

**Effects of Mental Illness, Age, Gender, Personal Healthcare
Provider Relationship, and Medical Insurance Status on
Healthcare Access in an Underserved Homeless Shelter
Population in two Midwestern Rural Communities:
A Multivariate Analysis**

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ABSTRACT

Although attention has been directed to disparities in healthcare access among people who are poor and homeless in urban areas of the United States, relatively little research has been published about healthcare access among the poor and homeless in rural areas. The objective of the current study is to examine the impact of mental illness, age, gender, personal healthcare provider relationship, medical insurance status on healthcare access in an underserved homeless population in a two-county rural area in the Midwest. Forty residents of two homeless shelters in west-central Illinois were surveyed by trained volunteers during an outreach screening project.

Regression analysis showed that the model accounted for about one third of the variance in healthcare access. Mental illness was the variable most highly associated with healthcare access, with those who indicated that they suffered from a mental health problem having less access to health care. Age was also significantly related to access, with younger people having more access. The insurance indicator approached significance, suggesting that those with medical insurance coverage have more access to healthcare. Finally, gender and having an ongoing personal healthcare provider relationship were not significantly related to healthcare access.

INTRODUCTION

Although much attention has been directed to disparities in healthcare access in people who are poor and homeless in urban areas of the United States, relatively little research has been published about healthcare access among the poor and homeless in rural areas (Rollinson and Pardeck, 2006) . Between 235,000 and 434,000 people are homeless on an average day in the U.S. (“Annual Homeless Assessment,” 2007), and the rural homeless make up 9% of the total homeless population (Burt, Aron, Lee, and Valente, 2001). Not surprisingly, rural poverty can lead to homelessness (Aron and Fitchen, 1996) and many uninsured or underinsured individuals rely on emergency care facilities as a source of healthcare (Fontanarosa, Rennie, and DeAngelis, 2007). The objective of the current study is to examine the impact of mental illness, age, gender, personal healthcare provider relationship, and medical insurance status on healthcare access in an underserved homeless population in a rural area of the Midwest.

METHODS

Thirty four residents of the homeless shelter in Knox County, Illinois, and six residents of the homeless shelter in Warren County, Illinois, underwent a face-to-face private health care access survey by a trained group of medical professional and nonprofessional volunteers during a healthcare screening outreach project. Questions pertaining to mental and physical diseases and disabilities, age, medical insurance status, gender, and the existence of a personal primary healthcare provider were asked. Respondents were asked to rate their satisfaction with their access to healthcare. A regression model was built to examine the variables that are associated with this satisfaction rating. This model included the mental illness indicator, the insurance dummy variable, and an indicator of whether respondents have a person they think of as their personal doctor or health care provider, along with gender and age. The raw data was then analyzed by a university survey research laboratory and a multivariate analysis was conducted.

RESULTS

Of the 40 respondents, 32 were men and 8 were women. Twelve of the men and three of the women indicated that their access to healthcare was compromised (*figure 1*).

