months. Other income was attributed to a variety of sources including assistance from family members or friends (21%) and government benefits. Food stamps were received by 37% of the sample, AFDC by 52%, Medicaid by 30%, SSI by 11%, and General Assistance by 9%. Veteran related disability payments were received by 6%, veteran related pensions by 2%, medical care from the Department of Veterans Affairs was received by 7%, and 8% reported income from panhandling.

Women face many social and economic hardships during their lifetime that contribute to their vulnerability. Economic problems are compounded and exacerbated by gender-related workplace biases that contribute to low income levels, the effects of single parenthood, the lack of adequate and enforceable child support legislation, difficulties in obtaining safe affordable housing, and inadequate federal and state government aid

The decline of employment opportunities and availability of public assistance both contribute to increasing poverty levels in society, which directly affect the rate of homelessness (National Coalition for the Homeless, 1999b). Although income and employment status varies from group to group and may be affected by numerous factors, the great majority of the homeless, especially women, has few sources of adequate income, employment opportunities, and is dependant on various public assistance programs. While some homeless are employed on a full-time or part-time basis, the income that is generated is still too little to afford housing (First, Rife, & Toomey, 1994). The importance of income from various government benefits is evidenced by the amount of support indicated by various programs in these cited studies.

**Structural Factors: Public Policies**

Political influences on homelessness are reflected through policies at all levels of government. At the federal level, the Stewart B. McKinney Act /P.L. 100-77 (1998) serves as the response from the federal government to the issue of homelessness. Enacted in 1987, this legislation was meant to assist homeless families and individuals through a broad base of six programs that support partnerships and collaborative efforts with the individual States, community agencies, and organizations in a cost-effective manner. Programs include services directed at outreach, health care services, mental health, alcohol and drug abuse services, education, job training, child care, emergency food and shelter services, transitional and permanent housing and are composed of six
programs: Emergency Shelter Grants Program, Supportive Housing Demonstration Program, Section 8 Moderate Rehabilitation Assistance for Single-Room Occupancy Dwellings, Shelter Plus Care, Supplemental Assistance to Facilities to Assist the Homeless, and Single Family Property Disposition Initiative (HUD, 2002).

Welfare reform, enacted in 1996 by President Clinton, has brought about many changes in government programs designed to assist the poor and have contributed to increased poverty in women (Kneipp, 2000a; Kneipp, 2000b; Lawton, Leiter, Todd, & Smith, 1999). This new welfare system, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 eliminated the Aid to Families with Dependent Children (AFDC) program and replaced it with a new federal program, Temporary Assistance for Needy Families (TANF), which is administered at the state level through block grants. TANF imposes stringent time limits for income support and changed the enrollment process for Medicaid for those receiving public assistance. Although the goals of TANF support successful employment for recipients, many women are only able to find low-paying jobs without essential benefits. Not enough support is being provided for childcare assistance, appropriate training, and educational opportunities (Kneipp, 2000b; Lawton, et al., 1999). Additionally, many families eligible for the Medicaid program may not be enrolled because of the many changes in the welfare system. Therefore, many are not receiving acute or preventive health care services (Klein, 1999; Kneipp, 2000a). The current welfare system, while devised to promote self-sufficiency, promotes many barriers to impoverished women attempting to make economic gains in the workplace. A great number of homeless women receive public assistance including AFDC benefits, general assistance, and other forms of
government benefits (Bassuk, et al., 1996; Cummins, et al., 1998; Wojtusik & White, 1998). Previous studies have documented AFDC public assistance of homeless women to be between 39% and 72% (Bassuk, et al., 1996; U.S. Census Bureau, 1999; Wagner, et. al, 1994, 1995; Wojtusik & White, 1998). The PRWORA will ultimately place more low-income women at risk for homelessness due to the strict guidelines for length of benefits and the confusion for ensuring enrollment for Medicaid.

Structural Factors: Housing

The current housing crisis for low income Americans has been identified as the primary cause for homelessness and is increasing due to lack of affordable housing and a limited amount of programs for housing assistance (National Coalition for the Homeless, 1999a; U.S. Census Bureau, 1999; U.S. Conference of Mayors, 2001). This concern regarding housing for the impoverished has been prevalent in our history for many years as evidenced by denial of settlement rights to those who were considered the transient poor as early as Colonial times. More recently, the impact of urban renewal of major metropolitan cities was first felt during the 1970s and 1980s and currently continues. Gentrification, the process of transformation of urban low-income housing for economic improvement (new office space, luxury apartments, and condominiums) has had great impact on communities in many geographical locations. This focus on urban redevelopment has contributed to the major loss of low-income affordable housing in many metropolitan areas in the United States and is a main contributor to homelessness (Baumohl, 1996; Glasser & Bridgman, 1999).

The U.S. Conference of Mayors (2001) reported that in 2001 requests for assisted housing by low-income families and individuals increased by 86% from the previous year
and, on the average, a waiting period of 20 months existed for all applicants for public housing assistance. Additionally, 19% of the cities surveyed reported they had ceased to take housing applications for at least one of their programs due to these long waiting lists. Housing assistance was also cited as a significant predicting factor in a study of 266 homeless families in New York City (Shinn, et al., 1998). Subsidized housing was found to be the only predictor of residential stability after families were sheltered. Also critical was the importance of the role of the shelter in providing extensive housing services as well as clients being able to stay at the shelter long enough to advance to the top of the waiting list.

Because of the affordable housing shortage, homeless individuals and families often resort to other means before seeking shelter services. Increased migration has been noted as many homeless move from one community to another or stay with family or friends as long as possible before seeking shelter services. Homeless clients in the National Survey of Homeless Assistance Providers and Clients (46% of single homeless individuals and 29% of homeless families) moved to another area after becoming homeless in order to find assistance from friends, family, work opportunities, or services directed toward their needs (U.S. Census Bureau, 1999). This trend for increased migration is also present in rural communities as described by Craft-Rosenberg et al. (2000) in a study that noted that all of the 31 homeless women with children in the study reported having moved from farms and small communities to seek shelter and other services for the homeless in a larger community.

This phenomenon of increased migration was also noted in the data from the Worcester Family Research Project where adult risk and protective factors were explored
in a sample of 220 homeless sheltered mothers and 216 housed low-income mothers receiving welfare (Bassuk, et al., 1997). Significant differences were noted between the two groups in relationship to housing history. Homeless mothers had moved 3.8 times in the prior two years as compared to 1.8 of the housed mothers. Adulthood risk factors were found to be minority status, recent move to the area, recent eviction, conflict in one’s social network, frequent alcohol or heroin use, recent hospitalization for a mental health problem, and the perception of greater resources on one’s network. Protective factors (mostly found in the housed mothers) were being a primary tenant, having received public assistance (AFDC or housing subsidy) in the prior year, high school graduate, and having a large social network of nonprofessionals.

Doubled-up housing, the practice of moving in temporarily with family or friends after a loss of housing with nowhere else to go, is also a common precursor to homelessness (Bassuk, Buckner et al., 1997; Bolland, McCallum, 2002; Shinn et. al, 1998, Wagner, et. al, 1994, 1995). In a study of risk factors for homelessness among indigent urban adults with no history of psychotic illness (N=400), homeless women were significantly more likely than men to have lived with family members or friends prior to homelessness (Caton, et. al, 2000). Similarly, high percentages were noted in another urban study of homeless families finding that 59% had been doubled up prior to seeking shelter services and 46% had never had an apartment of their own for as long as a year (Shinn, et. al, 1998). The Worcester Family Research Project also documented significantly high percentages of doubled-up housing for the homeless mothers as compared to the housed mothers. Eighty-eight percent of the homeless mothers reported a housing history that included being doubled-up as compared to 49.5% of their housed
counterparts. Bolland and McCallum (2002) investigated patterns of doubled-up homelessness using a national random household telephone survey (N=1021). The survey revealed that in 1997, approximately 18 million households in the United States provided temporary housing for adults (73.2%), families, (21.7%) and children (21.7%). Lower income households (less than $30,000/year) were more likely to have provided housing than higher income households. The length of stay was varied with 35% staying 1 month to 6 months and 22.4% from 1 week to 1 month. Forty-four percent were related to those they were staying with and 29.4% were with close friends. Rural studies have also documented the frequency of this phenomenon prior to homelessness. In a study of 76 rural homeless mothers, 52% reported that they were doubled-up with another family at the time of data collection (Wagner, et. al, 1994, 1995).

Some homeless stay in unsheltered environments not meant for habitation such as sleeping on the street, in parks, cars, etc. (U.S. Census Bureau, 1999). An urban study conducted in San Francisco (N=138) included both men and women who were both sheltered and unsheltered (Wojusik & White, 1998). Data revealed the diversity of habitation of the study sample but was not separated by gender. Of the total group, 30% lived in their own or abandoned vehicles, 22% in parks or doorways on city streets, 12% doubled-up with friends or family, 12% in shelters, 12% in motels, and 5% in abandoned buildings. O’Toole et al. (1999) also reported a variety of living arrangements of their study population of urban homeless and housed poor adults in an urban population. Of the study sample, 30% were residing in emergency shelters, 20% were unsheltered, 19.1% living in temporary housing, 14.2% in subsidized housing, 13% doubled up with friends or family, and 4% combination sheltered. Higher numbers of unsheltered adults
were noted in the data from the National Survey of Homeless Assistance Providers and Clients. While 66% of the sample reported using an emergency shelter, transitional housing program, or program offering vouchers for emergency accommodation, 31% slept on the streets of in other places not meant for habitation (U.S. Census Bureau, 1999).

Living on the street can increase the exposure and risk of physical and psychological stressors (Nyamathi, Leake, & Gelberg, 2000). In a comparison of sheltered and unsheltered homeless women in Los Angeles (N=1,051), those without shelter were found to be at greater risk for both poor physical and mental health outcomes. Unsheltered homeless women were found to be younger, more likely to be white, and homeless for a year or more than their sheltered counterparts. They were more likely to report some type of pain, less likely to report utilization of any health service, have a three times greater odds of fair or poor physical health, and over 12 times greater odds of poor mental health. Similar findings were cited in a large study of homeless women (N=1,302) also conducted in Los Angeles (Nyamathi, Leake, Keenan, et al., 2000). Data showed that 53.4% of the sample resided in homeless or sober living shelters while 36.2% lived on the streets. Those living on the street were found to have significantly less social support as compared to the sheltered women and poorer health outcomes.

Housing concerns and issues are common problems for low-income individuals and families due to the many societal influences including ongoing economic, political, and social changes. Homelessness can be viewed just as one part of the current crisis of housing instability and will continue to grow unless solutions are found to lessen and
ultimately eliminate existing barriers so that affordability and availability of safe low-income housing for a diverse group of people is increased.

*Structural Factors: Services*

Comprehensive programs and services directed for the homeless are critical in addressing their complex and multiple needs. Limitations exist in the current delivery system of homeless services due to a lack of coordinated knowledge of programs and documentation of effective interventions (McChesney, 1995; Weinreb & Buckner, 1993; U.S. Census Bureau, 1999). Fragmentation of services consequently occurs because of this wide variety of services and programs provided by diverse groups (Douglass, et al., 1999; Rogers, 1997; Strehlow & Amos-Jones, 1999; Wojusik & White, 1998).

The primary intervention for the homeless has been the provision of some type of housing on an emergency shelter basis often leading to transitional housing programs (National Coalition for the Homeless, 1999b; U.S. Conference of Mayors, 2001; U.S. Census Bureau, 1999). Homeless assistance programs are composed of diverse programs designed to meet the unique needs of this heterogeneous population. The National Survey of Homeless Assistance Providers and Clients represented the first attempt to nationally describe and quantify diverse services provided for the homeless (U.S. Census Bureau, 1999). Data from this survey documented approximately 40,000 homeless assistance programs in the United States located in 21,000 service locations. Assistance programs come from both private and public sectors and most commonly include emergency shelters, transitional housing programs, soup kitchens, food pantries, outreach programs, and voucher distribution programs. Others programs include services for physical and mental health, alcohol and/or drugs, HIV/AIDS, outreach, and drop-in
centers. The majority (49%) of the homeless assistance programs are located in cities, 19% in suburban areas, and 32% in rural areas and operated by many different types of agencies. Nonprofit agencies are responsible for operation of 85% of homeless assistance programs (34% by religious organizations, 51% by secular groups) and 14% are operated by government agencies. A very small percentage (1%) is operated by for-profit organizations. Difficulties in the quantification of service requests/contacts with many of the assistance programs were noted in the study due to the fact these programs offer more than one type of service.

The number and variety of programs as well as requests for services has increased greatly over the past decade. The U.S. Conference of Mayors (2001) reported that the request for emergency shelter assistance in 27 major cities increased by an average of 13% from the previous year with requests for shelter by homeless families by 22%, but lack of resources caused 52% of requests by homeless families to be unmet. Emergency food assistance requests also had raised from the previous year by an average of 23% and 14% of these requests were unmet. Because of this increased food request, 85% of the surveyed cities’ emergency food assistance facilities had to impose limitations on the amount of food distributed. This trend of increasing requests for services, as well as a lack of resources, is expected to continue to rise in light of the recent terrorist attacks on September 11, which has exacerbated the economic slowdown resulting in continued job loss.

Social support is viewed as an essential component of services provided to the homeless and can serve as a system resource factor or an individual resource (McChesney, 1995). Homeless women have few resources with little or no substantive
support person or system (Bassuk, et al, 1996; Nyamathi, Bennett, Leake, & Chen, 1995; Nyamathi, Leake, Keenan, et. al, 2000; Nyamathi, Stein, et. al, 2000; Stovall & Flaherty, 1994). The importance of social and community resources in the sheltered homeless population was explored by Bechtel (1997) in a study of 77 sheltered homeless adults (44% female) using a triangulated methodology. The results revealed that the study sample often ignored beneficial social activities in order to meet essential housing and health care needs. The most serious concerns identified by the participants were the lack of social opportunities and occurrence of problems related to staying connected to existing community and family systems. Additional cited concerns included the absence of specific social activities that cultivated networking, team building, community interaction, and a lack of environmental conditions that provided a home-like environment that provided aspects such as privacy.

The source and quality of support are also important factors to consider in the homeless. Stovall and Flaherty (1994) examined the differences between sheltered homeless men and women and their perceptions of social support from social agencies, families, and friends. Homeless women were significantly more likely to perceive less overall levels of social support and support from social agencies than men in the sample. Although not significant, women also identified less support from families and friends than men in this study. Insignificant family support was also noted in a study of homeless clients (N=100) who accessed an urban nurse-managed free clinic in Georgia. Social support was found to come primarily from each other, shelter staff, and the clinic nurses and most denied having any family contact (Carter, et al., 1994). Conversely, in a study of 31 rural homeless women and children, personal resources consisting of family
members or friends were identified as the primary source of support for 73% of the study sample in comparison to a professional resource such as shelter staff, social service counselors, and clergy (Craft-Rosenberg, et. al, 2000).

In a cross-sectional survey of 1,308 homeless women, Nyamathi, Leake, Keenan, et al. (2000) explored the impact of various levels of social support from substance users and nonusers. Fifty-one percent of the sample reported no substantive support at all and 31% cited support from substance nonusers only. Those women who had support from only substance users were equivalent to not having any support and were found to have increased risky health behaviors, less utilization of health services, and poor mental health outcomes. Those reporting no support were significantly more likely to be African-American, have less education, and been sexually assaulted as an adult.

The significance of support networks in the lives of children, especially those who experience adverse experience, indicates that early support systems can have critical effects during adulthood. In a qualitative study of families of origin of homeless (n = 12) and never-homeless women (N= 16), Anderson and Imle (2001) found that support networks of children, especially those who had encountered adverse experiences were significant. These early support systems were found to buffer the effects of negative life experiences of transience and loss and have protective effects on this negative outcome of adulthood homelessness.

How well one utilizes services can be an important indicator of health as many barriers impede access to health care and other services for the homeless. The complexity of the current health care system was explored in a grounded theory qualitative study of nineteen sheltered homeless women, six agency staff, and two
community health nurses (Hatton, 2001). Findings revealed that access to health services was successfully accomplished only through negotiation of multiple levels in the system, which contained numerous obstacles and barriers. The first tier of access was represented by shelter services, which met the participant’s health needs by providing basic services such as food, shelter, and clothing and by a framework for a social network structure consisting of staff and other residents who helped negotiate the system as brokers. The second tier was represented by the managed health care system and was characterized by paperwork, appointments, different locations for services, and waiting times. Success within the system was accomplished by effective utilization of the first tier of social networks in order to gain access into the health care system. Advocates for the homeless women were not found in case managers within the system, but through the staff at the shelters and other community agencies who helped provide entrance and guidance in the complex health care system.

Identification of various needs, access and barriers to care, and health status are critical variables related to positive or negative health outcomes in homeless adults. Service needs of the homeless were explored in a survey of 178 homeless (45% female) to assess if women needed special services (DiBlasio & Belcher, 1995). Housing, transportation, and job finding were the most frequently reported needs for both males and females, but overall women showed a greater need for many services including childcare services and social service benefits. However, significant differences were noted between women with children and women not accompanied by children. In comparing these two groups, statistically significant requests for services by the women with children group were noted in the areas of education, childcare, family counseling,
and effective parenting skills. The only service requested more frequently by men was alcohol and drug rehabilitation. Medical services was identified as a needed service by 36% of the females and 32% of the males, but was defined in the study only as needing assistance in obtaining Medicaid and other assistance, not receipt of health care for a specific condition.

