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Health and Health Care Disparities among Homeless Women

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Abstract

While disparities in health and health care between vulnerable (e.g., minorities, low income) and majority populations are well documented, less is known about disparities within these special populations that are large and diverse. Such knowledge is essential to determine the most needy within these generally needy populations and to plan interventions to reduce their health and health care disparities. With data from 1,331 women residing in Los Angeles County, in one of the largest, most comprehensive studies of the health of homeless women to date, we examined the health and health care disparities among homeless African American, Latina and white women. We further explored if race/ethnicity and other factors that predispose homeless women to poor health or enable them to obtain better health care were associated with their unmet need for medical care. We found that white, non-Latina women were more likely to report unmet need than African Americans and Latinas, and women suffering from drug abuse, violence, or depression were most in need of care. These findings should be considered in targeting and addressing the special needs of homeless women of different racial/ethnic groups.

Keywords

homeless women; disparities; health; health care

Introduction

The elimination of health and health care disparities for vulnerable populations is a major health policy objective in the U.S. (U.S. Department of Health and Human Services, 2000). The extent of these disparities is quite well-documented for vulnerable populations typically defined by their low income and minority status (Agency for Healthcare Research and Quality, 2008; Hebert, Sisk, & Howell, 2008; Kilbourne et al., 2006; Morales & Ortega, 2007; Yancey, Bastani, & Glen, 2007). Of special concern are vulnerable population subgroups in the United States today defined by the punishing environments in which they live, their risky and unhealthy life styles and the illnesses and injuries that afflict them (Aday, 2001). These subpopulations include refugees and immigrants, people living with acquired immunodeficiency syndrome (AIDS), alcohol and substance abusers, high-risk mothers and infants, victims of family or other violence, and the chronically or mentally ill. Among these vulnerable sub populations, one with some of the greatest health and health care disparities, is the homeless.

Health and health care disparities for the homeless are particularly distressing for homeless women. Compared to the general population of women, homeless women's health disparities include higher rates of mortality, poor health status, mental illness, substance abuse, victimization, and poor birth outcomes (Arangua & Gelberg, 2007; Schanzer et al., 2007). Regarding health care, homeless women are less likely to have a regular source of care, health insurance, cancer screening, adequate prenatal care, appropriate ambulatory care, and specialty care for specific disorders (Arangua & Gelberg, 2007; Gelberg et al., 2009; Kim et al., 2006; Weinreb et al., 2006).

While all homeless women are vulnerable and experience health and health care disparities, they are diverse in many ways. Early on, Milburn and D'Ercole (1991) documented their diversity in race/ethnicity, age, and circumstances that may have led them into or out of homelessness. More recently, some studies have been conducted that shed light on how these differences might be related to health and health behavior. For example, being partnered or married has been associated with greater distress among African American and white homeless women, and experiencing competing needs (difficulty finding a place to sleep at night, enough food to eat, a place to wash, or a place to go to the bathroom) has been observed to predict mental distress for African American and Hispanic homeless women (Austin, Andersen & Gelberg, 2008). In other studies of homeless women, family closeness was found to be a significant protective factor against daily alcohol use for African Americans and high-acculturated Latinas and for daily drug use among low-acculturated Latinas, and negative peer influence in adolescence predicted daily drug use among high-acculturated Latinas (Nyamathi et al., 2001). Active coping was observed to be associated with fewer general (sexual) AIDS risk behaviors for both African American and Latina women, and less drug use behavior among African American women (Nyamathi, Stein & Brecht, 1995).

Prior literature on racial/ethnic disparities in unmet need for health care among homeless women exists, but leaves unclear answers to important questions about disparities that should be considered in the identification and provision of services and care for different subgroups of these women. For example, some measures of health and health care disparities among homeless women indicate non-Hispanic whites are actually worse off than minority groups. One study of homeless women in Los Angeles suggested that whites appear to be the most vulnerable racial/ethnic subgroup compared to African Americans and Hispanics. Whites were most likely to report sexual abuse in childhood, physical abuse recently and in childhood, lifetime mental health hospitalization, serious medical symptoms, and lack of a regular source of care (Gelberg et al. 2009). Further, in unadjusted analyses, the study showed that compared to whites, African Americans were less likely to have unmet need for medical care, Hispanics had similar unmet need, and other racial/ethnic groups had more unmet need. However, in adjusted analyses, no effects were observed according to race/ethnicity in an earlier publication (Lewis et al., 2003). While unadjusted hospitalization rates were higher for homeless white women than for minorities, race/ethnicity showed no effect in multivariable regression analysis on the number of ambulatory care visits, hospitalization, and number of health screens (Gelberg, et al., 2009; Lim et al., 2002). Thus, previous research demonstrates the importance of adjusted analyses in identifying differing needs among diverse racial/ethnic groups of homeless women.