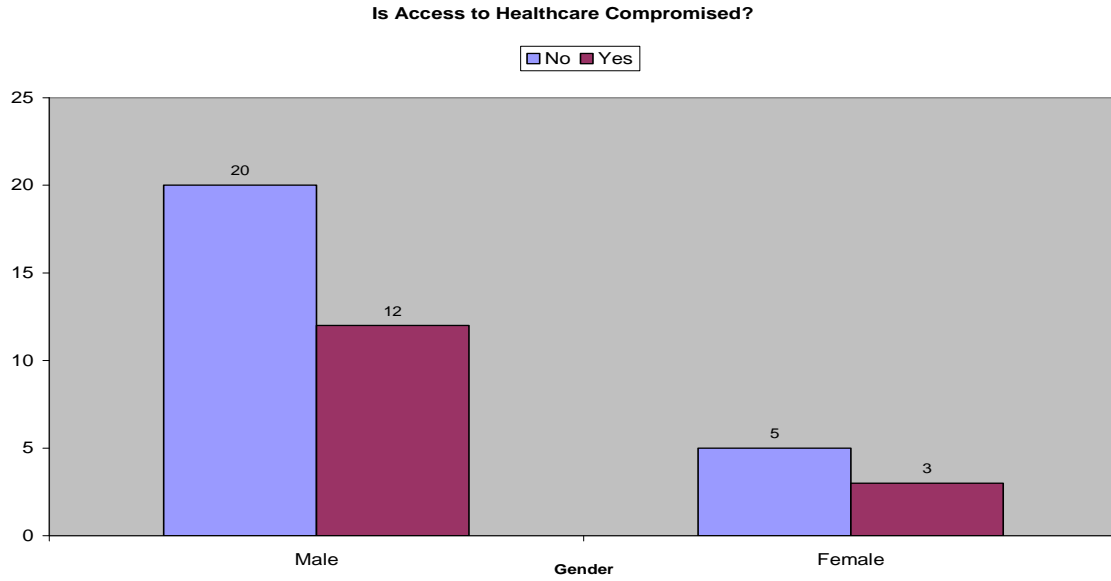


Figure 1 Effect of gender on healthcare access

Gender was not a significant variable ($\beta = 0.141$). Twenty-five of the respondents (62.5%) were 45 years of age or older. Six out of 15 respondents 19-44 years old, 4 out of 13 respondents 45-53 years old, and 5 out of 12 respondents 54 years or older reported dissatisfaction with healthcare access (figure 2).

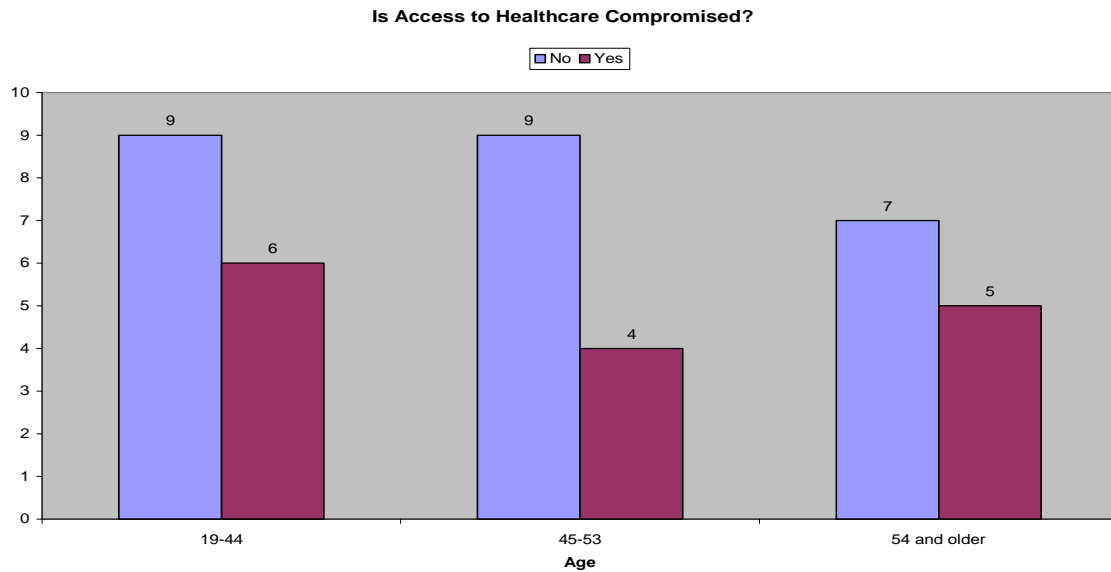


Figure 2 Effect of age on healthcare access

Age was a significant variable ($\beta = -0.516$). Of the respondents who reported mental illness, 8 (50%) described compromised healthcare access. Of those who reported no mental illness, only 7 (29%) described dissatisfaction with access (figure 3).