In another study using structured interviews, data were collected on the variables of health status, perceived needs, and barriers to care in a sample of 128 homeless men and women in San Francisco (Wojtusik & White, 1998). Results indicated women reported more health problems than men (average of 5.4 versus 4.8). Dental and vision concerns were the most frequently reported but permanent housing and employment were identified as the most important unmet needs. A high percentage (67%) reported a serious chronic health problem and 43% identified health care needs as unmet. Barriers to care were identified by 91% of the sample with cost the most frequently cited. Other barriers to health care identified included lengthy waiting times for appointments and care, lack of transportation, lack of information, no childcare, disrespectful staff, and fear of arrest and deportation. A lack of primary health care was identified by 54.7% of the sample and the majority sought care at the county’ hospital’s emergency room.

Other similar barriers exist that interfere with the utilization of services. Disrespectful treatment by health care staff and providers, lack of insurance/cost, transportation, and problems with waiting times or appointment and/or clinical hours availability have been identified as major barriers to health care access (Johnson, 2001; Sach-Ericsson, et al., 1999; Weinreb, et al., 1998; Wojtusik & White, 1998; Zhan, Clutterbuck, Keshian, & Lombardi, 1998). Through the use of focus groups including
both urban and rural homeless women, Johnson (2001) explored perceived barriers and health care needs in an area served by nurse-managed clinics and other primary level sites (physician offices, clinics, hospital emergency rooms). Financial constraints (mainly lack of insurance), provider gender, long waiting times, inconvenient clinic hours, and disrespectful treatment by office staff were identified as important issues by the participants who sought care in physician offices, emergency rooms, and other clinics. Another barrier identified was a lack of consumer knowledge of the role and functions of a nurse-managed clinic. Those that sought care in the nurse-managed clinic reported less barriers and greater satisfaction with care.

The Worcester Family Research Project data also examined barriers to medical care and service utilization patterns in their sample of homeless women and housed mothers (Weinreb, et al., 1998). High percentages of both groups (66% homeless and 50% housed) reported problems getting medical care during the past year. Significant barriers to care for the homeless group were noted to be a lack of childcare, too busy with other things, and depressed/not up to going. Other barriers included lack of transportation, waiting time for the appointment, nervous or afraid, unsure where to go, inconvenient clinic hours, and problems getting appointments. Additionally, homeless women had greater odds of being hospitalized in the past year than their housed counterparts and were more likely to receive care at a community clinic versus a physician’s office. Similarly, lack of transportation and clinic characteristics, (location, clinic hours) were identified as major barriers to health care in a sample of 100 homeless sheltered adults (Schaffer, et al., 2000). Other identified barriers included financial
constraints, lack of understanding clinic staff, and no childcare. The majority of those who sought assistance for medical conditions cited treatment in the emergency room.

Hatton (1997) explored the management of health problems among homeless women with children in the shelter setting through a grounded theory study (N=30). Data analyses revealed four dominant themes related to the management of their health problems: shame, fear, lack of information, and lack of eligibility. Shame was mainly associated with stigma of psychiatric problems and drug and alcohol abuse. Fear was perpetuated by the stigma and by ongoing concerns about their condition. Participants also lacked vital basic information about how to manage their health and the health of their children. Problems related to eligibility of public assistance programs were prevalent and interfered with other important parts of their lives (medical care, custody, financial concerns). These major problems were complicated by the current fragmented health care system which when compounded by the shame, fear, lack of information and eligibility caused the women to give up and not reach out for any support.

The presence of co-morbid conditions can complicate utilization of care and accessibility. Kushel, et. al, (2001) examined data from the National Survey of Homeless Assistance Providers and Clients to determine use of health care services and perceived access to care. Data revealed significant findings in those who lacked insurance (31%) and had medical co-morbid conditions (44.7% with 2 co-morbid illnesses such as diabetes, anemia, hypertension, cancer, HIV, arthritis) were more likely to report an inability to receive care. O’Toole et al. (1999) also reported more than one medical co-morbidity in 30.2% of a sample of 399 urban homeless adults specifically with psychiatric co-morbidities present in 37%. Use of the emergency room for usual care
was associated with having a lack of health insurance, being homeless for greater than 2
years, being single, a non-veteran, and receiving no medical care within the past 6
months. Few barriers were cited by this sample with accessibility of receiving care at the
emergency room, hospital based clinic, shelter-based clinic, or community clinic.
Overall, satisfaction with the care provided ranged from 72.8% to 77.7% and respectful
and helpful staff was reported by the majority of the respondents (80.3% to 93.3%).
Significant factors cited by those who did not seek treatment for a medical condition or
problem included the barriers of lack of transportation and a lack of identification.

Comprehensive and coordinated services are needed to effectively meet the
unique needs of this at-risk group. Programs must include not only housing, but a wide
range of services related to adverse lifestyle practices, social support systems,
accessibility to physical and mental health care, and other diverse individual needs such
as life skills counseling, parenting skills, job training and education, transportation, and
childcare.

Health, Health Promotion, and Homelessness

The homeless are a vulnerable population who are at great risk for negative health
outcomes related to their vulnerability (Strehlow & Amos-Jones, 1999). Their level of
vulnerability is influenced by both personal and environmental components that result in
physiological and psychological effects (Rogers, 1997). The homeless have been found
to have significantly higher mortality rates when compared to the general population.
Barrow, Herman, Cordova, and Streuning (1999) compared the mortality rates of
sheltered homeless men and women (N=1,260) in New York City to the general U.S. and
New York City populations. Death rates for the homeless were found to be four times
those of the general U.S. population and two to three times higher than the general population of New York City. Predictors of mortality included the presence of serious medical problems such as high blood pressure, heart problems, cancer, pneumonia, and tuberculosis (men and women), as well as history of incarceration, injected drug use, and extended homelessness (men), and injected drug use (women).

The homeless experience many chronic and acute physical health problems. High prevalence rates of asthma, anemia, and ulcer disease were found in both homeless and low-income mothers in the Worcester Family Research Study and rates were four to eight times higher when compared to a general population sample of women (Weinreb, et al., 1998). Other common cited health problems of the homeless include upper respiratory infections, skin diseases, trauma, hypertension, dental conditions, diabetes, heart disease, obstetric and gynecologic conditions, musculoskeletal disorders, and gastrointestinal disorders (Bassuk, et al., 1996; Carter, et al., 1994; Craft-Rosenberg, et al., 2000; Douglass, et al., 1999; Nyamathi, Stein, et. al, 2000; Sachs-Ericsson, et al., 1999; Weinreb, et al., 1998; Wojtusik, & White, 1998).

Homeless women are more likely to report poor health status. In an urban study of homeless adults (21% women), women were significantly more likely to report their health status as fair or poor than the men in the study, have a higher number of reported health problems, and nearly one-third were uncertain about their current pregnancy status (Wojtusik & White, 1998). Other researchers have also reported similar findings. Rosengard, and colleagues (2001) reported that 48% of their sample of 105 homeless women reported their health as poor or fair. In homeless women who had poor social support, 41.3% with no support person reported poor physical health and 45.6% of those
who had support from substance users only reported poor health (Nyamathi, Leake, Keenan, et al., 2000). Segal, Gomory and Silverman (1998) also cited self-reported health status of fair or poor health in 42.9% of a sample of 310 homeless and marginally housed adults who were users of community mental health services in San Francisco. Data from the Worcester Family Research Project showed that 25% of both the homeless and housed women reported their health to be fair or poor (Weinreb et al., 1998).

Decreased health status also has been found negatively affect mental health in the homeless. In a large sample of homeless adults (N=1,849), self-reported health status of poor or fair was significantly associated with depression (Herman, et al., 1994). Unsheltered homeless also have been noted to be at increased risk for poor health status. Significant differences were noted between sheltered and unsheltered homeless women in regards to self-reported health status. Those living on the street were three times more likely to report fair or poor physical health, to experience pain, and less likely to report utilization of any health service than their sheltered counterparts (Nyamathi, Leake, & Gelberg, 2000).

Rural homeless report similar health issues. Asthma, high blood pressure, and diabetes were the three primary chronic problems reported by a rural sample of homeless mothers and acute problems were cited as bronchitis, pneumonia, colds, ulcers, and fractures (Craft-Rosenberg, et al., 2000). Other health related issues included reports of high need for vision correction, high incidence of headaches, hearing loss, and injury. Conversely, 83% of a sample of rural homeless mothers perceived themselves as having no physical health problems (Wagner, et al., 1995). Health problems most frequently cited were gynecological disorders, headaches, allergies, bronchitis, anemia, and kidney
disorders. Similarly, First et al. (1994) reported that only 8.1% of their study sample in rural Ohio (N=919) rated their health as poor, however 25.5% stated that they had major health problems (e.g. heart and circulatory problems, respiratory conditions, problem pregnancy) for which they sought medical treatment.

The value placed on health has been reported as an important influence on the health of homeless women (Gelberg, Andersen & Leake, 2000; McCormack & Macintosh, 2001; Rosengard, et al, 2001). Data from a study of 105 sheltered homeless women identified health and health-related concerns as valued priorities and equally ranked self-respect (feeling good about yourself) with the importance of health (physical and mental well-being). Subjects who ranked health-related concerns as an important priority were more likely to practice basic health practices and preventive/protective behaviors (Rosengard, et. al, 2001).

Homeless individuals are willing to obtain care if they believe it is important. The majority of a sample of urban homeless adults prioritized health care as an important need (94.5%) but 55.4% identified it as an unmet need (Wojtusik & White, 1998). Gelberg et al. (2000) studied 363 urban homeless adults to assess medical care use and health outcomes. Although data revealed high rates of functional vision impairment, skin/leg/foot programs, positive TB skin tests, and elevated blood pressure, researchers were surprised to find that subjects were more likely to seek treatment for conditions that had more of a long-term effect (high blood pressure and TB skin test positivity) than those that presented immediate symptoms. Results indicate that the homeless have understanding and concern for the potential impact of long-term chronic conditions and lends support to successful case identification and physical health referrals.
Preventive health care has been underutilized in the homeless and places this already vulnerable population at risk for poor health outcomes. Homeless women who were unsheltered were found to have significantly lower utilization of preventative services of seeing a dentist, Pap test, and TB test in the past year when compared to their sheltered counterparts. Segal and colleagues (1998) also reported that even though the majority of their sample of 310 homeless and marginally housed urban adults reported accessibility to health care, care provided was at an emergency room and preventative or regular care was not obtained. Homeless women (N=1,308) whose primary support system consisted of substance users only or no support had significantly lower participation in preventive health practices such as dental care, Pap test, HIV test, TB test (Nyamathi, Leake, Keenan, et al., 2000). However, some studies have documented higher utilization rates for preventive services for homeless women. Data from the Worcester Family Research Project documented that the majority of both homeless and housed women had received preventive care recommended for their age group; however, a significant percent of both groups had never been screened for HIV or tuberculosis (Weinreb, et al., 1998). Positive utilization of preventive practices was also noted in a sample of 31 rural homeless women. Data showed that the majority had received Pap tests, mammograms, breast exams by a health professional, TB tests, and performed routine self-breast examinations (Craft-Rosenberg, et al., 2000). Similarly, adequate preventive health behaviors were documented in a sample of 105 homeless women. At least 50% of the subjects had attended four health care visits in the past year, were up-to-date with breast exams, Pap tests, eye examinations (if needed), dental exams, and routinely performed daily care
activities such as showering/bathing, brushing their teeth, changing their clothes, and eating at least two meals a day (Rosengard, et al., 2001).

Great variation exists within the published literature in regard to conceptual definitions of health-promoting practices in the homeless population. Many who cite health-promotive practices define these as participation in preventative measures such as Pap tests, HIV tests, and tuberculosis screening (Craft-Rosenberg, et al., 2000; Nyamathi, et al., 1999). As defined previously by Pender et al. (2002), health-promotion is a positive dynamic process whose behaviors are intended to expand the positive potential for health by increasing the well-being of the individual and actualize their human potential through participation in a lifestyle that supports a holistic perspective of health.

Many descriptive studies have documented socio-demographic characteristics of the homeless along with precursors, consequences, physical and mental health problems, morbidity and mortality; few have examined health-promoting behaviors and lifestyles as defined in this study (Pender, et. al, 2002; Reutter, et. al, 1998). A model of health was described by McCormack and MacIntosh (2001) from data from a qualitative grounded theory study of 11 sheltered homeless adults. Homeless were noted to be active participants in the positive promotion of their health through three pathways to a more healthy state. Important mediating factors of lifestyle behaviors and sector services directly influence this journey to health were described. Lifestyle behaviors served as a critical component in the first pathway as they represented the desire and ability for taking personal responsibility for self-care and improved health. The second pathway was influenced by sector services defined as services that assisted with a broad range of services including housing, health, employment, religion, transportation education. The
third pathway reflected the integration of both lifestyle behaviors and sector services in the quest to improve health status. A theoretical model was proposed by Flynn (1997) to explain the influences of learned helplessness, self-esteem, and depression on the practice of positive health practices in a sample of 122 sheltered homeless women. The model was supported by the study findings indicating the psychological variables of learned helplessness and diminished self-esteem have negative influences on positive health practices but no significant relationships were found with depression and health practices.

The HPM has been used and supported as a theoretical framework for research studies in diverse populations including lower income African American women (Brady & Nies, 1999), pregnant and nonpregnant women (Tellen, 1993), black and white college women (Felton, Parsons, Misener, & Oldaker, 1997), mothers from the Midwest (Preski & Walker, 1997), blue-collar workers (Lusk, Kerr & Ronis, 1995), college students (Martinelli, 1999), disabled adults (Stuifbergen & Becker, 1994), older adults (Boland, 2000), employees of a health department (Blacconiere & Oleckno, 1999), and homeless women (Alley, et. al, 1998). Although only one other published study (Alley, et al, 1998) has reported use of the HPLP II in a homeless population, the extensive sampling of women in prior studies lends credibility to the use of this tool.

Only a few researchers have studied the health-promoting behaviors of those who have economic and housing instability. Focus groups conducted with 101 urban sheltered homeless residents identified perceptions of health, health care needs, and health care delivery (Schaffer, et al., 2000). Their meaning of health revealed a dominant theme of a holistic definition including body, mind, and sprit. Prevention and healthy living were identified as critical ways to maintain health with exercise, nutrition, and
spirituality as a source of strength noted as key methods. The hospital or emergency room was identified as the primary source of health care and common barriers identified as economic constraints, transportation, and clinic characteristics such as location or hours.

Also supporting a holistic perspective of health, impoverished older women who accessed senior services in an inner city area described their personal experiences with health promotion as a form of nurturance of the physical self, intellectual self, social self, and emotional-spiritual self. These women identified the restrictions imposed on health promotion by limited income including social isolation, but stressed the importance of personal choice in relationship to the practice health promoting behaviors (Morris, Kerr, Wood, & Haughey, 2000). Brady and Nies (1999) compared health-promoting lifestyles and exercise in older African American women (N=58) above and below the poverty level. Using the Health Promoting Lifestyle Profile (HPLP), results revealed that women who were living in poverty engaged in fewer health-promoting behaviors that those living above the poverty level particularly in the area of exercise.

The only published study of health-promoting lifestyles using the conceptual definition as supported by this dissertation study was conducted by Alley, et al. (1998) and included 59 low-income and homeless women who sought care at a nurse-managed clinic. Using the Health Promoting Lifestyle Profile II (HPLP II), researchers noted a low participation in all areas health-promoting behaviors (exercise, nutrition, health-responsibility, interpersonal relations, stress management, and spiritual growth). However, the researchers noted that performance of any healthy behaviors (measured by the HPLP II) indicated that that homeless women have the capability to practice health-
promoting measures and these behaviors should be viewed as strengths and efforts made to support these behaviors during times of crisis such as homelessness.

Women experiencing crisis situations such as homelessness are faced with multiple challenges in many aspects of their lives but posses many positive qualities that can be built upon to help enhance their personal strengths. The current body of literature describes numerous studies that describe the diverse characteristics of homeless women and related variables from a negative and problem perspective. Additionally, homeless women are often characterized by their deficits and weaknesses and not by their positive characteristics. Only a few researchers have explored the concept of strength in homeless women.

Montgomery (1994) explored the experiences of seven women who had survived homelessness. Their current state of homelessness was identified as a quest for a better life and was represented by much hope and courage as these women were escaping other situations that they identified as being worse than homelessness (e.g. domestic abuse, an environment of drugs). Three distinct categories of strengths that enabled the women to move toward a better life, health and self-actualization were identified as personal strengths (e.g., pride, positive outlook, determination), interpersonal strengths (e.g., opportunities to contribute, unity and bonding), and transpersonal strengths (e.g., religious beliefs, finding purpose). These strengths helped them conquer the many negative situations that they faced in their state of homelessness.