The present study sought to provide data to increase our understanding of racial/ethnic disparities among homeless women by comparing African Americans, Latinas and whites according to a broad range of population, health and health care measures. In addition, we selected one health care measure (not seeing a doctor when perceived necessary), for further multivariable analyses to examine because it is generally considered a key measure of access to and disparities in health care (Aday & Andersen, 1975; Andersen & Davidson, 2007;

Institute of Medicine, 1993). The specific objectives of this study were to answer the following questions: (1) What were the background characteristics of the homeless women in the sample according to their race/ethnicity? (2) What were the health and health care disparities of the homeless women according to their race/ethnicity? (3) How were race/ethnicity and other background and health characteristics related in a multivariable analysis to the unmet need of homeless women for health care?

This study contributes new information and deepens our understanding of disparities among homeless women by examining and identifying areas of health and health care needs where racial/ethnic groups may differ. Further, while a limited number of studies have investigated racial/ethnic disparities in unmet need among homeless women, this study extends the findings on unmet need and also contributes new information on the effect of race/ethnicity on a range of health and health care disparity measures. The findings are essential in developing a more targeted, rather than a one-size-fits-all approach, to meet the specific health and health care needs of different subgroups of homeless women, including racial/ethnic subgroups.

Methods

Study Participants

Data for the "Decision-making Regarding Drug Use among Homeless Women" study (DMS) were collected from 1994-1996. The DMS recruited a purposive sample of 1,344 homeless women (age 18 years or older) from 51 traditional or sober-living shelters or through street outreach in or near the Southwestern area of Los Angeles, and from 12 shelters or through street outreach in two additional areas of Los Angeles County: the San Fernando Valley (7 sites) and Pasadena (5 sites). Women were recruited through presentations provided by research staff to groups or on an individual basis. All those who expressed an interest in participating in the study notified the project nurses and outreach workers. Those who met the inclusion criteria (aged 18 or over and homeless) were provided with information about the study and asked to read and sign an informed consent form. A homeless woman was defined as one who had spent the previous night in a shelter, hotel, motel, or home of a relative or friend and who was uncertain as to her residence in the next 60 days or stated that she did not have a home or house of her own in which to reside. Ninety percent of the selected shelters agreed to participate, and 90-94% of women approached were eligible for the study. Ninety six percent of women who met the study's eligibility criteria also agreed to participate after completing the recruitment and informed consent process. For this study, the original sample of 1,344 was reduced to 1,331 women who identified themselves as African American, Latina or white. The study was approved by the University of California, Los Angeles, Institutional Review Board. See Nyamathi et al. for details on sampling design and procedures (Nyamathi, Leake, & Gelberg, 2000).

Variables

Our analysis employed the Behavioral Model for Vulnerable Populations, especially developed for homeless populations (Gelberg, Andersen, & Leake, 2000). The Gelberg-Andersen Behavioral Model is a specialized and expanded version of the Andersen Behavioral Model (Andersen, 1995), which originally described relationships among predisposing, enabling and need factors found in the general population in explaining health services utilization. The original model has been used in a wide variety of contexts such as predicting emergency room use (Padgett, Struening, & Andrews, 1990; Padgett, Struening, Andrews, & Pittman, 1995) and patient satisfaction (Swanson, Andersen, & Gelberg, 2003). The expanded Gelberg-Andersen model not only incorporates the normative predisposing characteristics that exist prior to the perception of illness (e.g., race, education, age),

enabling resources that facilitate or impede use of services (e.g., having a regular source of care), and the need variables pertaining to physical illness, but also includes specific vulnerabilities found especially prevalent among homeless people such as substance abuse, mental illness, severity of homelessness and competing needs that lead to significant barriers to obtaining health care (e.g., Kushel, Gupta, Gee, & Haas, 2006; Lewis et al., 2003; Stein, Andersen, & Gelberg. 2007). In this study, we used the expanded Behavioral Model to address the three research questions using secondary analysis of the DMS data set.

