

Examining the Burden of Public Stigma Associated with Mental Illness in the Rural United States

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KEY POINTS

- Findings suggest that rural respondents held no more negative attitudes towards individuals with mental illness than non-rural respondents.
- Female respondents held more positive attitudes on items related to recovery and outcomes than male respondents.
- Racial and ethnic differences were observed related to negative stereotypes held towards individuals with mental illness, across geographic definitions.
- Older respondents had significantly higher subscale scores on negative stereotypes than younger respondents.
- While similar population dynamics associated with mental health stigma were observed among rural and non-rural respondents, stigma reduction efforts are especially important in rural communities where there is limited or no access to mental health providers.

Purpose

Stigma is a widely recognized barrier to receipt of health and mental health services. This policy brief documents the burden of public stigma associated with any mental illness in rural versus non-rural communities in the United States (U.S.). Differences in stigmatizing attitudes and beliefs by rurality, gender, race and ethnicity, and age are examined.

Background

In 2020, approximately 21.0 percent of adults aged 18 and older (or 52.9 million people) had any mental illness (AMI) in the past year.¹ According to the National Institute of Mental Illness (NIMI), AMI is defined as a mental, behavioral, or emotional disorder.²

With longstanding challenges to prevention and treatment, mental health conditions remain prevalent in rural communities. An estimated 20.5% of adults in non-metropolitan counties had a mental illness in the past year.² Despite the potential harm of untreated mental illness, many individuals with mental illness do not receive mental health services. According to the National Survey on Drug Use and Health (NSDUH), of the approximately 52.9 million adults aged 18 or older in 2020 with AMI in the past year, 46.2 percent (or 24.3 million people) had accessed mental health services in the past year.¹

Stigma is posited to be a “fundamental cause of population health inequities”.² Its negative consequences are significant and can limit opportunities across multiple aspects of life—housing, employment, social relationships, health care, and more.²⁻⁴ Stigma can impede seeking and engagement in mental health care and disease self-management among those with mental illness.^{1,5-7} Ultimately, stigma can have serious consequences for impacted individuals and their communities.⁸ When an individual experiences stigma around a given health condition (including mental illness), the negative connotation may further exacerbate symptoms and isolate an individual from necessary resources, including treatment.⁹ When stigma leads to these types of harms, some individuals may be affected differently than others

based on where they live,^{10,11} including those living in rural areas. Given the potential influence of stigma in affecting whether and where individuals seek treatment, combined with the more limited resources to address the mental health needs in rural communities, it is important to understand any potential differences in stigma levels between rural and non-rural communities.^{12,13}

Few studies have investigated mental illness stigma in rural communities. A study among rural Appalachian parents of children with mental health concerns identified stigma as a barrier to seeking services for their children.¹⁴ In older adults, rural residents reported greater public and self-stigma related to seeking help for personal problems.¹⁵ Finally, a study of individuals living in South Dakota found a gender-rural interaction where men had higher levels of stigma related to mental illness than women, but rural women had higher levels of stigma than urban women.¹⁰ These findings suggest the need for rural focused information and educational campaigns to reduce mental illness stigma.¹⁰ Further, social stressors facing minority populations in rural communities may exacerbate issues of mental illness stigma and health-seeking behaviors.¹⁶

Ultimately, the body of literature on mental illness stigma in rural communities is limited, impeding efforts to mitigate stigma and its consequences. Studies are often smaller in scope or focus on a specific state (e.g., South Dakota), region (e.g., Appalachia), or subpopulation (e.g., parents or older adults). Studies also commonly use qualitative methods, such as interviews and focus groups, which might not be generalizable beyond the communities involved. Studies have addressed research questions related to self-stigma and public stigma, but many focus only on self-stigma. Studies on self-stigma provide important information regarding the experiences of people with stigmatized conditions but offer little insight into the scale of public stigma in the communities in which they live.

The purpose of this policy brief is to describe the burden of public stigma associated with any mental illness in rural versus non-rural communities in the U.S. Using an established, nationally representative panel survey, it examines stigmatizing attitudes and beliefs towards any mental illness among the general population, including differences by rurality, age, gender, and race/ethnicity. Consistent with prior work, this brief focuses on any mental illness rather a specific mental health condition to enhance generalizability and contribute to a broad understanding of the current scale of public stigma associated with mental illness.¹⁷

Methods

Data collection

Data were derived from a survey conducted using the AmeriSpeak® Panel. Funded and operated by NORC at the University of Chicago, AmeriSpeak® is a probability-based panel designed to be representative of the U.S. household population. Randomly selected households are sampled using area probability and address-based sampling, with a known, non-zero probability of selection from the NORC National Sample Frame. These sampled households are then contacted by U.S. mail, telephone, and field interviewers (face-to-face). The panel provides sample coverage of approximately 97% of U.S. household population. Those excluded from the sample include people with P.O. Box only addresses, some addresses not listed in the USPS Delivery Sequence File, and some newly constructed dwellings. While most AmeriSpeak® households participate in surveys via web, non-internet households can participate in AmeriSpeak® surveys by telephone. Households without conventional internet access but having web access via smartphones are allowed to participate in AmeriSpeak® surveys by web. AmeriSpeak® panelists participate in NORC studies or studies conducted by NORC on behalf of governmental agencies, academic researchers, and media and commercial organizations. For purposes of this study, the sample drawn from AmeriSpeak® was designed to support rural/non-rural analyses, with Rural-Urban Commuting Area (RUCA) codes as the measure of rurality.¹⁸ The target sample size was a total of 2,000 panelists aged 18 years or older, including 1,000 panelists living in rural areas (RUCA codes 4-10) and 1,000 panelists living in non-rural areas (RUCA codes 1-3). Given the sample size, this study was powered to detect small, statistically significant differences.