Herth (1996) also identified the concept of hope as an important factor within homeless families. In this cross-sectional (N = 108) and longitudinal study of 10 homeless families (89% female-headed) conducted in rural and urban shelters in a
Midwestern state, hope was defined as an internal personal power that helps to move a person beyond their present situation and to envision a better future. Low levels of hope were identified as the homeless families first entered the shelters, but significantly increased as they were leaving the shelters to become independent and leveled off six months afterwards.

Homeless women, like other domiciled women, have many strengths, skills, goals, and aspirations; however, these are often impeded by a lack of resources and opportunities. A qualitative study of 64 homeless mothers residing in shelters in three small midwestern cities explored their strengths and goals (Banyard & Graham-Bermann, 1995). In addition to common themes of determination, parental competence, connections to others, and self-sufficiency, short-term and long-term goals were identified that centered on the provision of a better life for themselves and their families.

A similar ethnographic qualitative study of 15 homeless female-headed families residing in three shelters in Detroit revealed three major themes centered on personal strengths: finding housing, caring for children, and remaining connected to social contacts to keep their families together. These homeless women demonstrated high motivation to actively seek creative solutions to their problems, effective coping skills, and the desire to be a good parent and provide a better life for their families (Thrasher & Mowbray, 1995).

C. Summary

An increase in the number of the homeless, especially women alone and those accompanied by their children, reflects an alarming trend in our society. Although both structural and individual level influences are significant, the incidence of homelessness...
cannot be attributed to an identified single cause, but to the complex interaction among problems that occur at these two levels and leads one into a vulnerable state (Morrell-Bellai, et al., 2000; Phelan & Link, 1999; Strehlow & Amos-Jones, 1999; Styron, et al., 2000).

The current political, economic, and social environments have great influences on the state of homelessness in the United States. Growing levels of poverty, housing issues, decreasing levels of public support and available services, both private and public, only serve to exacerbate existing problems for the vulnerable in our society. For those who are already affected by economic instability and other structural factors, individual problems such as emotional/mental health disorders, poor health, interpersonal violence, and substance abuse only perpetuate difficult circumstances. It is unclear as to which of these issues serve as precursors and which are consequences of homelessness, as multiple complex relationships exist among structural and individual level influences.

The health status of the homeless population is an important issue for multidisciplinary providers, but must be viewed from a holistic perspective. The homeless, who represent a very vulnerable population, face many challenges and adversities, but also possess many strengths and capabilities. Research has documented that the homeless are capable of participating in positive practices and place great value on their health. Interventional strategies that target both preventative measures as well as those directed at health promoting behaviors and lifestyles are needed to support improved health outcomes for the homeless, but also to contribute to an increased level of health for society.
Women who are socially or economically deprived can make significant contributions to enhance their own and their family’s quality of life through personal social action and health promotion efforts (Kar, Pascual, & Chickering, 1999). The practice of health promoting behaviors in this vulnerable group is an important issue of their level of wellness and for the overall health of society. Examination of strengths and deficits related to health promotion will result in an increased understanding of complex interrelationships that exist among diverse factors in the lives of homeless women. This will help to strengthen current services and provide guidance for the development of new programs and effective interventions.
III. METHODS

This chapter presents the methodology used to effectively answer the three research questions of this study. Discussion includes design, setting, power analysis, sample, protection of human subjects, research instruments, and procedures used for data collection and analysis.

A. Design

A descriptive, correlational, and non-experimental design was used to describe socio-demographic characteristics of homeless women, their practice of health-promoting behaviors, and relationships that existed between selected variables. This approach is appropriate to the purpose and design of the study since little is known about the health-promoting behaviors of homeless women and few studies have been conducted on this topic.

B. Setting

The setting was an urban area in Northeast Indiana. Nine shelters providing housing assistance to homeless women were identified through a Community Resource Manual published by the United Way. Telephone interviews were completed with the administrative officer of each of the nine agencies obtaining information about the organizational structure, target population, referral process, mission, goals, services, and residency requirements. All nine shelters were categorized as not-for-profit organizations and received funding from private contributions from individuals, foundations, other organizations/businesses, and donations (monetary and in-kind services). Seven of the shelters also received funding from governmental agencies through various competitive grants. Services offered varied slightly among the agencies but mainly included case
management, educational/job training, childcare, and programs directed at daily living skills, personal growth, goal setting, and parenting skills. All of the shelters required residents to fulfill assigned personal responsibility tasks that supported the living environment, such as some type of household chore (e.g. cleaning, meal preparation). None of the shelters offered direct health care services and all referred residents to three local indigent health care clinics for any physical health care needs.

Data were collected at each of the nine shelters originally identified (N=175). After careful comparison of these nine shelters, five were selected for inclusion for data analysis (N=143) and four were not selected (N=32). The four shelters not selected also had similar organizational structures, but admitted distinct subgroups; two only admitted recovering substance abusers, one accepted only women who were mentally ill, and the other focused on continued services for women who had been in the other homeless shelters. All of these with the exception of the shelter for mentally ill were for single women and women with children. In addition, these four shelters focused on provision of long-term transitional housing services, did not provide emergency shelter services, and required a formal referral process from outside sources (e.g. other agencies, shelters, court system).

The five shelters selected were comparable in administrative organization, goals, services, referral process, and designated target populations. Two of the selected agencies were faith-based, three only accepted single women and women with children present, and two accepted nuclear families and single fathers with children. The referral process to these shelters was the same; women were able to self-refer or were directed
through a local telephone help-line that directed clients to a shelter based on family composition and availability of space.

Shelter 1 was established 14 years ago to serve the needs of homeless families (single parents, nuclear families, and single women) in the specified geographical location. Up to 11 families can be housed at one time in the temporary housing shelter and approximately 30 families are served yearly. A broad range of services are offered to residents including educational and employment services, personal growth and parenting skills. This organization also provides a unique transitional housing program that purchases and refurbishes neighborhood homes.

Shelter 2 is a faith-based shelter that is part of a national network providing emergency shelter, meals, and services for homeless families in this geographical region. In operation for the past three years, single women, women with children, and nuclear families are accepted into this shelter and stay an average of 30 days. This shelter partners with a network of 15 local multi-denominational churches to provide temporary housing for up to 14 people at a time. Each week a different host church provides overnight accommodations and two meals for residents. The shelter consists of a day center where residents receive case management services (employment and housing placement) and can take care of personal hygiene needs.

For over fifteen years, Shelter 3 has provided emergency shelter for up to 45 days to single women and women with children who have experienced relationship/conflict situations. A broad range of services are offered to residents and include assistance for employment issues and personal counseling for individual issues. This shelter refers
clients to other shelters for continued housing needs that exist past the restricted time frame. Shelter 3 has a capacity for 50 women and children.

Shelter 4 has provided emergency shelter for homeless women and children for the past 8 years. Up to 36 women and children can be accommodated at one time. In addition to emergency shelter, services also include self-sufficiency programs ranging from 45 days to 1 year. Educational and employment needs are evaluated and referrals made as needed. Personal growth, including effective parenting skills, are individually addressed as needed.

Shelter 5 is faith-based and accepts single women and women accompanied by children. A men’s division is also available at another location and administered by the same organization. Established seven years ago, the women’s division has a capacity of 42 women and children and provides three levels of programs (emergency shelter, a focus on personal growth, and independent living) lasting for up to six months. The average length of stay for all programs combined is four months. Services provided to residents include educational assistance, goal setting, personal finances, parenting skills, and personal growth skills.

C. Power Analysis

A power analysis was done based on identified study variables and published literature on the HPLP II questionnaire used in a similar study population (Alley, et al., 1998). A sample size of at least 110 participants was estimated. This sample size provided a power of .80 needed for estimating correlations in the .40 range (medium effect size).
D. Sample

The final sample consisted of homeless women (N=143) who were residents of the five shelters. Data from subjects residing in the other four shelters (N=32) were not included for data analysis in this study. Inclusion criteria established prior to data collection included homeless women who 1) were registered residents of the shelters, 2) could read and understand the English language, and 3) had been a resident of the shelter for 1 to 3 weeks at the time of data collection. Subjects were excluded if they previously completed the research questionnaires while at another shelter (N=6) and/or were unable to read and understand the English language (N=0). All of those meeting inclusion criteria were invited to participate. A restriction imposed by each agency was that all residents who could read and speak English, regardless of their length of residency, be allowed to complete questionnaires. Exclusion from any type of services/activity was incongruent with the mission and goals of the shelters. This criterion of restricted length of stay (1 to 3 weeks) was originally proposed due to the possibility of bias from services provided on the HPLP II. This length of stay criterion was changed to include all women regardless of their length of stay at the shelter for the final sample size. Since no significant correlations were found between length of stay and measures of the HPLP II. Further description of this analysis is presented in Chapter IV.

Data from the five shelters were combined as one group to reach the target sample size as determined by the power analysis. As mentioned previously, these five shelters were selected due to their similar services and organizational structure and organization. Chapter IV presents the socio-demographic characteristics of the residents for each of the shelters used for data analysis and the total sample for further comparison. All sites were
contacted for data collection during the same interval. Number of subjects recruited by shelter varied due to residential capacity of the shelter and fluctuations in daily census. Table 2 summarizes the distribution of subjects according to shelter site. Of the 143 homeless women included in the study, 53 (38.7%) were residents of Shelter 3. This shelter provides emergency shelter for women who have experienced relationship/conflict situations. Ten (7.3%) were residents of Shelter 2 (faith-based).

Table 2

<table>
<thead>
<tr>
<th>Shelter</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>11.7</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>7.3</td>
</tr>
<tr>
<td>3</td>
<td>53</td>
<td>38.7</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td>16.8</td>
</tr>
<tr>
<td>5</td>
<td>35</td>
<td>25.5</td>
</tr>
</tbody>
</table>

E. Protection of Human Subjects

Approval for this study was granted from the Institutional Review Board (IRB) at Duquesne University (Appendix B) and support from the Administration (Appendix C) at the participating shelters was obtained. There were no known risks, discomforts, or adverse side effects associated with this study, no physical effects, medical procedure or interventions. All subjects signed a consent form (Appendix D) after this researcher provided a verbal and written explanation, and any questions were answered. It was stressed that the decision to participate or not would in no way affect services provided by the shelter where the subject was residing. A private comfortable location was used at each shelter to collect data. After signing the consent, each subject was assigned a
number to be used to identify her research instrument. So that names and numbers could not be associated, consents and instruments were kept in separate locked files.

F. Instruments

Two instruments were used in this study: Personal History Form (Appendix E) and the Health-Promoting Lifestyle Profile II. These instruments were used to answer identified research questions and are described in the following discussion.

*Personal History Form*

The Personal History Form was developed by this researcher and collected personal and demographic characteristics from participants. Items included were based on an extensive literature review of studies of various homeless populations. Data collected was organized into three categories: demographics, health, and homeless history. Specific items were age, ethnic/racial background, marital status, number and ages of children, children’s residential status, employment status, level of education, self-reported health status, date of last visit to health care provider (medical, dental, vision, mammogram, Pap test), tobacco use, barriers to health care, identification of specific physical conditions, prior homeless history, length of time homeless, reason for current homeless state, and childhood foster care prevalence. Readability of this instrument was assessed at less than a 5<sup>th</sup> grade reading level using the Flesch-Kincaid Grade Level measurement computed by Microsoft Word software. This rate is calculated through assessment of the average number of syllables per word and words per sentence and based on a U.S. grade-school level. The Personal History Form takes approximately 10 minutes to complete. Information obtained from the Personal History Form allowed this investigator to describe the study population characteristics in detail.
Health Promoting Lifestyle Profile II

Health-promoting behaviors were measured with the Health-Promoting Lifestyle Profile II (HPLP II). The HPLP II is used to identify patterns of health promotion lifestyles and health-promoting behaviors conceptualized as a multidimensional pattern of self-initiated actions and perceptions that serve to maintain or enhance the level of wellness (Pender, et al., 2002). Readability of the HPLP is written at a 6.9 grade level as assessed by the Flesch-Kincaid Grade Level. This paper and pencil measure takes approximately 15 minutes to complete.

The original version of this research instrument, the Health-Promoting Lifestyle Profile (HPLP) was first made available in 1987 and has been used extensively since that time (Walker, Sechrist, & Pender, 1987; S. N. Walker, personal communication, March 16, 2002). The HPLP was developed from the Lifestyle and Health-Habits Assessment, a checklist of 100 items of positive health behaviors, and was created for research use within the framework of the Health Promotion Model (Pender, 1987). The HPLP contained 48 items (total score), and was comprised of six subscales with 5 to 13 items each: self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management. The scale was revised to more accurately reflect current literature and practice and for balance among the subscales (S. N. Walker, personal communication, March 16, 2002). The HPLP II consists of a 52-item scale that also encompasses a total score and six subscales (8 to 9 items each): health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management. Table 3 lists the numbered items that are included on the total scale and six subscales. Refer to Appendix A for corresponding health behaviors.
Items are scored with a 4-point response format: Never = 1, Sometimes = 2, Often = 3, and Routinely = 4. Scores are calculated for the total score and six subscale scores by calculation of a mean of the individual’s responses. Means are used to represent the total and subscale scores to retain the 1 to 4 metric of item responses and to allow comparability across subscales (S. N. Walker, personal communication, March 16, 2002).

Table 3

*Health Promoting Lifestyle Profile II Items for Total Scale and Six Subscales*

<table>
<thead>
<tr>
<th>Scale Label</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health-Promoting Lifestyle</td>
<td>1 to 52</td>
</tr>
<tr>
<td>Health Responsibility</td>
<td>3, 9, 15, 21, 27, 33, 39, 45, 51</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>4, 10, 16, 22, 28, 34, 40, 46</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2, 8, 14, 20, 26, 32, 38, 44, 50</td>
</tr>
<tr>
<td>Spiritual Growth</td>
<td>6, 12, 18, 24, 30, 36, 42, 48, 52</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>1, 7, 13, 19, 25, 31, 37, 43, 49</td>
</tr>
<tr>
<td>Stress Management</td>
<td>5, 11, 17, 23, 29, 35, 41, 47</td>
</tr>
</tbody>
</table>

Validity and reliability for the HPLP II were assessed using data from 712 adults ages 19 to 92. Content validity was established by content experts’ evaluation and a literature review. Validity was also established through item analysis for the total scale and each of six subscales. Construct validity was confirmed through a factor analysis that supported six factors that were used as the six subscales in the final instrument (S. N. Walker, personal communication, March 16, 2002; Walker, et al., 1987). Reliability was
established through Cronbach’s alphas for the total scale and the subscales. The reliability coefficient for the total scale is reported in the literature as .94 and the subscales range from .79 to .87: Health Responsibility (.86), Physical Activity (.85), Nutrition (.80), Spiritual Growth (.86), Interpersonal Relations (.87), and Stress Management (.79). A 3-week test-retest stability coefficient for the total scale was .89 (S. N. Walker, personal communication, March 16, 2002).

Table 4 displays internal consistency measures (Cronbach’s Alpha) for the HPLP II in this study as compared to other published studies. The HPLP II, used with this population of sheltered homeless women, showed high internal consistency (total score: .95; range of subscales: .75-.88) and was consistent with the findings of others. For example, Alley et al., (1998) reported Cronbach’s Alphas of .95 for the total scale and a range of .75 to .87 for the six subscales in a study of 59 indigent and homeless women seeking care at a nurse-managed clinic. Similarly, Stuifbergen and Becker (2001), using a sample of 194 women with multiple sclerosis, found internal consistency reliability scores of .92 for the HPLP II total score and a range of .74 to .86 for the subscales.

Table 4

*Internal Consistency (Cronbach’s Alpha) for the Health-Promoting Lifestyle Profile II (Total Score and Six Subscales scores) from Present Study and Previous Studies*

<table>
<thead>
<tr>
<th>HPLP II Total and Subscales</th>
<th>Present Study N=137</th>
<th>Walker, 2002 N=712</th>
<th>Lucas, Orshan, &amp; Cook, 2000 N=107</th>
<th>Acton &amp; Malatham, 2000 N=84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Lifestyle</td>
<td>.95</td>
<td>.94</td>
<td>.91</td>
<td>.90</td>
</tr>
<tr>
<td>Health Responsibility</td>
<td>.83</td>
<td>.86</td>
<td>.75</td>
<td>.88</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>.81</td>
<td>.85</td>
<td>.84</td>
<td>.86</td>
</tr>
<tr>
<td>Nutrition</td>
<td>.75</td>
<td>.80</td>
<td>.67</td>
<td>.83</td>
</tr>
<tr>
<td>Spiritual Growth</td>
<td>.88</td>
<td>.86</td>
<td>.77</td>
<td>.90</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>.83</td>
<td>.87</td>
<td>.78</td>
<td>.85</td>
</tr>
<tr>
<td>Stress Management</td>
<td>.80</td>
<td>.79</td>
<td>.63</td>
<td>.85</td>
</tr>
</tbody>
</table>
The HPLP and HPLP II have been reported as being used to determine the health-promoting lifestyles of diverse populations including homeless women (Alley et al., 1998), lower income African American women (Brady & Nies, 1999), mothers from the Midwest (Preski & Walker, 1997), midlife women (Duffy, 1988), older adults (Brady & Nies, 1999; Lucas, Orshan, & Cook, 2000; Walker, Volkan, Sechrist, & Pender, 1998), employed men and women (Bagwell, & Bush, 1999; Blacconiere & Oleckno, 1999; Lusk, et al., 1995; O’Quinn, 1995; Waite, Hawks, & Gast, 1999), African American women (Brady & Nies, 1999; Felton, et al., 1997; Jefferson, Melkus, & Spollett, 2000; Nies, Buffington, Cowan, & Hepworth, 1998), Mexican-American women (Duffy, Rossow, & Hernandez, 1996), disabled adults (Stuifbergen & Becker, 1994), and young adults (Martinelli, 1999). The reported sampling with diverse populations, including women and lower income populations, and high reliability scores supports the use of the HPLP II as a valid measure of health-promoting behaviors in this study population of sheltered homeless women.