We provide univariable statistics for measures of predisposing and enabling characteristics to evaluate these characteristics of homeless women by race/ethnicity. Race/ethnicity was categorized as white, African American, and Latina. The predisposing and enabling variables included:

Predisposing demographics—age; years of education; number of children; currently pregnant, married or currently partnered; current full- or part-time work; history of ever having spent any time in jail or prison; and social support (number of friends, categorized as more than two friends vs. fewer friends; Koegel & Burnam, 1991).

Predisposing homeless history—the place where respondents spent most of their nights during the past 30 nights, divided into six categories: (a) traditional housing (including home, apartment, staying with friends, staying with family) (b) shelter or institution (including mission, homeless shelter or transition program, boarding house, hotel paid by vouchers) (c) residential drug treatment program (d) limited housing (including cars, abandoned buildings, theaters, indoor public places) (e) the street (including other outdoor places), and (f) other; as well as having multiple episodes of homelessness (Koegel & Burnam, 1991).

Predisposing victimization history—physical or sexual assault before the age of 18 years (or before the respondent began living on her own; Koegel & Burnam, 1991).

Predisposing mental health—Self-esteem was measured by a revised version of the Coopersmith (1967) Self-esteem Inventory. Responses to the 23 items in the scale were summed to form a scale score with a range of 0 to 23.

Predisposing substance use—Injection drug use was determined by asking the respondents whether they had used needles to inject drugs during the past 6 months.

Enabling—whether respondents were currently receiving public assistance (e.g., food stamps, aid to families with dependent children) and income from family or friends. (Access to insurance factors was not available.)

The health disparities (need) variables included having an alcohol problem, which was defined as alcohol use at least 4 times every day for the past year, and having a drug problem, which was defined as self-reported daily (using at least once a day) use of illegal drugs for the past year. Based on the Drug History Form (Simpson, 1992), drugs included alcohol, marijuana, hallucinogens, crack/freebase, other cocaine, heroin, and street methadone. Items included lifetime use and frequency of use. Using this form, test-retest reliability for daily narcotic use and abstinence was in an acceptable range of 0.63 to 0.71 (Anglin et al., 1996; Dowling-Guyer et al., 1994). The women were also asked if they were ever told by anyone that they had a sexual disease, and if they had been physically or sexually assaulted as a child or as an adult or since living on their own (Koegel & Burnam, 1991). Women's psychological well-being was based on the five-item RAND Mental Health Index (MHI-5; Berwick et al., 1991; Rost, Burnam, & Smith, 1993; Wells et al., 1989).

Higher scores (0 to 100 range) indicated greater well-being. Other measures included history of hospitalization for mental illness, depression during the past year, which was assessed by a shortened version (Zima et al., 1996) of the Diagnostic Interview Schedule (DIS) screener (Robins et al., 1981), any bodily pain in the past month, and perceived general health status (fair or poor vs. other) (Ware & Sherbourne, 1992).

The health care disparities variables included unmet need for general medical care, based on a dichotomous self-perceived measure: during the past year, was there was a time when the woman would have liked to have seen a doctor or nurse or go to a hospital or clinic for a physical illness or injury but did not; any hospitalizations (overnight or longer) during the past year; any outpatient physician visits in an office, clinic, or emergency room during the past year; human immunodeficiency virus (HIV) test in the past six months; Pap smear during the past year; and tuberculosis (TB) skin test during the past year.

For our third research question, we employed the Behavioral Model in a multivariable analysis to examine the independent effects of race/ethnicity and important predisposing, enabling and need model components on unmet need for health care.

Many of the variables described in this section have been used in previous studies and tested for reliability and validity, as documented above. The remaining variables are commonly employed, have face validity, were pretested for this study, and were collected with a structured survey.

Data Analyses

To determine sample differences as a function of race/ethnicity, we first examined unadjusted associations between race/ethnicity and selected variables (predisposing and enabling variables, health disparities/need and health care disparities/use of services). Associations involving categorical variables were assessed with chi-square tests. Analysis of variance was used to describe relationships between race/ethnicity and continuous variables.