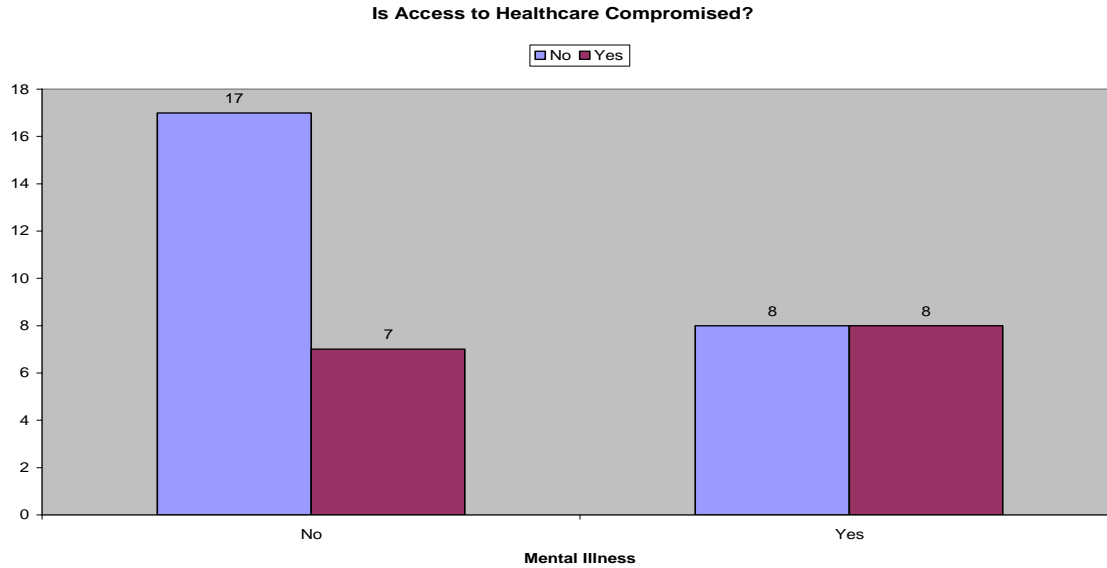


Figure 3 Effect of mental illness on healthcare access

Having a mental illness was the variable most highly associated with satisfaction rating ($\beta = -0.719$). Of those who reported having no insurance, 10 (46%) felt their access to healthcare was compromised. Only 4 (25%) of respondents who had some form of healthcare insurance described dissatisfaction with healthcare access (figure 4).

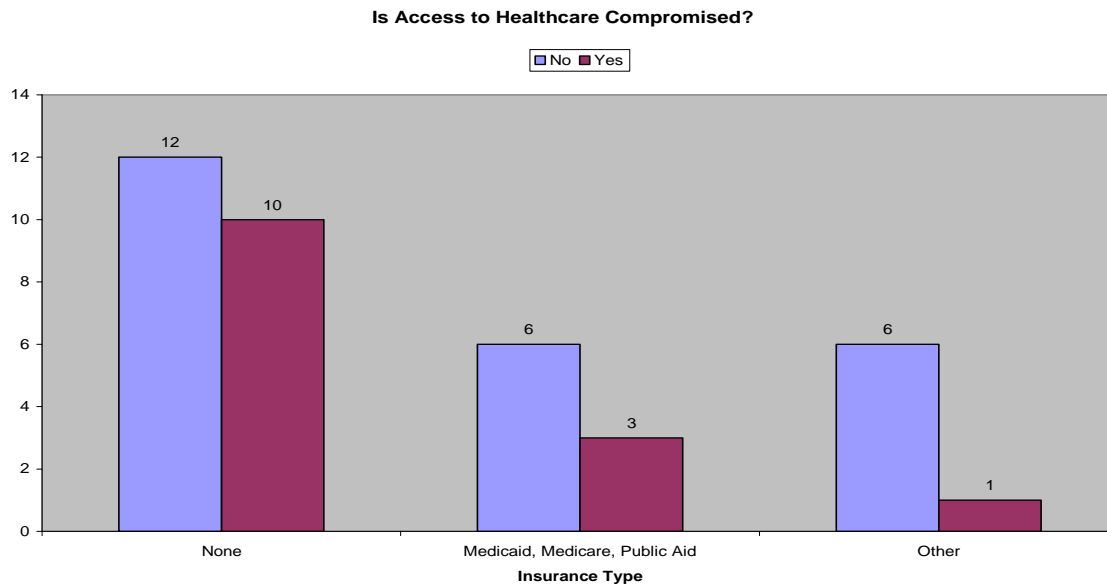


Figure 4 Effect of health insurance status on healthcare access

The insurance indicator approached significance ($\beta = 0.291$). Of those respondents who reported having a personal doctor or healthcare provider 7 (39%) described some dissatisfaction with their healthcare access. Seven (33%) of respondents who did not

have a personal doctor or healthcare provider were dissatisfied with their healthcare access (figure 5).