G. Data Collection

Procedures for data collection in this study included seeking permission for instrument use, IRB approval, permission from agencies used for data collection, and data collection and management of the data.

Permission to use the HPLP II was obtained from Dr. Susan Noble Walker, Professor and Chair, Department of Gerontological, Psychosocial and Community Health Nursing, University of Nebraska Medical Center (Appendix F). Approval to conduct this study was granted by the Institutional Review Board at Duquesne University and
permission to collect data at each of the five shelters used was granted by agency administration. A written copy of the proposed study and a sample questionnaire packet was made available to the Administrative Director of each shelter and in-person meetings held with Administrative staff to answer questions and provide further explanation as needed. All shelter staff were informed of the research study, procedures, and inclusion criteria and assisted with identification of potential subjects.

A letter and packet of information consisting of a brief outline of the research project, subject written consent/explanation, and research instruments were mailed to the administrative officer at each of the nine agencies following the initial telephone call (Appendix G). An appointment was then scheduled to further discuss the research study, answer any questions, and gain approval for collection of data. All nine shelters selected agreed to participate in the study.

Data collection took place over a five-month period (May through September). Weekly telephone contact was maintained with a designated staff person in each shelter and data collection visits were scheduled when new residents were admitted. Visits to the shelters ranged from two times per week to once every two weeks in response to individual shelter census. The shelter most often provided childcare, but on rare occasion, children were present during data collection. All potential subjects were provided with written and verbal explanations of the nature and purpose of this investigation, complete confidentiality of all responses, and the ability to withdraw from the study at any time. Contact numbers of this investigator were included on the written explanation provided to subjects. Potential subjects were asked to not complete the questionnaires if they had previously done so at the shelter or at another shelter.
Numbered questionnaires were used for all research instruments and presented as a packet secured by a paperclip. The questionnaire packet included (in this order) a Subject Consent Form, Personal History Form, and the HPLP II. After a verbal explanation of the study, questionnaire packets were distributed to those who met inclusion criteria and volunteered to participate. All research instruments were self-administered. This investigator was present to answer any questions as needed during the data collection periods. After completion, completed questionnaires were reviewed as subjects turned them in for missing data and were clarified/completed if needed. In appreciation for their participation in this study, $5.00 cash was given to each subject after completion of the research questionnaires. If accompanied by children, a small gift (e.g. coloring book and crayons, age-appropriate book/toy) was also provided for each child residing with his/her mother at the shelter. A trained research assistant (master’s prepared nurse) was utilized when five or more subjects were scheduled for data collection at one time.

H. Data Analysis

All questionnaires were hand scored by this investigator and SPSS Version 11.5 was used as the statistical software to enter and analyze the data. Duplication of questionnaires was established by comparison of names of subjects on consent forms; six cases were discarded due to duplication. There were no missing data on any of the remaining questionnaires (N=137). To establish the presence of clean data for analysis, a doctorally prepared researcher conducted data inspection and verification for all entered cases.
To address the three stated research questions of this descriptive, correlational, non-experimental study, a variety of statistical analyses were used. Research question one identified various personal and socio-demographic characteristics of the sample measured by the Personal History Form. Research question two identified health-promoting behaviors of the study population as measured by the HPLP II. Univariate descriptive statistics (frequencies, percents, means, standard deviations, and ranges) were used to describe sample characteristics and health-promoting behaviors as stated in research questions one and two. One way analysis of variance (ANOVA) was used to see if there were significant differences between the characteristics of the sample by shelter. Research question three explored the presence of relationships between selected socio-demographic variables and health-promoting behaviors. Bivariate descriptive statistics consisting of Pearson’s $r$ and Eta correlations were used for analysis of this research question. The level of significance for all analyses was set at $p < .05$. Further statistical analysis was conducted to explore differences between racial/ethnic groups and if differences existed among the shelters. Chapter IV presents a detailed description of data analysis.
IV. RESULTS

This chapter presents data collected for this research investigation and its analysis. Variables include personal and socio-demographic characteristics and health-promoting behaviors of respondents. Data were collected over a five-month period using the Personal History Form and the Health-Promoting Lifestyle II (HPLP II) questionnaire. Results are organized in this chapter by the three research questions of this study. Descriptive statistics are used to present sample characteristics. Further examination of sample characteristics was undertaken in regards to major racial/ethnic groups represented in the sample (White and African-American). One-way analysis of variances (ANOVA) and Chi Square test of independence were utilized to examine differences among the five shelters. Pearson $r$ and Eta correlations were utilized to examine for significant relationships between study variables. Data from the five shelters were then combined into one sample for final analysis.

A. Profile of the Sample

Data were collected from 143 homeless women residing in five shelters located in Northeast Indiana that provide temporary residential housing for homeless women. All women approached agreed to participate in the study and completed research questionnaires. Of the 143 completed questionnaires, six were excluded for duplication; subjects had previously completed research tools while residing at another shelter during the data collection period. None were excluded for missing data. Data were analyzed for the individual five shelters and for the total sample for commonalities and differences. The results from 137 subjects are presented in this Chapter.
B. Research Question One

The first research question in this study was “What are the socio-demographic characteristics of homeless women?” Socio-demographic and personal characteristics were collected using the Personal History Form, which consisted of demographic characteristics (age, race/ethnicity, marital status, education, number of children, employment status), homeless history (length of stay in shelter, reason(s) for current homeless state, prior living arrangements, prior homelessness, and foster care history), and personal health information (self-perceived health status, location for usual health care, date of last visit to health care provider for medical, dental, vision, mammogram, Pap test, tobacco use, presence of physical conditions, and barriers to receiving health care).

Demographic Characteristics

Data showed consistency in the characteristics of the sample when examined by individual shelters and the total sample. Tables 5 and 6 present a summary of the sample demographic characteristics (race/ethnicity, marital status, education, employment, age, number of children) by individual shelter and total sample. Overall, subjects were between the ages of 18 to 60 years with a mean age of 36 years. Fifty-three percent identified themselves as White and 43.8% as African-American. The majority (43.8%) of the sample was single (never married) and 27% were divorced. The study sample was highly educated as over 50% had some type of post-high school education. Over half (65.7%) of the sample had a high school or advanced degree; 26.3% had a high school education, 31.4% some college, and 8% an earned college degree. Most (80.3%)
reported that they were unemployed at the time of data collection. Number of children ranged from 0-7 with a mean of 2.2 children.

As noted by the data presented in Table 6, the mean age of the sample had the greatest differences ranging from 29.3 years (Shelter 1) to 39.8 years (Shelter 4) and in number of children from 1.6 (Shelter 1) to 2.6 (Shelter 4). To determine if the differences in age and number of children were significant, a one-way ANOVA was used. This analysis is displayed in Table 7. As noted, there was a significant finding related to age and individual shelters (F=3.02, p = .02).

The Scheffe’ Test, the most conservative post-hoc test available, was then used to further analyze this finding of a significant difference between age and shelter. It is important to note that conservative tests increase the risk of a Type II error (Burns & Grove, 1997). A significant difference (.052) was found between Shelter 1 and Shelter 4. No other areas of significance were found with other variables. Although the Scheffe' test is very stringent and highly respected, caution must be taken in interpretation of these analyses as small sample sizes and unequal group sizes increase the chance of a Type I error since the results might be attributed to chance since the sample is less representative of the larger population (Burns & Grove, 1997). To further explore the significant relationship of age and shelter, an Eta correlation was used as a directional measure of the relationship. The computed Eta was .576, which demonstrates a strong relationship between age and the type of shelter.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Shelter 1 N=16</th>
<th>Shelter 2 N=10</th>
<th>Shelter 3 N=53</th>
<th>Shelter 4 N=23</th>
<th>Shelter 5 N=35</th>
<th>Total N=137</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>11 (68.8%)</td>
<td>4 (40.0%)</td>
<td>28 (52.8%)</td>
<td>12 (52.2%)</td>
<td>18 (51.2%)</td>
<td>73 (53.3%)</td>
</tr>
<tr>
<td>African-American</td>
<td>5 (31.3%)</td>
<td>6 (60.0%)</td>
<td>9 (39.1%)</td>
<td>23 (43.4%)</td>
<td>17 (48.6%)</td>
<td>60 (43.8%)</td>
</tr>
<tr>
<td>Latina</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>2 (3.8%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>2 (1.5%)</td>
</tr>
<tr>
<td>Asian</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>2 (8.7%)</td>
<td>0 (0.0%)</td>
<td>2 (1.5%)</td>
</tr>
<tr>
<td>Native American</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single (never married)</td>
<td>5 (31.3%)</td>
<td>5 (50.0%)</td>
<td>22 (41.5%)</td>
<td>7 (30.4%)</td>
<td>21 (60.0%)</td>
<td>60 (43.8%)</td>
</tr>
<tr>
<td>Married</td>
<td>8 (50.0%)</td>
<td>1 (10.0%)</td>
<td>5 (9.4%)</td>
<td>2 (8.7%)</td>
<td>2 (5.7%)</td>
<td>18 (13.1%)</td>
</tr>
<tr>
<td>Separated</td>
<td>2 (12.5%)</td>
<td>2 (20.0%)</td>
<td>9 (17.0%)</td>
<td>5 (21.7%)</td>
<td>2 (5.7%)</td>
<td>20 (14.6%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>1 (6.3%)</td>
<td>2 (20.0%)</td>
<td>16 (30.2%)</td>
<td>8 (34.8%)</td>
<td>10 (28.6%)</td>
<td>37 (27.0%)</td>
</tr>
<tr>
<td>Widow</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>1 (1.9%)</td>
<td>1 (4.3%)</td>
<td>0 (0.0%)</td>
<td>2 (1.5%)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College degree</td>
<td>1 (6.3%)</td>
<td>0 (0.0%)</td>
<td>5 (9.4%)</td>
<td>1 (4.3%)</td>
<td>4 (11.4%)</td>
<td>11 (8.0%)</td>
</tr>
<tr>
<td>Some college</td>
<td>6 (37.5%)</td>
<td>3 (30.0%)</td>
<td>14 (26.4%)</td>
<td>7 (30.4%)</td>
<td>13 (37.1%)</td>
<td>43 (31.4%)</td>
</tr>
<tr>
<td>Trade/Vocational</td>
<td>0 (0.0%)</td>
<td>1 (10.0%)</td>
<td>7 (13.2%)</td>
<td>6 (26.1%)</td>
<td>3 (8.6%)</td>
<td>17 (12.4%)</td>
</tr>
<tr>
<td>High school degree</td>
<td>6 (37.5%)</td>
<td>3 (30.0%)</td>
<td>16 (30.2%)</td>
<td>4 (17.4%)</td>
<td>7 (20.0%)</td>
<td>36 (26.3%)</td>
</tr>
<tr>
<td>Some high school</td>
<td>3 (19.8%)</td>
<td>3 (30.0%)</td>
<td>8 (15.1%)</td>
<td>5 (21.7%)</td>
<td>6 (17.1%)</td>
<td>25 (18.2%)</td>
</tr>
<tr>
<td>8th grade or less</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>3 (5.7%)</td>
<td>0 (0.0%)</td>
<td>2 (5.7%)</td>
<td>5 (3.6%)</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>1 (6.3%)</td>
<td>2 (20.0%)</td>
<td>4 (7.5%)</td>
<td>5 (21.7%)</td>
<td>2 (5.7%)</td>
<td>14 (10.2%)</td>
</tr>
<tr>
<td>Part time</td>
<td>2 (12.5%)</td>
<td>2 (20.0%)</td>
<td>2 (3.8%)</td>
<td>3 (13.0%)</td>
<td>4 (11.4%)</td>
<td>13 (9.5%)</td>
</tr>
<tr>
<td>Not employed</td>
<td>13 (81.3%)</td>
<td>6 (60.0%)</td>
<td>47 (88.7%)</td>
<td>15 (65.2%)</td>
<td>29 (82.9%)</td>
<td>110 (80.3%)</td>
</tr>
</tbody>
</table>
Table 6

*Personal History Form: Age and Children by Shelter and Total Sample*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Shelter 1</th>
<th>Shelter 2</th>
<th>Shelter 3</th>
<th>Shelter 4</th>
<th>Shelter 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>29.3</td>
<td>31.2</td>
<td>36.5</td>
<td>39.8</td>
<td>37.5</td>
<td>36.1</td>
</tr>
<tr>
<td>SD</td>
<td>7.66</td>
<td>10.25</td>
<td>11.47</td>
<td>10.73</td>
<td>10.72</td>
<td>11.01</td>
</tr>
<tr>
<td>Number of Children</td>
<td>1.6</td>
<td>2.3</td>
<td>2.2</td>
<td>2.6</td>
<td>2.0</td>
<td>2.2</td>
</tr>
<tr>
<td>SD</td>
<td>.96</td>
<td>1.25</td>
<td>1.63</td>
<td>1.78</td>
<td>1.74</td>
<td>1.60</td>
</tr>
</tbody>
</table>

Table 7

*One Way Analysis of Variance (ANOVA) of Age, Number of children, and Shelter*

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1383.435</td>
<td>4</td>
<td>345.859</td>
<td>3.023</td>
<td>.020</td>
</tr>
<tr>
<td>Within Groups</td>
<td>15103.835</td>
<td>132</td>
<td>114.423</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16487.270</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>9.194</td>
<td>4</td>
<td>2.299</td>
<td>.896</td>
<td>.468</td>
</tr>
<tr>
<td>Within Groups</td>
<td>338.587</td>
<td>132</td>
<td>2.565</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>347.781</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A Chi-square Test of Independence, to test for statistically significant differences among the shelters, was conducted for the variables of marital status, education, race, and employment. Because of small sample sizes, a valid Chi-Square could not be calculated due to improper loading of cells: 20% of the cells had expected frequencies of less than 5.

Table 5, in addition to examining demographic data of the total sample, displays demographic data by each shelter. Of the ten homeless women who resided in Shelter 2 (faith-based that accepts single women, women with children, and nuclear families), 60% were African American. In contrast, white homeless women appear to be equally distributed among the five shelters. Of the 16 women residing in Shelter 1, 50% were
married. Similar to Shelter 2, this shelter serves the needs of single parents, nuclear families, and single women. More single homeless women (60%) resided in Shelter 2. Separated and divorced homeless women appear to be equally distributed across the five shelters.

With respect to education, Shelter 4 appears to have a higher percentage of homeless women with a trade/vocational school level of education (26.1%), whereas Shelter 2 had a higher percentage of homeless women with “some high school” (30%). Other educational groups appear to be equally distributed across the five shelters.

Finally, a higher percentage of homeless women who were employed full-time resided in Shelter 2 (20%) and Shelter 4 (21.7%). Shelter 2 also had a higher percentage of homeless women who were employed part-time (20%).