For the multivariable analysis, we first examined the correlations between unmet need for health care and the predisposing, enabling and need variables. Variables that were associated with unmet need at the $p > .15$ level were eliminated from subsequent analysis, and the rest were entered into a stepwise backward logistic regression analysis. Variables that were significant at the $p < .10$ level were retained in the final model. Variables in the final model were tested for multicollinearity and the model goodness of fit was measured with the Hosmer-Lemeshow test.

Findings

1. What were the Background Characteristics of the Homeless Women?

Total Sample—Two-thirds of the sample were current substance users (reported using an illegal drug and/or alcohol in the past three months), and the sample roughly represented the racial/ethnic distributions of homeless women in the study area shelters. The demographic profile showed that a large majority of the sample were racial/ethnic minority – almost one-half were African American and 30% were Latina (Table 1). Typically, the women had experienced repeated episodes of homelessness, and had stayed in shelters. Their average age was 33 years and each averaged two children. The majority had not completed high school, only a tenth worked full- or part-time, and almost half had been incarcerated. Overall, the sample was predisposed to poor health. Almost a third of the women had been victimized, either physically or sexually, as children. Women frequently indicated having low self-esteem, and approximately one in ten reported injection drug use. Concerning enabling factors that might facilitate receipt of medical care, almost three-quarters of the

sample were receiving public assistance and 10% received income assistance from friends/family.

Race/ethnicity—Statistically significant differences ($p < 0.001$) were observed in the predisposing measures by race/ethnicity with respect to pregnancy status, marital status, employment status, history of incarceration, usual place to stay, childhood physical and sexual abuse and injection drug use (Table 1). Latinas differed most from the other ethnic groups on the predisposing and enabling measures. A greater percentage of Latinas than of whites and African Americans reported being married or currently partnered, working, not having been incarcerated, and having stayed in shelters during the 30 days prior. They also had the lowest percentage reporting physical and sexual abuse as children, and the greatest percentage who said they had injected drugs. White and African American women were most likely to have had histories of incarceration. Whites were most likely of all groups to have lived on the street during the past 30 days, and to report having been physically abused as children. A greater percentage of African American than of white or Latina women reported staying in treatment programs 30 days prior and being sexually abused as children. Differences among the three subsamples were also observed with respect to the enabling factors. African Americans had the highest percentage of women reporting public assistance, while whites had the highest percentage reporting income assistance from family and friends.

2. What were the Health and Health Care Disparities of Homeless Women According to their Race/ethnicity?

Large health disparities were observed among the racial/ethnic subsamples, but the differences often showed whites, rather than non-whites, to be most disadvantaged (Table 2). White women had the highest proportions reporting alcohol and drug problems during the past year, physical and sexual assaults as adults, recent depression, and bodily pain. They also had low psychological well-being scores and a relatively high prevalence (along with African Americans) of hospitalization for mental illness. African Americans generally occupied an intermediate position with respect to health and health care measures numerically (less than whites but more than Latinas). Latinas reported the best health according to most measures, and only 1 in 3 reported their general health status as fair or poor, compared to about 2 in 5 whites and African Americans.

Regarding health care disparities, a greater proportion of white women reported unmet need for medical care (57%) than African Americans (22%) and Latinas (10%) (Table 2). Latinas had the lowest proportion using health care services (Table 2). They were less than half as likely to have been hospitalized in the last year as whites and African Americans. They also had the lowest percentages reporting any outpatient physician visits and preventive HIV and TB tests. Along with whites (53% each), Latinas also had relatively low percentages reporting a Pap smear within the last year compared to African Americans (71%).

3. How were Race/ethnicity and Other Background and Health Characteristics Related in a Multivariable Analysis to the Unmet Need of Homeless Women for Health Care?

Unmet need is an important potential measure of health care disparities and access to care as it directly links physician visits to perceived need (Adams, Lucas, & Barnes, 2008). Because we observed a large disparity in reporting unmet need between whites (higher) and minorities (lower), we wanted to see if it persisted when controlling for other variables in the Behavioral Model. Even after controlling for the predisposing, enabling and need variables (from Tables 1 and 2) that were at least weakly associated with unmet need in a multiple logistic regression analysis, the odds that whites would report unmet need were about twice that for African Americans and five times that for Latinas (Table 3). Some other

predisposing, enabling and need variables were also associated with unmet need in the adjusted analysis. Women with drug problems, those who had been physically and/or sexually assaulted, those suffering from depression, and those receiving income assistance from family/friends had significantly higher odds of reporting unmet need.