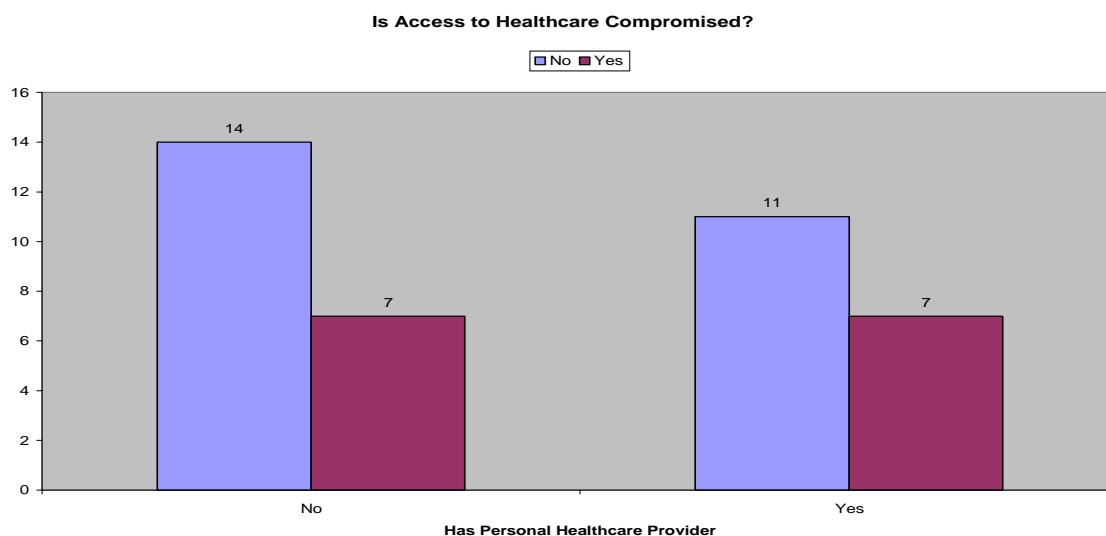


Figure 5 Effect of personal provider on healthcare access

Having an ongoing healthcare provider relationship was not found to be a significant variable ($\beta = -0.53$).

DISCUSSION

The model accounts for about one third of the variance in the healthcare satisfaction rating (adjusted $r^2 = 0.339$). The presence of mental illness was the variable most highly associated with the satisfaction rating, with those who indicated that they suffered from a mental health problem being less satisfied with their access to healthcare. Age was also significantly related to satisfaction with access to healthcare, with older people being less satisfied. The insurance indicator approached significance. The direction of the relationship indicates that those with insurance were more satisfied with their access to healthcare. Gender and having someone considered a personal healthcare provider were not significant variables. Our findings may have important implications for researchers and clinicians alike. Homeless individuals who are less satisfied with their healthcare access may be less likely to seek appropriate care when needed. Moreover, homeless people who reported the least satisfaction with their healthcare access are members of groups that have historically required more extensive care—older individuals and those who suffer from mental illness. In a previous study, the presence of mental illness and medical insurance coverage were not statistically significant variables associated with frequency of emergency department visits (Benejam, Harmon, Owens, and Benejam, 2007). Since as many as 26-33% of the homeless population has some sort of mental illness (Burt, Aron, Lee, & Valente, 2001; Wright, Rubin, & Devine, 1998), a larger study may indeed clarify relationships between mental illness, medical insurance coverage and emergency care. Persistence of poor healthcare access affecting certain demographic groups within the homeless population may result in an enlarging, aging,

mentally ill segment of contemporary American rural society that is not seeking, and thereby not receiving, the timely medical care required. The population studied in this report was small and this may explain why some of the variable relationships considered were not statistically significant. Further research is needed to investigate the effects of improving the treatment of mental illness and other medical disorders on healthcare access in older rural homeless populations, as well as to resolve healthcare access disparities in this often overlooked group.

This study demonstrates that the presence of mental illness and older age in individuals living in homeless shelters play a statistically significant role in healthcare access. In addition, medical insurance status approached significance as a variable in healthcare access. Gender and having an ongoing personal healthcare provider relationship were not statistically significant variables in healthcare access.

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