Because of the large percentage of African Americans (43.8%) found in the sample as compared to local demographics (17.4%), a further analysis was conducted. Table 8 displays differences between Whites and African Americans based on marital status, education, and employment. Latina (N=4) and Asian (N=2) subjects were not included in this comparison, but are included in the total sample results. A larger percentage of African Americans were employed as compared to whites (28.4% vs. 13.7%), more African Americans were single than Whites (55% vs. 37%), and educational levels were congruent. No further statistical analyses were performed using these subsets of race/ethnicity.
Table 8

*Personal History Form: Race/Ethnicity and Marital Status, Education, and Employment Status (N=137)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>White N=73</th>
<th>African-American N=60</th>
<th>Total N=137</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single (never married)</td>
<td>27 (37.0%)</td>
<td>33 (55.0%)</td>
<td>60 (43.8%)</td>
</tr>
<tr>
<td>Married</td>
<td>10 (13.7%)</td>
<td>8 (13.3%)</td>
<td>18 (13.1%)</td>
</tr>
<tr>
<td>Separated</td>
<td>10 (13.7%)</td>
<td>9 (15.0%)</td>
<td>20 (14.6%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>25 (34.2%)</td>
<td>9 (15.0%)</td>
<td>37 (27.0%)</td>
</tr>
<tr>
<td>Widow</td>
<td>1 (1.4%)</td>
<td>1 (1.7%)</td>
<td>2 (1.5%)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College degree</td>
<td>6 (8.2%)</td>
<td>4 (6.7%)</td>
<td>11 (8.0%)</td>
</tr>
<tr>
<td>Some college</td>
<td>20 (27.4%)</td>
<td>22 (36.7%)</td>
<td>43 (31.4%)</td>
</tr>
<tr>
<td>Trade/Vocational</td>
<td>10 (13.7%)</td>
<td>7 (11.7%)</td>
<td>17 (12.4%)</td>
</tr>
<tr>
<td>High school degree</td>
<td>24 (32.9%)</td>
<td>12 (20.0%)</td>
<td>36 (26.3%)</td>
</tr>
<tr>
<td>Some high school</td>
<td>11 (15.1%)</td>
<td>12 (20.0%)</td>
<td>25 (18.2%)</td>
</tr>
<tr>
<td>8th grade or less</td>
<td>2 (2.7%)</td>
<td>3 (5.0%)</td>
<td>5 (3.6%)</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>7 (9.6%)</td>
<td>7 (11.7%)</td>
<td>14 (10.2%)</td>
</tr>
<tr>
<td>Part time</td>
<td>3 (4.1%)</td>
<td>10 (16.7%)</td>
<td>13 (9.5%)</td>
</tr>
<tr>
<td>Not employed</td>
<td>63 (86.3%)</td>
<td>43 (71.7%)</td>
<td>110 (80.3%)</td>
</tr>
</tbody>
</table>

*Homeless History*

Tables 9 and 10 display data from the homeless history section of the Personal History Form. Distribution of the length of stay in the shelter at the time of data collection is highly skewed as noted by the wide range (less than 1 week to 57 weeks) in Table 9. Median length of stay was 2 weeks with one week most frequently reported (mode) as their length of stay when data were collected. However, 80% of the sample had been at the shelter for 4 weeks or less at the time of data collection.
Table 9

*Homeless History Data: Length of stay in shelter at time of data collection (N=137)*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of stay in shelter</strong></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>5.54 weeks</td>
</tr>
<tr>
<td>Median</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Mode</td>
<td>1 week</td>
</tr>
<tr>
<td>SD</td>
<td>9.78</td>
</tr>
<tr>
<td>Range</td>
<td>&lt; 1 week - 57 weeks</td>
</tr>
</tbody>
</table>

Table 10 reports homeless history data related to reason for homelessness, living arrangements before coming to the shelter, previous homelessness, and history of childhood foster care. Subjects identified a variety of reasons for the current homeless state and could specify one or more reasons. The majority (46%) reported relationship problems/conflict as the primary factor. Additional circumstances identified were eviction/lack of money to pay rent (35.8%), loss of job (30.7%), violence (24.1%), drugs/alcohol (23.4%), and emotional/mental illness (22.6%). The majority of the subjects (49.5%) had been residing with friends or family prior to this current state of homelessness. A large number (44.5%) reported that they had experienced previous homelessness at sometime during their lifetime and 21.2 % had a childhood history of foster care.
Table 10

**Personal History Form: Homeless History Data/Reasons for homeless state, prior living arrangements, previous homelessness, history of childhood foster care** (N=137)

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason for Homeless State</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical illness</td>
<td>11</td>
<td>8.0</td>
</tr>
<tr>
<td>Emotional/mental illness</td>
<td>31</td>
<td>22.6</td>
</tr>
<tr>
<td>Drugs/alcohol</td>
<td>32</td>
<td>23.4</td>
</tr>
<tr>
<td>Violence</td>
<td>33</td>
<td>24.1</td>
</tr>
<tr>
<td>Legal problems</td>
<td>21</td>
<td>15.3</td>
</tr>
<tr>
<td>Relationship problems/conflict</td>
<td>63</td>
<td>46.0</td>
</tr>
<tr>
<td>Loss of job</td>
<td>42</td>
<td>30.7</td>
</tr>
<tr>
<td>Eviction/lack of money to pay rent</td>
<td>49</td>
<td>35.8</td>
</tr>
<tr>
<td><strong>Living Arrangements before Shelter</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With friends/family</td>
<td>68</td>
<td>49.5</td>
</tr>
<tr>
<td>In own apartment/house</td>
<td>49</td>
<td>35.8</td>
</tr>
<tr>
<td>Hotel</td>
<td>8</td>
<td>5.8</td>
</tr>
<tr>
<td>On the street</td>
<td>12</td>
<td>8.8</td>
</tr>
<tr>
<td><strong>Previous Homelessness</strong></td>
<td>61</td>
<td>44.5</td>
</tr>
<tr>
<td><strong>History of Childhood Foster Care</strong></td>
<td>29</td>
<td>21.2</td>
</tr>
</tbody>
</table>

**Personal Health Information**

Tables 11 through 14 report personal health characteristics of the sample as measured on the Personal History Form. Overall, the majority (70.8%) identified their health as “good”, “very good” or “excellent “, but 29.2 % of the subjects perceived their health to be “fair” or “poor” (Table 11). Although, respondents reported that they were able to access health care (84.7%), money (63.5%) and transportation (32.1%) were identified as major barriers to care. Although a small percentage identified trust (doctors and nurses) as a barrier to health care (13.1%), this finding is important to consider.

Supporting the finding of accessibility to health care services, respondents most often
received health at the doctor’s office (35.8%) or public clinic (37.2%). Only a small percent (15.3%) indicated that they did not have a regular health care provider and 11.7% cited the emergency room as the usual provider of health care services. Tobacco use was widely reported in this sample (68.6%) with most (98%) using cigarettes at a rate of one or more packs per day (47.5%).

Table 11

**Personal Health Data: Health Status, Healthcare Provider, Tobacco Use, Barriers to Health Care (N=137)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>10</td>
<td>7.3</td>
</tr>
<tr>
<td>Very Good</td>
<td>23</td>
<td>16.8</td>
</tr>
<tr>
<td>Good</td>
<td>64</td>
<td>46.7</td>
</tr>
<tr>
<td>Fair</td>
<td>30</td>
<td>21.9</td>
</tr>
<tr>
<td>Poor</td>
<td>10</td>
<td>7.3</td>
</tr>
<tr>
<td><strong>Location of Health Care Provider</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor’s office</td>
<td>49</td>
<td>35.8</td>
</tr>
<tr>
<td>Public clinic</td>
<td>51</td>
<td>37.2</td>
</tr>
<tr>
<td>Emergency Room</td>
<td>16</td>
<td>11.7</td>
</tr>
<tr>
<td>No where</td>
<td>21</td>
<td>15.3</td>
</tr>
<tr>
<td><strong>Tobacco Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarettes</td>
<td>93</td>
<td>98.0</td>
</tr>
<tr>
<td>1 pack or more daily</td>
<td>45</td>
<td>47.5</td>
</tr>
<tr>
<td><strong>Barriers to Health Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>87</td>
<td>63.5</td>
</tr>
<tr>
<td>Transportation</td>
<td>44</td>
<td>32.1</td>
</tr>
<tr>
<td>Unsure where to go</td>
<td>23</td>
<td>16.8</td>
</tr>
<tr>
<td>Nervous/afraid</td>
<td>18</td>
<td>13.1</td>
</tr>
<tr>
<td>Childcare</td>
<td>5</td>
<td>3.6</td>
</tr>
<tr>
<td>Lack of trust of doctors</td>
<td>15</td>
<td>10.9</td>
</tr>
<tr>
<td>Lack of trust of nurses</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Language</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>Nothing</td>
<td>31</td>
<td>22.6</td>
</tr>
</tbody>
</table>
Table 12 presents time since the last visit for various types of medical care (medical, dental, vision, Pap test, and mammogram). Dental (48.9%) and vision care (49.6%) were the greatest needs as nearly 50% had not received this type of care in over two years. Supporting previously stated data of access to health care, 84.7% had received medical care and 63.5% a Pap test during the past two years. Fifty-three percent of the sample (N=73) reported never having had a mammogram; however, further examination of this data revealed that of these, 16 women (22.1%) were between the ages of age 40 – 56 years. Current mammography guidelines recommend initial screening beginning at the age of 40 years.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Medical</th>
<th>Dental</th>
<th>Vision</th>
<th>Pap Test</th>
<th>Mammogram</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>&lt; 2 years</td>
<td>116</td>
<td>84.7</td>
<td>68</td>
<td>49.6</td>
<td>59</td>
</tr>
<tr>
<td>&gt; 2 years</td>
<td>19</td>
<td>13.9</td>
<td>67</td>
<td>48.9</td>
<td>58</td>
</tr>
<tr>
<td>Never</td>
<td>2</td>
<td>1.5</td>
<td>2</td>
<td>1.5</td>
<td>10</td>
</tr>
</tbody>
</table>
To further explore data related to physical condition, a health index was created to determine the number of respondents who reported multiple diseases. These results are shown in Table 14. A large majority of subjects (67.9%) reported one or more physical diseases, 35% had two or more conditions, and 32.1% of respondents indicated that they had no physical diseases at all.
C. Research Question Two

The second research question in this study “What health-promoting behaviors do homeless women practice?” was measured by the HPLP II questionnaire. The HPLP II consists of 52 items (specific health behaviors), which represent major components of a healthy pattern of living. Six subscales consisting of 8-9 items each are represented in this instrument. Response categories range from 1 (never), 2 (sometimes), 3 (often), to 4 (routinely). Mean scores are calculated for the total scale and each of the subscales to reveal an individual’s engagement in these health-promoting activities reflecting strengths, resources, and areas for future growth (Pender, et al, 2002).

Descriptive analyses of the HPLP II are presented in Table 15. The table includes a total score and six subscales scores (health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management). Of these six subscales, physical activity is noted to have the lowest mean score (1.97) and spiritual growth the highest (2.86). There was variability noted within all of the subscales as evidenced by ranges and standard deviations for each.

Table 15

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPLP II Total</td>
<td>2.44</td>
<td>.46</td>
<td>1.55-3.60</td>
</tr>
<tr>
<td>Health Responsibility</td>
<td>2.38</td>
<td>.60</td>
<td>1.22-3.89</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>1.97</td>
<td>.56</td>
<td>1.00-3.63</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2.27</td>
<td>.52</td>
<td>1.11-3.56</td>
</tr>
<tr>
<td>Spiritual Growth</td>
<td>2.86</td>
<td>.63</td>
<td>1.22-4.00</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>2.67</td>
<td>.56</td>
<td>1.56-4.00</td>
</tr>
<tr>
<td>Stress Management</td>
<td>2.41</td>
<td>.57</td>
<td>1.38-3.88</td>
</tr>
</tbody>
</table>
To assess if differences existed between the shelters and the HPLP II total and subscales scores, a one-way analysis of variance was performed. These results are displayed in Table 16. No statistical differences were noted in the HPLP II Total and subscales.

Table 16

One-Way Analysis of Variance (ANOVA) Between Shelters and the HPLP II and Subscales

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPLP Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.493</td>
<td>4</td>
<td>.123</td>
<td>.567</td>
<td>.687</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28.667</td>
<td>132</td>
<td>.217</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>29.160</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Responsibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.359</td>
<td>4</td>
<td>.340</td>
<td>.940</td>
<td>.443</td>
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<tr>
<td>Within Groups</td>
<td>47.730</td>
<td>132</td>
<td>.362</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>49.089</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.576</td>
<td>4</td>
<td>.144</td>
<td>.444</td>
<td>.777</td>
</tr>
<tr>
<td>Within Groups</td>
<td>42.835</td>
<td>132</td>
<td>.325</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43.411</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.052</td>
<td>4</td>
<td>.513</td>
<td>1.937</td>
<td>.108</td>
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<tr>
<td>Within Groups</td>
<td>34.957</td>
<td>132</td>
<td>.265</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>37.009</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiritual Growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.184</td>
<td>4</td>
<td>.046</td>
<td>.110</td>
<td>.979</td>
</tr>
<tr>
<td>Within Groups</td>
<td>55.261</td>
<td>132</td>
<td>.419</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>55.445</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.875</td>
<td>4</td>
<td>.469</td>
<td>1.510</td>
<td>.203</td>
</tr>
<tr>
<td>Within Groups</td>
<td>40.975</td>
<td>132</td>
<td>.310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>42.850</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.693</td>
<td>4</td>
<td>.173</td>
<td>.525</td>
<td>.717</td>
</tr>
<tr>
<td>Within Groups</td>
<td>42.524</td>
<td>132</td>
<td>.330</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44.217</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To further examine specific health behaviors for each of the six subscales, descriptive analyses are presented in Tables 17 through 22. The Health Responsibility subscale includes nine health behaviors that encompass various aspects of self-care.

Table 17 lists specific behaviors in this subscale with mean scores and standard deviations for each from this study. Means ranged from a low of 1.77 to a high of 2.74. Attend educational programs on personal health care was noted to have the lowest mean score (1.77). A related behavior of Read or watch TV programs about improving health (2.13) was low. Question health professionals in order to understand their instructions (2.74) had the highest mean score among the health behaviors.

Table 17

**Means and Standard Deviations of Health Responsibility Subscale Items (N=137)**

<table>
<thead>
<tr>
<th>Health Behavior</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report any unusual sign or symptoms to a physical or other health professional.</td>
<td>2.51</td>
<td>.98</td>
</tr>
<tr>
<td>Read or watch TV programs about improving health.</td>
<td>2.13</td>
<td>.74</td>
</tr>
<tr>
<td>Question health professionals in order to understand their instructions.</td>
<td>2.74</td>
<td>.91</td>
</tr>
<tr>
<td>Get a second opinion when I question my health care provider’s advice.</td>
<td>2.15</td>
<td>.94</td>
</tr>
<tr>
<td>Discuss my health concerns with health professionals.</td>
<td>2.49</td>
<td>.94</td>
</tr>
<tr>
<td>Inspect my body at least monthly for physical changes/danger signs.</td>
<td>2.63</td>
<td>.97</td>
</tr>
<tr>
<td>Ask for information from health professional about how to take good care of myself.</td>
<td>2.40</td>
<td>.99</td>
</tr>
<tr>
<td>Attend educational programs on personal health care.</td>
<td>1.77</td>
<td>.86</td>
</tr>
<tr>
<td>Seek guidance or counseling when necessary.</td>
<td>2.61</td>
<td>.90</td>
</tr>
<tr>
<td><strong>Total Health Responsibility Subscale</strong></td>
<td>2.38</td>
<td>.46</td>
</tr>
</tbody>
</table>

Table 18 displays data for specific health behaviors related to physical activity. This subscale consists of eight items that focus on various types of diverse activities and other behaviors related to physical activities. Items ranged from a low of 1.53 to a high of 2.59. Four behaviors had mean scores of less than 2 (sometimes); Check my pulse rate...
when exercising (1.53), Reaching my target heart rate when exercising (1.61), Follow a planned exercise program (1.78), and Do stretching exercises at least 3 times per week (1.90) were the least practiced behaviors. This subscale had the lowest overall mean (1.97) among all six subscales.

Table 18
Means and Standard Deviations of Physical Activity Subscale Items (N=137)

<table>
<thead>
<tr>
<th>Health Behavior</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow a planned exercise program.</td>
<td>1.78</td>
<td>.77</td>
</tr>
<tr>
<td>Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).</td>
<td>2.05</td>
<td>.98</td>
</tr>
<tr>
<td>Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
<td>2.28</td>
<td>.93</td>
</tr>
<tr>
<td>Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
<td>2.02</td>
<td>.76</td>
</tr>
<tr>
<td>Do stretching exercises at least 3 times per week.</td>
<td>1.90</td>
<td>.89</td>
</tr>
<tr>
<td>Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).</td>
<td>2.59</td>
<td>.94</td>
</tr>
<tr>
<td>Check my pulse rate when exercising.</td>
<td>1.53</td>
<td>.80</td>
</tr>
<tr>
<td>Reach my target heart rate when exercising.</td>
<td>1.61</td>
<td>.76</td>
</tr>
<tr>
<td>Total Physical Activity Subscale</td>
<td>1.97</td>
<td>.56</td>
</tr>
</tbody>
</table>

The Nutrition subscale (Table 19) is comprised of nine health behaviors that represent current nutritional guidelines. Mean scores reflect similar levels of activity within this subscale. The least frequently practiced behavior was Eat 6-11 servings of bread, cereal, rice, and pasta each day (1.97) and Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day (2.55) was found to be practiced most often.
Table 19

Means and Standard Deviations of Nutrition Subscale Items (N=137)

<table>
<thead>
<tr>
<th>Health Behavior</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose a diet low in fat, saturated fat, and cholesterol.</td>
<td>2.12</td>
<td>.95</td>
</tr>
<tr>
<td>Limit use of sugars and food containing sugars (sweets).</td>
<td>2.13</td>
<td>.82</td>
</tr>
<tr>
<td>Eat 6-11 servings of bread, cereal, rice, and pasta each day.</td>
<td>1.97</td>
<td>.82</td>
</tr>
<tr>
<td>Eat 2-4 servings of fruit each day.</td>
<td>2.17</td>
<td>.85</td>
</tr>
<tr>
<td>Eat 3-5 servings of vegetables each day.</td>
<td>2.35</td>
<td>.86</td>
</tr>
<tr>
<td>Eat 2-3 servings of milk, yogurt or cheese each day.</td>
<td>2.43</td>
<td>.99</td>
</tr>
<tr>
<td>Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.</td>
<td>2.55</td>
<td>.87</td>
</tr>
<tr>
<td>Read labels to identify nutrients, fats, and sodium content in packaged food.</td>
<td>2.32</td>
<td>1.0</td>
</tr>
<tr>
<td>Eat breakfast.</td>
<td>2.36</td>
<td>.87</td>
</tr>
<tr>
<td><strong>Total Nutrition Subscale</strong></td>
<td>2.27</td>
<td>.52</td>
</tr>
</tbody>
</table>

The Spiritual Growth subscale is shown in Table 20. Scores ranged from 2.49 to a high of 3.05. Higher mean scores were noted with health behaviors of *Believe that my life has purpose* (3.05), *Look forward to the future* (3.02), and *Am aware of what is important to me in life* (3.02). This 9-item subscale measured personal behaviors directed at spirituality and not religiosity. This subscale had the highest overall mean (2.86) among all six subscales.