Discussion

1. Predisposing, Enabling and Need Conditions Threaten the Health and Health Care of All Homeless Women, and May Vary According to Race/ethnicity

The demographic profile of the sample was similar to that of other large local (Gelberg et al., 2009; North & Smith, 1993; Weitzman, Knickman, & Shinn, 1992; Winkleby & Boyce, 1994) and national (Burt et al., 1999) samples of homeless women. While the emphasis in this article has been on health and health care disparities among homeless women, our findings remind us that homeless women of all racial/ethnic groups face major threats to their health and access to appropriate medical care. These findings confirm those of other studies, which have documented homeless women's predisposition to poor health (Burt et al., 1999; Culhane, Avery, & Hadley, 1998; Gelberg et al., 2009; North & Smith, 1993; Robertson, 1991; Weinreb, Goldberg, & Perloff, 1998; Weitzman et al., 1992; Winkleby & Boyce, 1994). Housing instability, itself, significantly reduces health, access to health care and use of acute care services (Reid, Vittinghoff, & Kushel, 2008). High levels of childhood victimization (physical and sexual abuse), poor self-esteem, history of incarceration are common to all homeless women; and their enabling resources to meet their needs are often limited (e.g., to public assistance).

While overall, the homeless women in the sample showed similar background characteristics, upon closer examination and by comparing racial/ethnic subgroups, differences and patterns emerged that confirmed the heterogeneity of the population (Milburn & D'Ercole, 1991). For example, Latinas compared to white and African American women in the sample showed some of the lowest and highest values for predisposing variables (e.g., lowest percentage reporting physical and sexual abuse as children, highest percentage of not having been incarcerated, and having injected drugs). Racial/ethnic differences were also observed with respect to enabling factors in terms of African American women having the highest percentage reporting public assistance, while whites had the highest percentage reporting assistance from family and friends. These differences among the racial/ethnic subsamples on predisposing and enabling factors have implications for outreach (e.g., Latinas were most likely to have stayed in a shelter, whereas one third of whites reported living on the streets) and the type of targeted services that different subgroups of homeless women may need (e.g., drug treatment services for Latinas, legal assistance for whites and African Americans).

2. Health and Health Care Disparities among African American, Latina and White Homeless Women

The racial/ethnic health disparities (need variables) found for homeless women are often not as usually characterized for the general population, i.e., suggesting minorities are most needy. Rather, our results showed that white women were especially needy by many of our health measures (Table 2). Thus, whites were most likely to report alcohol and drug problems during the past year, compared to African American women and Latinas. White homeless women also reported the most physical and sexual assault, depression, and bodily pain, followed by African Americans, with Latinas being the least likely to report such needs. Our findings are in accord with other studies of homeless women, which found that whites were also more likely than African Americans and Latinas to be in poor health (Gelberg et al., 2008). The apparent reversal of race/ethnicity differences in homeless

women compared to the general population may be explained partly in terms of women's pathways to homelessness. Perhaps co-occurring substance use (Nyamathi et al., 2001) and mental health problems (Austin, Andersen & Gelberg, 2008) in white women has a stronger contribution to their homelessness, while African American women and Latinas may be more likely to become homeless because they are unable to find affordable housing (Stein, Andersen, & Gelberg, 2007). Lewis, Andersen, and Gelberg (2003) have suggested that high vulnerability may "neutralize" race/ethnicity as a correlate of need, while Padgett et al. (1990) propose that homelessness, in particular, has "a leveler effect."

Some of our health disparities measures also showed differential risk between the ethnic minority groups. African Americans were more likely than Latinas to report alcohol and drug problems. African Americans also had the greatest prevalence of sexually transmitted disease, followed by whites, with Latinas being at risk the least. Clearly, more research needs to be done to understand better the meaning of the health disparities discovered across racial/ethnic groups. Still, the results suggest that the health needs differ among ethnic/racial groups of homeless women and health care services for each group should be adjusted accordingly.