Table 20

Means and Standard Deviations of Spiritual Growth Subscale Items (N=137)

<table>
<thead>
<tr>
<th>Health Behavior</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel I am growing and changing in positive ways.</td>
<td>2.86</td>
<td>.85</td>
</tr>
<tr>
<td>Believe that my life has purpose.</td>
<td>3.05</td>
<td>.84</td>
</tr>
<tr>
<td>Look forward to the future.</td>
<td>3.02</td>
<td>.87</td>
</tr>
<tr>
<td>Feel content and at peace with myself.</td>
<td>2.49</td>
<td>.86</td>
</tr>
<tr>
<td>Work toward long-term goals in my life.</td>
<td>2.80</td>
<td>.93</td>
</tr>
<tr>
<td>Find each day interesting and challenging.</td>
<td>2.70</td>
<td>.94</td>
</tr>
<tr>
<td>Am aware of what is important to me in life.</td>
<td>3.02</td>
<td>.87</td>
</tr>
<tr>
<td>Feel connected with some force greater than myself.</td>
<td>2.98</td>
<td>.98</td>
</tr>
<tr>
<td>Expose myself to new experiences and challenges.</td>
<td>2.83</td>
<td>.79</td>
</tr>
<tr>
<td><strong>Total Spiritual Growth Subscale</strong></td>
<td>2.86</td>
<td>.63</td>
</tr>
</tbody>
</table>
Table 21 displays the data for the Interpersonal Relations subscale, which consisted of 9 items. Health behaviors identified within this subscale focused on caring relationships and support from others. Scores ranged from a low of 2.27 to a high of 3.10. *Find it easy to show concern, love, and warmth to others* was noted to have the highest mean score (3.10) while *Find ways to meet my needs for intimacy* was the lowest (2.27).

Table 21

*Means and Standard Deviations of Interpersonal Relations Subscale Items (N=137)*

<table>
<thead>
<tr>
<th>Health Behavior</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss my problems and concerns with people close to me.</td>
<td>2.50</td>
<td>.84</td>
</tr>
<tr>
<td>Praise other people easily for their achievements.</td>
<td>2.97</td>
<td>.82</td>
</tr>
<tr>
<td>Maintain meaningful and fulfilling relationship with others.</td>
<td>2.73</td>
<td>.84</td>
</tr>
<tr>
<td>Spend time with close friends.</td>
<td>2.37</td>
<td>.91</td>
</tr>
<tr>
<td>Find it easy to show concern, love, and warmth to others.</td>
<td>3.10</td>
<td>.79</td>
</tr>
<tr>
<td>Touch and am touched by people I care about.</td>
<td>2.83</td>
<td>.87</td>
</tr>
<tr>
<td>Find ways to meet my needs for intimacy.</td>
<td>2.27</td>
<td>.86</td>
</tr>
<tr>
<td>Get support from a network of caring people.</td>
<td>2.64</td>
<td>.99</td>
</tr>
<tr>
<td>Settle conflicts with others through discussion and compromise.</td>
<td>2.59</td>
<td>.81</td>
</tr>
<tr>
<td><em>Total Interpersonal Relations Subscale</em></td>
<td>2.67</td>
<td>.56</td>
</tr>
</tbody>
</table>

The last subscale, Stress Management, consisted of eight health behaviors, which included behaviors directly related to specific stress relieving activities and methods (Table 22). Items ranged from a low of 2.07 to a high of 2.72. Mean scores were noted to be consistent within the subscale. *Accept those things in my life, which I cannot change* was the highest with a mean score of 2.72 and *Practice relaxation or meditation for 15-20 minutes daily* had the lowest mean score (2.07).
Table 22

*Means and Standard Deviations of Stress Management Subscale Items (N=137)*

<table>
<thead>
<tr>
<th>Health Behavior</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get enough sleep</td>
<td>2.48</td>
<td>.92</td>
</tr>
<tr>
<td>Take some time for relaxation each day.</td>
<td>2.41</td>
<td>.83</td>
</tr>
<tr>
<td>Accept those things in my life, which I cannot change.</td>
<td>2.72</td>
<td>.84</td>
</tr>
<tr>
<td>Concentrate on pleasant thoughts at bedtime.</td>
<td>2.66</td>
<td>.90</td>
</tr>
<tr>
<td>Use specific methods to control my stress.</td>
<td>2.38</td>
<td>.90</td>
</tr>
<tr>
<td>Balance time between work and play.</td>
<td>2.38</td>
<td>.85</td>
</tr>
<tr>
<td>Practice relaxation or meditation for 15-20 minutes daily.</td>
<td>2.07</td>
<td>.95</td>
</tr>
<tr>
<td>Pace myself to prevent tiredness.</td>
<td>2.17</td>
<td>.86</td>
</tr>
<tr>
<td>Total Stress Management Subscale</td>
<td>2.41</td>
<td>.57</td>
</tr>
</tbody>
</table>

D. Research Question Three

The third research question was “What relationships exist between selected socio-demographic characteristics and health-promoting behaviors in homeless women?”

Table 23 displays a correlation matrix of Pearson Correlations for selected variables of age, number of children, health status, and health index with the HPLP II Total score and six subscales.

Significant positive relationships were noted between age and health status and health index: although a moderate relationship, older homeless subjects were more likely to have a greater number of physical diseases ($r = .29; p < .01$) and identify their health status as worse ($r = .19; p < .05$). Another significant positive correlation was noted between health index (number of physical diseases) and the subscale of health responsibility ($r = .18; p < .05$): again, although weak, those reporting more physical diseases were more likely to practice more health behaviors related to health responsibility.
Table 23

*Pearson Correlation Matrix of Selected Socio-demographic Variables and HPLP II Total and Subscale Scores (N = 137).*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>1. Age</td>
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<td>2. No. Children</td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Health Status</td>
<td>.19*</td>
<td>-.02</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Health Index</td>
<td>.29**</td>
<td>-.04</td>
<td>.31**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. HPLP II Total</td>
<td>.06</td>
<td>-.03</td>
<td>-.22**</td>
<td>.09</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Health Responsibility</td>
<td>.05</td>
<td>-.08</td>
<td>-.14</td>
<td>.18*</td>
<td>.83**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Physical Activity</td>
<td>.17</td>
<td>-.01</td>
<td>-.15</td>
<td>-.02</td>
<td>.66**</td>
<td>.45**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Nutrition</td>
<td>-.02</td>
<td>.03</td>
<td>-.21*</td>
<td>.01</td>
<td>.78**</td>
<td>.59**</td>
<td>.55**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Spiritual Growth</td>
<td>.07</td>
<td>-.01</td>
<td>-.22*</td>
<td>.16</td>
<td>.86**</td>
<td>.62**</td>
<td>.40**</td>
<td>.56**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Interpersonal Relations</td>
<td>-.09</td>
<td>-.03</td>
<td>-.10</td>
<td>.09</td>
<td>.83**</td>
<td>.69**</td>
<td>.29**</td>
<td>.53**</td>
<td>.78**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11. Stress Management</td>
<td>.11</td>
<td>-.04</td>
<td>-.25**</td>
<td>-.01</td>
<td>.84**</td>
<td>.57**</td>
<td>.58**</td>
<td>.55**</td>
<td>.72**</td>
<td>.64**</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: ** p < .01 level (2-tailed). *p < .05 level (2-tailed).
Health Status was significantly negatively correlated with HPLP II Total Score, and the subscales of Nutrition, Spiritual Growth, and Stress Management. Homeless women were significantly more likely to practice health-promoting behaviors related to the total lifestyle profile ($r = -.22; p < .01$), nutrition ($r = -.21; p < .01$), spiritual growth ($r = -.22; p < .01$), and stress management ($r = -.25; p < .01$) when they associated their health status as low (fair or poor).

As to be expected, significant positive relationships ($r = .66$ to $.86; p < .01$) were demonstrated between the HPLP II total score and all six subscales. The strongest relationships among the subscales were noted between spiritual growth and interpersonal relations ($r = .78; p < .01$), and spiritual growth and stress management ($r = .72; p < .01$). This demonstrates that those who participated in spiritual growth behaviors also participated in behaviors of interpersonal relations and stress management. Several findings were noted involving health responsibility. Significant positive relationships were noted between health responsibility and nutrition ($r = .59; p < .01$), spiritual growth ($r = .62; p < .01$), interpersonal relations ($r = .69; p < .01$), and stress management ($r = .59; p < .01$). Homeless women who took more responsibility for their personal health also practiced more health behaviors related to nutrition, spiritual growth, interpersonal relations, and stress management.

Pearson correlations were also utilized to examine relationships between length of time respondents had been at the shelter when data were collected and the HPLP II Total and subscales (Table 24). Based on a 2-tailed test, no significant relationships were noted between the lengths of time that a respondent was in the shelter at the time of data collection and influence engagement in health-promoting behaviors as measured by the
HPLP II. No significant relationships were noted, however, the relationship between stress management and length of stay in the shelter was approaching significance at the .08 level. This suggests that the longer one stays in the shelter the greater number of stress management behaviors are practiced.

Table 24

*Pearson Correlations of Length of Stay in Shelter and HPLP II Total and Subscale Scores (N = 137).*

<table>
<thead>
<tr>
<th>HPLP II Total &amp; Subscales</th>
<th>Length of Stay (r)</th>
<th>(p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPLP II Total</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td>Health Responsibility</td>
<td>.03</td>
<td>.74</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>.05</td>
<td>.57</td>
</tr>
<tr>
<td>Nutrition</td>
<td>.02</td>
<td>.85</td>
</tr>
<tr>
<td>Spiritual Growth</td>
<td>.12</td>
<td>.17</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>.08</td>
<td>.38</td>
</tr>
<tr>
<td>Stress Management</td>
<td>.15</td>
<td>.08</td>
</tr>
</tbody>
</table>

Table 25 presents Eta correlations used to examine relationships between nominal variables of race/ethnicity, education, marital status, and employment status and the HPLP II Total score and six subscales. The Eta scores displayed in Table 25 show the strength of association between the selected variables. Weak relationships were noted between race and spiritual growth (.21), education and stress management (.23), and employment and stress management.
Table 25

*Eta Correlations of Socio-demographic Characteristics (Race, Education, Marital Status, Employment) to HPLP II and Subscales (N=137)*

<table>
<thead>
<tr>
<th>HPLP II</th>
<th>Race</th>
<th>Education</th>
<th>Marital Status</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>.14</td>
<td>.15</td>
<td>.09</td>
<td>.10</td>
</tr>
<tr>
<td>Health Responsibility</td>
<td>.11</td>
<td>.07</td>
<td>.12</td>
<td>.15</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>.07</td>
<td>.17</td>
<td>.09</td>
<td>.13</td>
</tr>
<tr>
<td>Nutrition</td>
<td>.16</td>
<td>.14</td>
<td>.15</td>
<td>.07</td>
</tr>
<tr>
<td>Spiritual Growth</td>
<td>.21</td>
<td>.16</td>
<td>.10</td>
<td>.07</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>.15</td>
<td>.17</td>
<td>.20</td>
<td>.02</td>
</tr>
<tr>
<td>Stress Management</td>
<td>.15</td>
<td>.23</td>
<td>.13</td>
<td>.22</td>
</tr>
</tbody>
</table>

Data presented in this chapter describes the socio-demographic characteristics, specific health practices, and participation in health promoting behaviors of the sample of 137 homeless women residing in homeless shelters in Northeast Indiana. The sample was found to be highly educated, mostly unemployed, and primarily single. The majority identified their ethnicity/race as White or African American and was homeless due to relationship problems or conflict in their lives. Women in this study reported both positive and negative aspects related to their health. Health care access and utilization was evidenced in the sample, but specific health needs continued to be unmet (dental and vision). Negative health behaviors related to tobacco use was widespread. Specific areas of need for health promoting behaviors such as physical activity and health responsibility were identified. Personal strengths and resources were noted especially in the areas of spiritual growth and interpersonal relations.
V. DISCUSSION

This study described socio-demographic and personal characteristics and health-promoting behaviors of sheltered homeless women in an urban location in a specific geographic region. Relationships between these variables were explored using statistical analyses. A discussion of the findings of this study is presented in this chapter and is related to prior research about the homeless. Implications for clinical practice are identified followed by limitations of the study. Recommendations for further research are then presented.

Pender’s Health Promotion Model provided the framework for this study and is supported for use in a homeless population. The three major constructs of the HPM (individual characteristics and experiences, behavior-specific cognition and affect, and behavioral outcomes) were used to select specific study variables as conceptualized within the model. Individual characteristics and experiences were investigated through examination of prior behavior (specific health practices and tobacco use) and holistic personal factors consisting of biological, psychological, and socio-cultural components. Biological factors included variables of age and presence of physical health conditions. Psychological factors consisted of perceived health status, relationship problems/conflict and mental illness/emotional problems (identified only as a contributing factor to the homeless state). Socio-cultural factors explored included race/ethnicity, number of children, marital status, educational level, prevalence of childhood foster care, and employment status. Behavior-specific cognition and affect was explored through the context of health care utilization and barriers to care. Health-promoting behaviors, the
outcome of the HPM, were examined in this population and relationship among study variables explored.

A. Findings and Discussion

Socio-demographic characteristics

African Americans were highly represented in this sample as compared to local demographics. Census data indicated that African Americans account for 17.4% of the local population; however, this group represented 43.8% of the study sample. This finding supports previous national research that African Americans are the primary racial/ethnic background of current homeless populations (U.S. Census Bureau, 1999; U.S. Conference of Mayors, 2001). The higher number of African Americans represented in this study also support the findings of Shinn and colleagues (1998) who found African Americans were at greater risk for homelessness when compared to all other ethnic groups in a population of homeless sheltered and low-income families and attributed homelessness with problems associated with poverty, unemployment, lack of low-income housing, and racial discrimination. Although a high rate of unemployment existed in this sample, it is interesting to note that African Americans had a higher percentage of full and part-time employment as compared to Whites. The findings of this study suggest that African American women in this geographical area may be critically impacted by complex interacting factors other than race/ethnicity and employment and may have fewer critical social support networks that might assist in the prevention of a homeless situation.

Although demographic characteristics of the sample in each of the five shelters were consistent with the total sample, a significant difference was found between age of
the women and two of the shelters. However, these results must be cautiously interpreted as this finding may be due to chance alone since referral to different shelters is directed by the availability of space and not by individual characteristics.

An unexpected finding was that women in this study were highly educated when compared with homeless women in previous research. In an urban study on the East Coast comparing sheltered homeless and low-income housed women, Weinreb and colleagues (1998) found attainment of a high school education functioned as protective factor against homelessness and that the homeless women were significantly less likely to have completed a high school education than low-income women. This is also congruent with other national homeless statistics that show that less than one-third have completed high school and only 27% post-high school education (U.S. Census Bureau, 1999). The presence of a highly educated sample may suggest influences related to the geographical area; educational opportunities are accessible but other complex factors interact with and significantly impact the lives of women who become homeless in this region. Additionally, influences of declining and unstable local and national economic markets may affect this finding by contributing to higher educational levels in the homeless population due to increased unemployment issues.

Previous research indicates that the stability of adult support networks have been shown to be negatively affected by adverse childhood experiences (foster care, lack of care, sexual and physical abuse), often resulting in difficulty in development of long lasting relationships, strong social support networks, and dealing effectively with conflict (Herman, et al., 1997). The prevalence levels of foster care experiences in this sample support other research of homeless groups in other geographical locations across the
United States. Nearly one-fourth of homeless individuals have had some type of foster
care experience (Bassuk, et al., 1997; Shinn, et al., 1998; U.S. Census Bureau, 1999).
However, no data were obtained in this study that described the quality of these
experiences for direct comparison. Bassuk and colleagues’ (1997) study of the Worcester
Family Research Project found that predictors for adult homelessness included a history
of childhood foster care placement, drug use by mother, and minority status. Shinn and
colleagues (1998) also found that separation from the family of origin in childhood was
an important predictor in adult homelessness. The results of this study are consistent
with Bassuk and colleagues’ (1997) and Shinn and colleagues’ (1998) findings that
relationship problems/conflict is a primary predictor of adult homelessness, as evidenced
by the majority (46%) of this study’s women citing this issue as the major contributor to
the current homeless state.