While Latinas were generally least likely to have health disparities, they were most likely to have health care disparities according to most of our utilization measures. That is, they were generally less likely to report a recent hospitalization (reflecting, in part, their relatively better scores on health measures), a physician visit, and preventive tests (HIV, TB) than African Americans or whites. While some of Latinas' lower utilization rates might be explained by their relatively higher scores on many health measures, they are still a needy population. Latinas' relatively low use of physicians and screenings is of concern as it may lead to undetected disease and lack of monitoring and control of chronic disease problems. The higher rates of hospitalization for African Americans and whites suggests that a harsh environment, unhealthy lifestyle, and lack of enabling resources, such as having a regular source of care and health insurance, leads to acute illness episodes, trips to emergency rooms and hospital admissions (Gelberg et al., 2009).

3. Other Predisposing, Enabling and Need Variables Associated with Unmet Need for Health Care by Race/Ethnicity

Because of the importance of unmet need as a potential measure of health care disparities and due to the large health disparity in unmet need we discovered between white and racial/ethnic minority homeless women in our sample, we conducted a multiple logistic regression analysis of unmet need. We found that even controlling for the important predisposing, enabling and need variables of the Behavioral Model, homeless white women were still much more likely to report unmet need than African Americans or Latinas. Other research on homeless women has similarly reported that whites were in worse health than were Latinas or African Americans (Gelberg et al., 2009; Stein, Andersen, & Gelberg, 2007) and African Americans were less likely than whites to have unmet need for care (Lewis, Andersen, & Gelberg, 2003). Further, in one national sample of homeless men and women, the proportion of African Americans and Latinos with unmet need was less than that for non-Latino whites, although not significantly different at the .05 level (Kushel, Vittinghoff, & Haas, 2001). Thus, our multivariable analysis strengthens the evidence suggesting that white homeless women might need to be especially targeted for efforts to identify and respond to their unmet need for physician services.

Several limitations of the study should be noted. First, as the study design was cross-sectional, we could not assess causality or temporality of the associations observed. Second, the study used only self-reported measures so that validity of responses could not be assessed. However, research has shown that homeless persons are reasonably accurate in

recalling and reporting health care information (Gelberg & Siecke, 1997), although they may be less accurate in reporting some potentially stigmatizing information, such as drug use or related behaviors. Third, the data were relatively old, having been collected more than a decade ago. Results may thus be conservative in their estimates of the unmet need for primary care and other health needs that homeless women face, especially given policy changes that have increased homelessness and reduced rates of insurance and accessible care for poverty populations (Bustillo, 2002; Wilson, 2002). We expect that unmet need for primary care and health needs in general will only be stronger in the current environment in which many local and state economies are in retrenchment due to economic crises and other world events that have diverted funds from health and social services to other priorities such as national, state and local security and failing financial institutions. Los Angeles County's safety net system has been shrinking over the past decade, resulting in numerous clinic and hospital closures. However, with the recent passage of health care reform, some women may become insured in the foreseeable future. Although these data are somewhat dated, they still provide some of the most comprehensive information available on the health and health care disparities of homeless women according to race/ethnicity. Fourth, results may not be generalizable to homeless women across the country, even though Los Angeles is referred to as the "homeless capital of the United States" (Wolch & Sommer, 1997, p. 390). We still found many similarities comparing the predisposing, enabling and need characteristics of our sample with other samples of homeless women that are more recent and/or provide information for the nation or other locales. Last, some variables used in the study were not obtained from standard instruments; however, they have been assessed previously for content validity.

This study utilized data from 1,331 individuals residing in Los Angeles County in one of the largest, most comprehensive studies of the health of homeless women to date. Further research might also clarify how results might differ by type and locale of sample (e.g., degree of mental illness), what other predisposing, enabling and need variables might be included in the analysis (e.g., evaluated as well as perceived need measures), and how might the variables already included in the analysis be better measured (e.g., include level and type of drug use). The multivariable analysis also identified other groups of homeless women with high levels of unmet need for medical care that could particularly benefit from targeted efforts to reduce that need. These include women with drug problems, those who have been physically or sexually abused, those who receive public assistance, and those suffering from depression. Further, because it was specifically designed to recruit African Americans, Latinas and whites, the study sample is comprised of relatively large subsamples of three of the major racial/ethnic groups in the Los Angeles area. Data are limited on the relationships between health and health care measures and race/ethnicity for vulnerable populations. More detailed analysis investigating health and health care disparities refines what is known while adding new findings related to a number of variables that had not been examined prior. Thus, the study contributes important information that may help to inform approaches to improve the health and health care and reduce unmet need of homeless women in general, while also highlighting the need and importance of examining the unique characteristics, health and health care needs and the relationships between them according to the different racial/ethnic subgroups of homeless women.