Co-morbidity in the homeless has been associated with increased mortality as
compared with the general population (Barrow, et al., 1999). One reason is their limited
ability to receive essential medical care (Sachs-Ericsson, et al., 1999). Although the
results of this study were congruent with previous studies that cite a high number of co-
morbid conditions in the homeless (Kushel et al., 2001; Wojtusik & White, 1998), limited
access to healthcare was not. The results of this study suggest that in the represented
geographical area, access to health care was more coordinated and available: over 20% of
homeless women identified no barriers to receiving health care and a high percentage had
received medical care and pap tests within the past two years. Only 15% indicated that
they had “no where” to go for health care. The majority of the sample also reported a
regular source of health care provider; primary health care service providers were either a
physician office or public clinic. These results do not support other national studies of homeless men and women (Kushel, et al., 2001; O’Toole et al., 1999) who found that those with co-morbidity and a lack of insurance were more likely to use the emergency room for care as opposed to other services. Although health care accessibility and utilization were not an identified problem in the homeless women in this study, issues related to the availability of primary prevention (health promotion and disease prevention) should be further investigated since other research suggests that most visits to health providers in the homeless are related to acute conditions and access to health promotion and preventive services are limited (Stein, et al., 2000).

Although insurance issues were not assessed in this study, women reported money as the primary barrier to receiving health care. The high rate of unemployment in the sample might also affect the ability to pay for services and could affect health insurance status. While a small percentage (13%) of homeless women identified a lack of trust in the health care provider (doctors and nurses), this may be an important finding that could affect health care service utilization and provides direction for future interventions. Trust issues can serve as a major barrier to health care. Disrespectful treatment by health care providers and staff was found to lead to a lack of trust and contributed to barriers for care for adult low-income African American women (Johnson, 2001). Carter and colleagues (2001) identified trust as an important issue in health-seeking behaviors in a homeless population.

Women in this study who reported co-morbid physical conditions were more likely to have lower self-rated health status, validating previous research in similar populations of homeless women both in the Midwest and East Coast (Alley, et al., 1998;
Weinreb, et al., 1998). In comparison, only 10% of the general population report fair or poor health (USDHS, 2000). Physical problems related to respiratory conditions and hypertension were most prevalent in this study and are consistent with the research of Craft-Rosenberg and colleagues (2000) that cited similar problems in a population of rural homeless women. However, rates of hypertension and diabetes were found to be higher when compared to homeless clients seeking care at a free clinic (Carter et al., 2001). Since African Americans represent the majority of the sample, it is important to direct further attention to special health care concerns often found in this racial/ethnic group such as screening services for hypertension, heart disease, and diabetes.

Even though healthcare may be available and accessible for the homeless, unmet needs still exist. Dental and vision care were identified as primary, unmet physical needs, validating findings of others, both in rural and urban populations of homeless women (Craft-Rosenberg, et al., 2000; Weinreb, et al., 1998). This may be explained by a lack of accessibility for dental and vision services in the local community for homeless women and/or that women may view dental and vision problems as not as important as other physical needs.

A high rate of tobacco use (68.6%) was noted in this study sample and is consistent with other studies of homeless women (Alley, et al., 1998; Weinreb, et al., 1998). This rate is twice as high as the average percentage of smokers (27.2%) as reported for the specific geographic region (McMahan, 2002). These findings are noteworthy as results show that respiratory-related problems were the most frequently identified physical conditions. This suggests the need for interventional smoking cessation programs/assistance designed for specific needs and lifestyles of the homeless.
Health-promoting behaviors

This study extends the body of knowledge of health promotion in a population of sheltered homeless women. Homeless women in this study were found to participate in a variety of health-promoting behaviors indicating both their ability and interest in their personal health and wellness, despite their current housing crisis. Results from this study for the total levels of health-promoting lifestyles are similar to those found in low-income and homeless women (Alley, et. al, 1998), but are lower than others from diverse population groups such as those with Parkinson’s Disease, (Fowler, 2002), African American women (Jefferson, et al., 2000), community-dwelling adults (Acton & Malathum, 2000), and working adults (Waite, et. al, 1999). Previous studies of diverse populations using the first version of the HPLP questionnaire also reported higher mean total scores for low-income pregnant women (Kemp & Hatmaker, 1993), African American women (Brady & Nies, 1999), and employed adults (Lusk, et al., 1995) as compared to this study data.

Interpersonal relations and spiritual growth mean scores were found to be the highest in this study supporting the findings of other investigations of health promotion including well elderly (Lucas, et al., 2000), young black women (Jefferson, et al., 2000), and persons with multiple sclerosis (Stuifbergen & Becker, 2001). Using the first version of the HPLP questionnaire, Kemp and Hatmaker (1993) found self-actualization and interpersonal support as the highest mean scores in predominately African American, low-income pregnant women. The self-actualization subscale was updated and renamed spiritual growth on the revised HPLP II (Pender, 1987).
All shelters indicated that they provided a supportive environment during this crisis period and had specific programs and services directed at personal growth of the women. The significant relationships found between spiritual growth and interpersonal relations and stress management may be explained because of effective functioning of shelter services. Additionally, some women may have had these characteristics prior to their situation of being homeless and seeking shelter services. Sheltered homeless women have accomplished a major milestone by having accessed a supportive sheltered environment and are likely to be focusing on issues related to these areas. However, there were no significant relationships noted between the length of stay in the shelter and the HPLP total and subscales scores, although the subscale of stress management was approaching significance.

The finding that homeless women had low participation in physical activity behaviors supports the research of Brady and Nies (1999) and Jefferson and colleagues (2000) who reported similar low levels in African American women. It is interesting to note, however, the physical activity mean score for this sample is lower than findings for persons suffering from a chronic, progressive neurological disease living in the community (Stuifbergen & Becker, 2001). Although the physical activity subscale mean score was lower than other subscales in this study, positive behaviors were undertaken reflecting acknowledgment of the importance of physical activity as noted by Get exercise during usual daily activities. Both a financial and accessibility issue may explain these lower physical activity scores. Since the majority of the women were unemployed, the ability to participate in activities that require monetary commitment (purchase of equipment, membership to facilities, etc.) may have affected the findings.
Lack of transportation could also negatively affect participation. Since the majority of shelters in this study were located in inner-city and high-traffic areas, personal safety concerns may contribute to a restriction of seeking outside exercise at certain times of the day. These concerns are restricted to the study geographical location, which report higher than national averages for serious crimes including forcible rapes, robberies, and murders (AreaConnect, LLC, 2003). Further investigation is needed to ascertain the causes contributing to lower physical activity scores so appropriate interventions can be planned.

*Attend educational programs on personal healthcare* and *Read and watch TV programs about improving health* were the lowest health responsibility behaviors. These findings may reflect that women lack opportunities to become more involved in their health. All shelters indicated that they did not have a health care professional on staff and referred all health care needs to outside agencies. The lack of transportation and financial constraints of the sample may contribute to an accessibility issue for educational programs about health.

Scores on the nutritional subscale were the second lowest of the six subscales. For homeless women living in shelters, there may be restricted choices of foods available. All of the shelters indicated that they receive non-perishable food donations, which are non-perishable, which may limit the variety of food available, especially fresh fruits and vegetables. Review of the specific health behaviors indicated similar participation among nutritional behaviors with the exception of *Eat 6-11 servings of bread, cereal, rice, and pasta each day* noted as the lowest. It would be expected that these types of foods would
be readily available. One explanation is that women may voluntarily be restricting carbohydrates in their diet due to an awareness of current dietary trends.

**Socio-demographic factors and health-promoting behaviors**

Education has been shown to be positively correlated with health promotion behaviors in a variety of adult populations; community dwelling adults (Acton & Malathum, 2000); older adults (Lucas, et al., 2000), and employed adults (Lusk et al., 1995). Although homeless women in this study were highly educated, no association was found between education and the HPLP II total or subscale scores. These results support the work of Jefferson and colleagues (2000) who reported no relationships between educational level and the HPLP II total score in a sample of African American women of similar age and educational status. However, in a similar population of homeless and low-income women, Alley and colleagues (1998) found a significant relationship between education level (mean of 11 years of education) and the total score on the HPLP II questionnaire.

Age, race/ethnicity, marital status, number of children, and employment status were not associated with health promoting lifestyles on the total score or any of the subscales. This is consistent with the findings of Acton and Malathum (2000) who also reported no associations with similar demographic variables (age, gender, and ethnicity) and health-promoting behaviors. Differing from the findings of this study, Lucas and colleagues (2000) found significant relationships between age, marital status, race, and education with health-promoting behaviors in a study of community dwelling older adult women living in an East Coast community.
In this study, a significant relationship between health index (number of self-reported physical conditions) and health responsibility subscale \((r=0.18)\) reflected that women who identified specific physical problems were cognizant of their problems and practiced more health behaviors directed at addressing their health concerns. Although these findings are considered weak relationships due to the low \(r\)-value, they are within the typical range \((0.10 \text{ to } 0.40)\) for correlations between variables of a psychosocial nature (Polit & Hungler, 1999). In contrast to these findings, Kemp and Hatmaker (1993) found that pregnant women who were at high-risk (had one or more health problems e.g. diabetes, hypertension) practiced significantly less behaviors related to health responsibility than low-risk pregnant women. The findings of significant relationships between the variables of self-reported level of health status, health index (number of physical conditions), and the HPLP II total scores reflect the understanding of the women that positive behaviors can impact their health.

*Health Promotion Model and Homelessness*

The Health Promotion Model provides a framework in the examination of influences on participation in health-promoting behaviors and provides direction for effective interventions. Pender explains that the practice of health-promoting behaviors are influenced by personal characteristics of the individual as well as internal and external influences. Individual characteristics and past experiences are important to assess in order to provide an understanding of the individual. Immediate competing demands have direct effects on the participation of health-promoting behaviors and include issues such as work schedules and availability of childcare. For the homeless, basic needs (shelter, food, safety) can be viewed as competing demands as these take
priority status and must be adequately addressed before health promotion needs can become a focus (Reimer, et al., 1995). Half of the women reported that they had been staying with friends and/or family members being “doubled-up” on a temporary basis before seeking shelter services, validating the research of others (Bassuk, et al., 1997; Bolland & McCallum, 2002; Caton, et al., 2000; Shinn, et al., 1998; Thrasher & Mowbray, 1995; Wagner, et al., 1994; 1995). Housing instability, coupled with the added stress on families who host others and on those who are homeless, suggests that the homeless, prior to seeking shelter services (when “doubled-up”) have unstable support systems. This validates the critical importance of establishment and maintenance of strong social and emotional support networks.

Shelter staff and services can have both positive and negative effects on the practice of health behaviors. For example, an adequate knowledge base of the importance of health-promoting behaviors and recognition of its value can have positive influences on homeless residents to practice healthy behaviors. Additionally, if participation in health-promoting behaviors is rewarded, residents may also value these behaviors and recognize them as benefits to action, as depicted in the HPM. Situational influences are of critical importance as a motivator of action for health-promoting behaviors as depicted by Pender. If opportunities to engage in health-promoting behaviors are not readily available (planned exercise programs, availability of exercise equipment, knowledge about nutritional components, educational offerings related to personal health responsibilities, etc.), it is unlikely that homeless women will participate (Pender, et al., 2002). The decision of one to participate in health-promoting behaviors does not come from one single factor, but from the interaction of many.
B. Conclusions

Homelessness is a critical concern for all communities and will continue to increase as the nation faces uncertainty in unstable economic markets and worldwide events. Homeless women, especially female-headed families, are the fastest growing subgroup of the homeless and reflect great diversity due to geographical influences. Pender’s Health Promotion Model was shown to be an appropriate theoretical framework and the HPLP II was proven a reliable research instrument to be used in this population of sheltered homeless women. Homelessness is not caused by one single factor but by the complex interaction of many factors from diverse perspectives. Homeless women, even though they are experiencing a crisis, possess strengths and are capable and interested in participating in health-promoting behaviors. Shelter-based interventions are needed that address holistic care for physical, psychological, spiritual, and social resources and not just housing, food, safety, and specific disease concerns. The data from this study were instrumental in documenting the diverse characteristics, health and wellness needs, and health care utilization patterns of the local homeless population.

C. Implications for Clinical Practice

This study highlights important implications for nursing, other providers of services for homeless women, and society. Information learned from this study can be used to provide an understanding of the characteristics and needs of sheltered homeless women. The high educational level of this study’s population and their ability to participate in health-promoting behaviors can assist in disbanding stereotypical beliefs of homelessness. Women who have higher levels of education are more likely to better understand the need and rationale for healthy behaviors.
This increased understanding for providers and society may lead to additional programs, services, and heightened accessibility to critical preventive health services. Interventions that support improved lifestyle behaviors will not only assist in the improvement of the health status of this at-risk population, but also will contribute to the overall level of wellness. This possibly could prevent the occurrence and/or exacerbation of health problems related to unhealthy lifestyle, e.g., asthma, high blood pressure.

Nurses are in a key position to impact this vulnerable group by creating and establishing collaborative partnerships designed to implement effective interventions and programs that will enhance the health and well being of homeless women. Development of outreach services to homeless shelters as well as community sites that serve the impoverished (food banks, churches, low-income housing, community centers) is strongly warranted. Further research questions must be generated that explore the numerous variables that impact this population. Nursing education has a responsibility to disseminate knowledge about the homeless to future health care providers and provide experiences that enable students to care for and interact with the homeless. Information must also be shared with other health care providers in acute care and community settings and to the public to enhance a greater understanding of the needs of the homeless. Nurses have a responsibility to affect health policy at all levels in the community to enhance the health and well being of the homeless.

D. Limitations

The findings of this study are affected by several threats to internal and external validity that limit the generalizability of results. Sampling included a cross-sectional design using sheltered homeless women bound by the geographical region. There may
have been some potential bias by subjects when reporting health behaviors related to interpersonal support and spiritual growth since these areas are a focus at some of the sheltered environments. In addition, self-reports were used for all research instruments, which also may affect results. Sample size was moderate and would benefit from a larger number, which would allow statistical comparison between different shelters. Data collection took place over a 5-month period during warm weather (May-September), which may affect daily census in the shelter population and the types of barriers and problems reported.

E. Recommendations

Additional research is needed to confirm and clarify the results of this study. A larger sample size would assist in enhancing the results. Pender’s HPM should continue to be used as a framework to provide direction for further study and direct interventional strategies for homeless women. Model testing of the HPM is indicated in this population and should include other major variables such as perceived self-efficacy. A measure of depression as a personal factor would enhance the understanding of the effects of psychological influences on health-promoting behaviors. Including specific physiological measures such as height, weight, blood pressure readings, and medication history would assist in a more specific evaluation of current health status. Inclusions of these variables for further study could lead to further refinement and development of the HPM.

Studies that examine and compare specific subgroups of homeless women such as women with no children, mothers with their children present, and mothers without children present will further elucidate specific needs of homeless women. Additionally,
comparison of differing racial/ethnic groups represented in this study is indicated. Of critical importance is development of an understanding of why certain ethnic/racial groups, such as Latinas and Asians, are not present in the shelter population but are present in the general population.

Qualitative studies should be undertaken that examine the richness and diversity of the lives of sheltered homeless women including health behaviors and their strengths. One area that is warranted for further study is lack of trust of healthcare providers as reported by the study sample. Other qualitative studies must include a new phenomenon of single homeless fathers accompanied by dependent children.

Living arrangements prior to accessing the shelter system is also an important area to be explored. Studies that investigate women who have come directly from a correctional setting and are now homeless in addition to those doubled-up homeless individuals and families would provide additional clarity to the complexity of factors that occur prior to seeking shelter services.

Future studies should include a comparison between shelters and inclusion of shelters located in rural settings, as the needs may be vastly different. Shelter services should be investigated in more detail and their effects on health behaviors. Identification and study of additional factors that may determine participation in the practice of health-promoting behaviors is warranted. Further work is needed to understand mediating factors of both individual and structural influences such as adverse childhood experiences, public policies, poverty, housing, and employment issues and their relationships to both adult homelessness and health behaviors.
Revisions to the Personal History Form research instrument are warranted and include inclusion of pregnancy status, TB screening in past 2 years, testing for HIV, blood pressure check in past 2 years, information about self-breast exam education, breast exam by health professional in past 2 years, other substance abuse (alcohol and illegal drugs), psychological issues (depression and interpersonal violence), income levels, and public assistance and insurance status.

F. Summary

This was a descriptive cross-sectional study guided by Pender’s Health Promotion Model. This study has expanded the body of knowledge about sheltered homeless women by describing their socio-demographic characteristics and health practices, specifically their participation in health-promoting behaviors. Pender’s HPM is of great value to guide nursing interventions for sheltered homeless women and should be used as a guide to assess current influences and provide services directed at increasing their health. Strengths of this study include a holistic focus supported by the HPM and the use of the HPLP II to measure multidimensional health behaviors including physiological, psychological, social, and spiritual dimensions.