Acknowledgments

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Table 1

Predisposing and Enabling Characteristics of Homeless Women, by Race/ethnicity (N=1,331)

Predisposing and Enabling Variables	White (N=278)	African American (N=648)	Latina (N=405)	Total (N=1331)
Predisposing				
Demographics				
Age (years), Mean(SD)	33.2(9.0)	34.6(8.3)	30.5(9.2)	33.0(8.9)
Years of education, Mean(SD)	11.8(2.2)	11.9(1.8)	9.5(2.9)	11.2(2.5)
Number of children, Mean(SD)	1.5(1.7)	2.4(2.1)	2.0(1.9)	2.1(2.0)
Currently pregnant, % [***]	5	9	3	7
Married or currently partnered, % [***]	24	25	35	28
Working full- or part-time, % [***]	4	9	15	10
History of incarceration, % [***]	51	53	27	45
Having social support (>2 friends), %	44	48	40	45
Homeless History				
Usual place to stay, past 30 days, % [***]				
Traditional housing	18	22	6	16
Shelter	36	50	76	55
Treatment program	9	15	8	12
Limited housing	1	2	0	1
Street	33	10	9	14
Other	4	1	1	1
Multiple episodes of homelessness, %	46	40	41	42
Victimization History				
Physically abused as a child, % [***]	40	26	20	27
Sexually abused as a child, % [***]	30	36	21	30
Mental Health				
Self esteem score, Mean(SD)	9.7(5.2)	11.4(4.7)	11.1(5.4)	11.0(5.1)
Substance Use				
Injection drug use, past six months, % [***]	14	4	25	12
Enabling				
Public assistance, % [***]	68	79	62	72
Income assistance from friends/family, % [*]	14	9	9	10

SD = Standard deviation;

[*] p <0.05;

[**] p <0.01;

[***] p <0.001

Table 2
Health and Health Care Disparities of Homeless Women, by Race/ethnicity

Health and Health Care Disparities Variables	White (N=278)	African American (N=648)	Latina (N=405)	Total (N=1331)
Health Disparities (Need variables)				
Alcohol problem, past year (%)***	32	28	15	25
Drug problem, past year (%)***	64	59	45	56
Sexually transmitted disease (%)***	32	37	13	29
Physically assaulted as an adult (%)***	47	34	24	34
Sexually assaulted as an adult (%)***	41	35	15	30
Mean psychological well-being (SD)***	50.7 (21.8)	58.6 (21.2)	69.2 (22.2)	60.2 (22.6)
Hospitalized for mental illness (%)***	19	18	7	15
Depression, past year***	48	27	19	29
Having bodily pain, past month (%)*	68	59	58	60
Health status fair or poor health (%)*	41	40	33	38
Health care Disparities (Utilization variables)				
Physician/Hospital care				
Unmet need for general medical care, past year (%)***	57	22	10	23
Hospitalization, past year (%)***	31	29	14	25
Any outpatient visits, past year (%)***	55	56	43	52
Preventive services				
HIV test, past 6 months (%)***	54	58	25	47
Pap smear, past year (%)***	53	71	53	62
TB test, past year (%)***	54	68	47	59

SD = Standard deviation;

*
p <0.05;

**
p < 0.01;

***
p < .001

Table 3

Multiple Logistic Regression Analyses for Perceived Unmet Need for General Medical Care among Homeless Women (N = 1,281)

Predisposing, Enabling and Need Variables	Odds Ratio	95% Confidence Interval
<u>Predisposing Variables</u>		
Race/Ethnicity (reference = white)		
African-American	0.47	0.34, 0.65[***]
Latina	0.21	0.13, 0.32[***]
<u>Enabling Variables</u>		
Income assistance from family/friends	1.72	1.12, 2.63[*]
<u>Need Variables</u>		
Drug problem	1.63	1.20, 2.22[**]
Physically/sexually assaulted as adult[a]	2.22	1.66, 2.00[***]
Depression, past year	2.07	1.53, 2.79[***]

[a]Two separate variables were combined into one: physically and/or sexually assaulted as an adult or since living on her own

[*]p<0.05

[**]p<0.01

[***]p<0.001