Study findings provide support that homeless women are capable of and are interested in increasing their level of health even though they are experiencing crisis in their lives. Homeless women are in need of interventions that support their participation in health-promoting behaviors and that are accessible, affordable, and appropriate to their needs and lifestyles of being homeless. Adequate access to some type of health care provider was evidenced in this data and supported by high rates of preventive practices indicating that this particular community offers a health care system that is available and
accessible by homeless women who are sheltered. The shelter services in this study include linkages with existing service providers for health care for the impoverished, helping to facilitate service access and utilization. Improved lifestyle behaviors will not only help to enhance the health of this at-risk population, but will contribute to the overall level of health of the community. Social justice must become the guiding force so that all persons, regardless of socio-economic status will have opportunities to increase their level of wellness.
APPENDICES
## Appendix A

### Health Promoting Lifestyle Profile II

**LIFESTYLE PROFILE II**

DIRECTIONS: This questionnaire contains statements about your *present* way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

- N for never, S for sometimes, O for often, or R for routinely

<table>
<thead>
<tr>
<th></th>
<th>NEVER</th>
<th>SOMETIMES</th>
<th>OFTEN</th>
<th>ROUTINELY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discuss my problems and concerns with people close to me.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>2. Choose a diet low in fat, saturated fat, and cholesterol.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>3. Report any unusual signs or symptoms to a physician or other health professional.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>4. Follow a planned exercise program.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>5. Get enough sleep.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>6. Feel I am growing and changing in positive ways.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>7. Praise other people easily for their achievements.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>8. Limit use of sugars and food containing sugar (sweets).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>9. Read or watch TV programs about improving health.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>11. Take some time for relaxation each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>12. Believe that my life has purpose.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>13. Maintain meaningful and fulfilling relationships with others.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>14. Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>15. Question health professionals in order to understand their instructions.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>17. Accept those things in my life which I cannot change.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>18. Look forward to the future.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>19. Spend time with close friends.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>20. Eat 2-4 servings of fruit each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>23. Concentrate on pleasant thoughts at bedtime.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>24. Feel content and at peace with myself.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>25. Find it easy to show concern, love and warmth to others.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>26. Eat 3-5 servings of vegetables each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
</tbody>
</table>
27. Discuss my health concerns with health professionals. | NEVER | SOMETIMES | OFTEN | ROUTINELY
28. Do stretching exercises at least 3 times per week. | NEVER | SOMETIMES | OFTEN | ROUTINELY
29. Use specific methods to control my stress. | NEVER | SOMETIMES | OFTEN | ROUTINELY
30. Work toward long-term goals in my life. | NEVER | SOMETIMES | OFTEN | ROUTINELY
31. Touch and am touched by people I care about. | NEVER | SOMETIMES | OFTEN | ROUTINELY
32. Eat 2-3 servings of milk, yogurt or cheese each day. | NEVER | SOMETIMES | OFTEN | ROUTINELY
33. Inspect my body at least monthly for physical changes/danger signs. | NEVER | SOMETIMES | OFTEN | ROUTINELY
34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking). | NEVER | SOMETIMES | OFTEN | ROUTINELY
35. Balance time between work and play. | NEVER | SOMETIMES | OFTEN | ROUTINELY
36. Find each day interesting and challenging. | NEVER | SOMETIMES | OFTEN | ROUTINELY
37. Find ways to meet my needs for intimacy. | NEVER | SOMETIMES | OFTEN | ROUTINELY
38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day. | NEVER | SOMETIMES | OFTEN | ROUTINELY
39. Ask for information from health professionals about how to take good care of myself. | NEVER | SOMETIMES | OFTEN | ROUTINELY
40. Check my pulse rate when exercising. | NEVER | SOMETIMES | OFTEN | ROUTINELY
41. Practice relaxation or meditation for 15-20 minutes daily. | NEVER | SOMETIMES | OFTEN | ROUTINELY
42. Am aware of what is important to me in life. | NEVER | SOMETIMES | OFTEN | ROUTINELY
43. Get support from a network of caring people. | NEVER | SOMETIMES | OFTEN | ROUTINELY
44. Read labels to identify nutrients, fats, and sodium content in packaged food. | NEVER | SOMETIMES | OFTEN | ROUTINELY
45. Attend educational programs on personal health care. | NEVER | SOMETIMES | OFTEN | ROUTINELY
46. Reach my target heart rate when exercising. | NEVER | SOMETIMES | OFTEN | ROUTINELY
47. Pace myself to prevent tiredness. | NEVER | SOMETIMES | OFTEN | ROUTINELY
48. Feel connected with some force greater than myself. | NEVER | SOMETIMES | OFTEN | ROUTINELY
49. Settle conflicts with others through discussion and compromise. | NEVER | SOMETIMES | OFTEN | ROUTINELY
50. Eat breakfast. | NEVER | SOMETIMES | OFTEN | ROUTINELY
51. Seek guidance or counseling when necessary. | NEVER | SOMETIMES | OFTEN | ROUTINELY
52. Expose myself to new experiences and challenges. | NEVER | SOMETIMES | OFTEN | ROUTINELY
Appendix B
Duquesne University Institutional Review Board Approval

Duquesne University
Institutional Review Board
MEMORANDUM

To: Ms. Margaret E. Wilson
1201 Ashville Drive
Huntertown, IN 46748-9338

From: Mary de Chesnay, Chair, DU-IRB

Re: Protocol # 02-16 “Health Practices of Homeless Women”

Date: March 21, 2002

The committee granted approval for protocol for one year based on the following revisions being made and submitted to my office:

1) The consent forms should be on Duquesne University letterhead – either type Duquesne University on the current consent form or use letterhead attached.
2) On consent form change wording from “homeless mothers” to “homeless women.”
3) If you decide to change your instrument, please submit a revised copy to the IRB office for approval.

Please make these changes and fax a revised copy of the consent form to my office Fax # 412 396-5974.

This approval is effective for only one year. Before the renewal date, you must submit a progress report to the review board detailing the number of participants and any results or side effects occurring during your study. This approval is for the protocol and consent document in their current form. You must obtain approval from the board for any proposed changes in or variations to your protocol/consent prior to their implementation. Any serious or life-threatening complications must be reported immediately to the Chair of the DU-IRB. Any adverse consequences must be reported in writing within 14 days of their occurrence. Upon consent administration, you must furnish a copy of the consent form to each participant, and place a copy in your files and in medical records, if appropriate. Please type the approval date and DU-IRB identification number in the upper right-hand corner of the first page of the consent form. You must maintain copies of your research records for a minimum of three years after your study is completed.

Should there be any questions concerning this, please feel free to contact me at your convenience.

MdC/jw

Cc: Dr. Kathleen Sekula, School of Nursing
Dr. Pat Fedorka, School of Nursing
IRB Files
Appendix C
Administrative Approval

Reverend Patty A. Crisp, M.S.
Executive Director, Charis House

"Where women and children seeking shelter find hope for the future"

May 2002

Meg Wilson
University of St. Francis
2701 Spring Street
Ft. Wayne, IN. 46808

Dear Ms. Wilson,

We are very pleased to participate in your present study. You have our permission to collect data from our current residents at Charis House. If you need anything from us in the future, please feel free to call.

Sincerely,

Toni Lovell, MSW, LSW
Director of Client Services

A Ministry of the Fort Wayne Rescue Mission Ministries
533 West Washington Blvd. • P.O. Box 11116
Fort Wayne, Indiana 46855-1116
Phone: 260-426-8123 • Fax: 260-423-2458
Website: www.homelessministries.org • E-mail: charishouse@homelessministries.org

“A home for the homeless, food for the hungry, and hope for their future through Jesus Christ”
CEDARS HOPE, INC

525 W. Jefferson Blvd.  
Fort Wayne, IN 46802  
(260) 420-6618

527 W. Berry St  
Fort Wayne, IN 46802  
(260) 420-3507

Executive Director  
Anah D. Taylor

Board Officers  
President  
Janel Cain

Vice President  
Mac Gregory

Secretary  
Mary Gilliom

Treasurer  
Drew Dunlvay

Board Members  
Diane Behrens  
Tina Bell  
Jan Blair  
Laura Coon  
Nancy Crowe  
Tammy Dyer  
Sarah Harris  
Bev McCampbell  
Ruth Phillips  
Randy Raypole  
Mary Ann Ziembo

May 10 2002

This is to confirm that Meg Wilson has the permission of Cedars Hope organization and clients to collect data for a research project entitled “Health Practices of Homeless Women”.

Sincerely,
Darlene Emerson Taylor  
Executive Director

CEDARS HOPE, INC. is a non profit organization serving people with serious mental illness by offering permanent Housing. Opportunities for growth and companionship, Personal support, and Encouragement for independence.
May 20, 2002

Meg Wilson, PhD, RN
University of Saint Francis
2701 Spring Street
Fort Wayne, Indiana 46748

Dear Meg:

IHN gives you permission to collect data from the guest of Interfaith Hospitality Network. We are so pleased to participate in your research study, Health Practices of Homeless Women.

Sincerely,

Bea Williams-Tevis
IHN Executive Director
Meg Wilson
University of St. Francis
2701 Spring St
Ft. Wayne, IN 46808

Dear Meg:

Vincent House submits this documentation that your request to conduct confidential
surveys with homeless women living in the transitional shelter was approved for the
purpose of studying health practices of homeless women.

These surveys were completed and submitted to you with full knowledge and consent of
the participants.

We applaud your interest in the subject and would be very interested in reviewing your
final paper.

Sincerely,

M. Ann Helmska
Executive Director
April 10, 2003

University of St. Francis
2701 Spring Street
Fort Wayne, Indiana 46808

To whom this may concern:

With my approval Meg Wilson came to the Women’s Shelter and the Self-Sufficiency Programs of the YWCA’s Domestic Violence Services and facilitated the completion of surveys that identified depression with women of both programs.

Sincerely,

Oceiva Williams
Director of Domestic Violence Services of
The YWCA of Fort Wayne, In
May 18, 2002

Meg Wilson
University of St. Francis
2701 Spring St.
Fort Wayne, IN. 46808

Dear Ms. Wilson,

Second chance would gladly like to participate in the Health Practices of Homeless Women study that you will be conducting. You have our permission for the residents of Second Chance to be involved in this study and collect any data that you might need. We hope that this study will help homeless women with their many needs involving health care. Good luck, look forward to hearing from you in the near future.

[Signature]

Clydia Early-Oladuwa, Director, Second Chance

* helping women help themselves*
April 9, 2003

Meg Wilson
University of St. Francis
2701 Spring Street
Fort Wayne IN 46808

Dear Meg:

This letter acknowledges that you collected data for your research project on the health status of homeless women from women enrolled in Transitions, a residential substance abuse treatment program of the Fort Wayne Women’s Bureau, in May, 2002. This data was collected with the prior knowledge and consent of the agency management, and with the informed consent of the women who chose to participate.

Sincerely,

Ronnie Greenberg
President/CEO
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE: Health Practices of Homeless Women

INVESTIGATOR: Meg Wilson, PhD(c), RN
Department of Nursing
University of Saint Francis
Fort Wayne, Indiana 46808
(260) 434-3182

ADVISOR: L. Kathleen Sekula, PhD, RN
School of Nursing
Duquesne University
(412) 396-4865

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in nursing at Duquesne University.

PURPOSE: You are being asked to participate in a research project that seeks to investigate health practices of homeless women. You will be asked to complete two pencil and paper forms that will take approximately 30 minutes. These are the only requests that will be made of you. This study will help nurses and other health care professionals understand healthy behaviors and other characteristics of homeless women.

RISKS AND BENEFITS: There are no known risks, discomforts, or adverse side effects associated with this study. Your decision to participate or not participate will in no way affect the services provided by the shelter.

COMPENSATION: Each participant will receive an appreciation gift of $5.00 and an age appropriate book/toy for each child residing with you. Participation in the project will require no monetary cost to you. An envelope is provided for return of your response to the investigator.
CONFIDENTIALITY: Your name will never appear on any survey or research instruments. No identity will be made in the data analysis. All written materials and consent forms will be stored in a locked file in the researcher's home. Your responses will only appear in statistical data summaries. All materials will be destroyed at the completion of the research.

RIGHT TO WITHDRAW: You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time.

SUMMARY OF RESULTS: A summary of the results of this research will be supplied to you, at no cost, upon request.

VOLUNTARY CONSENT: I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason. On these terms, I certify that I am willing to participate in this research project.

I understand that should I have any further questions about my participation in this study, I may call Dr. Mary de Chesnay, Chair of the Duquesne University Institutional Review Board (412-396-6553).

Participant's Signature _____________________ Date

Researcher's Signature _____________________ Date
Appendix E
Personal History Form

PERSONAL HISTORY FORM

AGE

RACE/ETHNIC BACKGROUND

____ White
____ African-American
____ Latina
____ Asian
____ Native American
____ Other (please specify)

MARITAL STATUS

____ Single (never been married)
____ Married
____ Separated
____ Divorced
____ Widow

EDUCATION

____ College degree
____ Some College
____ Trade/Vocational School
____ High school degree
____ Some high school
____ 8th grade or less

CHILDREN

How many children do you have? _____

List their ages and where they are staying (with you, foster care, with friends, with family, adopted by another family)

<table>
<thead>
<tr>
<th>AGES</th>
<th>WHERE STAYING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

EMPLOYMENT STATUS

____ Full time
____ Part time
____ Not employed
HEALTH

How would you describe your health?
____ Excellent
____ Very good
____ Good
____ Fair
____ Poor

Where do you go for health care?
____ Doctor’s office
____ Public clinic
____ Emergency Room
____ Nowhere

When did you have your last?
Pap test _____ Less than 2 years ago
____ More than 2 years ago
____ Never

Mammogram _____ Less than 2 years ago
____ More than 2 years ago
____ Never

When did you last visit?
The dentist _____ Less than 2 years ago
____ More than 2 years ago
____ Never

Eye doctor _____ Less than 2 years ago
____ More than 2 years ago
____ Never

Doctor _____ Less than 2 years ago
____ More than 2 years ago
____ Never

Do you currently use tobacco?
____ Yes _____ No

If yes, how much? _________________________

What kind? ________________________________

Do you have or have you had:
Asthma _____ yes _____ no
Chronic Bronchitis _____ yes _____ no
High Blood Pressure _____ yes _____ no
Heart Disease _____ yes _____ no
Ulcer _____ yes _____ no
Cancer _____ yes _____ no
Arthritis _____ yes _____ no
Diabetes (High Sugar) _____ yes _____ no
Sexually Transmitted Diseases
What prevents you from getting health care?
___ Lack of Money
___ Lack of Transportation
___ Unsure where to go
___ Nervous or afraid
___ No childcare
___ Don’t trust doctors and/or health care providers
___ Don’t trust nurses
___ Problems with language
___ Nothing
___ Other, please list ___________________

HOMELESS HISTORY
Date you came to the shelter ___________

What are the reasons for being homeless at this time?
___ Physical illness
___ Emotional or mental illness
___ Drugs/alcohol
___ Violence
___ Legal problems
___ Relationship problems/conflict
___ Loss of job
___ Eviction/lack of funds to pay rent
___ Other: Please list

What were your living arrangements before coming to the shelter?
___ Staying with family/friends: for how long? ___
___ Own apartment or house: for how long? ___
___ Hotel: for how long? ___
___ On the street: for how long? ___

Have you ever been homeless before?
___ yes ___ no
If so, when and for how long? __________

Were you in any type of foster care as a child?
___ yes ___ no
If yes, for how long? __________
Appendix F
Permission to use the HPLP II

PERMISSION FORM

I plan to use the *Health-Promoting Lifestyle Profile II* in a research or evaluation project entitled: 

*Health Practices of Homeless Women*

I am enclosing a check for ten US dollars ($10.00) payable to the University of Nebraska Medical Center College of Nursing.

Margaret F. Wilson
Print Name

Doctoral student
Position

Duquesne University
Mailing Address

1201 Ashville Drive
Huntertown, IN 46748-9338

Permission is granted to the above investigator to copy and use the *Health-Promoting Lifestyle Profile II* for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in any way and the copyright/permission statement at the end is retained. The instrument may be reproduced in the appendix of a thesis, dissertation or research grant proposal without further permission. Reproduction for any other purpose, including the publication of study results, is prohibited without specific permission.

Susan Noble Walker
Date

Please send two signed copies of this page to:

Susan Noble Walker, Ed.D., R.N., F.A.A.N.
College of Nursing
University of Nebraska Medical Center
985330 Nebraska Medical Center
Omaha, Nebraska 68198-5330
Appendix G
Letter to Homeless Shelters

May 3, 2002

Dear

It was a pleasure to talk with you on the telephone recently about my research project, *Health Practices of Homeless Women*. For your review I have enclosed a brief outline of the project, written consent/explanation, and the research instruments to be used. This project is funded in part by the St. Joseph Community Health Foundation and has been approved by the Duquesne University Institutional Review Board, at which I am a doctoral student completing my PhD in nursing. After your review of the enclosed materials I would like to schedule a meeting with you and other interested parties in your organization to answer questions and receive your support.

I am deeply committed to the improvement of our community’s health, especially with those who are vulnerable, underserved, and impoverished. Throughout my professional nursing career I have focused on the care of underserved populations though my role as a professor of nursing at the University of Saint Francis (since 1989) and volunteer work with diverse community agencies. I have also been currently retained as a consultant for the St. Joseph Community Health Foundation. Additionally, I have been actively involved in the yearly planning and implementation of the annual Healthy Cities Health Fair for the under and uninsured in our community, served on the Board of Directors of the Fort Wayne Healthy Cities Committee (1990-1996), and have provided consultation services to Miss Virginia’s Mission House (2000-2001).

Thank you for your interest in this important research project. I will telephone you soon to schedule an appointment to further discuss this project. Please do not hesitate to contact me at any time at the numbers or email listed below.

Sincerely,

Meg Wilson, MS, RN
(260) 434-3182 (office)
(260) 434-7404 (fax)
(260) 434-6408 (home)
mwilson@sf.edu

Enclosures
REFERENCES