Survey Design and Administration

We searched the peer-reviewed literature and national surveys (e.g., 2013 Behavioral Risk Factor Surveillance System [BRFSS] questionnaire¹⁹) to identify a pool of established, validated items for potential inclusion in the survey. The search yielded a brief, validated scale with 11 items designed by Kobau and colleagues to examine public attitudes about mental illness.¹⁷ All questions were scored on a five-point Likert scale with the following response options: strongly disagree; somewhat disagree; neither disagree nor agree; somewhat agree; and strongly agree. The items factored into two subscales “negative stereotypes” and “recovery and outcomes.” With a goal of maintaining the validity of the scale, we used a data-driven approach to select two items for removal from the validated scale to retain a total of ten items. We removed two items, as opposed to only one item, to include an additional item in order to examine how experience with mental illness, whether personally having mental illness or knowing someone with mental illness, may influence stigmatizing beliefs and attitudes. Consistent with prior work, survey respondents self-defined the concept of mental illness.^{17,20,21} From the AmeriSpeak® panel, we also included demographic information collected from survey respondents within our analyses.

Variables of Interest

The sample was constructed to support statistical comparisons of responses from individuals who live in rural areas with those who live in non-rural areas. The panel was divided into two groups based on the RUCA codes of the panelists’ sampling addresses. One group included panelists with RUCA code 1 to 3 (non-rural), while the other included panelists with RUCA codes 4 to 10 (rural). Gender was categorized as male and female. Racial and ethnic group categories were non-Hispanic White, non-Hispanic Black, Hispanic, and non-Hispanic other. Age categories were defined as 18-29, 30-44, 45-59, and 60 and older.

Data Analysis

The nine items from the 11-item scale by Kobau and colleagues were treated individually as continuous variables with a scale from strongly disagree=1 to strongly agree=5 and summed to create the two subscales for: 1) four items for *negative stereotypes* ranging from 4-20; and 2) five items for *recovery and outcomes* ranging from 5-25 range.¹⁷ For negative stereotypes, higher scores corresponded to more negative attitudes. In contrast, for recovery and outcomes, higher scores corresponded to more positive attitudes. Comparisons of interest for each of these outcomes were analyzed via two-sample t-tests for comparisons with two groups (rural vs. non-rural, male vs. female), and via ANOVA models for comparisons with more than two groups (racial/ethnic groups, age groups).

Descriptive statistics are reported for each outcome (subscales and individual items) and by groups of interest. All analyses were weighted with a variable created and provided by NORC to account for rurality group in addition to the base sample weighting.²² A subset analysis was also conducted solely within rural respondents to evaluate other demographic relationships in a rural population. All results are reported as weighted values. While full results are presented in Table 2, results reported in text only reflect means. This study was reviewed and approved by both the NORC and ETSU Institutional Review Boards.

Results

Study Population Characteristics

Table 1 presents the characteristics of the study population. The survey yielded 2,091 responses, with 52% residing in rural areas and 48% in non-rural areas. Slightly over half of the respondents were female (51%), and they were fairly evenly dispersed across the four age categories. Over two-thirds (70%) of the

study population were non-Hispanic White, 9% were non-Hispanic Black, 13% were Hispanic, and 7% were non-Hispanic other. The largest education category was some college (32%), followed by high school equivalent (31%), bachelor's degree or higher (25%), and less than high school (12%).

Table 1. Study Population Characteristics (N=2091)

	Total	Non-Rural	Rural
	Weighted N (%)	Weighted N (%)	Weighted N (%)
Gender			
Male	1020 (49)	482 (48)	539 (49)
Female	1071 (51)	519 (52)	551 (51)
Age (in years)**			
18-29	378 (18)	205 (21)	173 (16)
30-44	550 (26)	264 (26)	286 (26)
45-59	493 (24)	238 (24)	254 (23)
60+	670 (32)	294 (29)	376 (35)
Race and Ethnicity***			
White, non-Hispanic	1472 (70)	609 (61)	863 (79)
Black, non-Hispanic	194 (9)	126 (13)	69 (6)
Other, non-Hispanic	151 (7)	87 (8)	63 (6)
Hispanic	273 (13)	178 (18)	95 (9)
Education***			
Less than HS	260 (12)	116 (12)	144 (13)
HS graduate or equivalent	641 (31)	257 (26)	384 (35)
Some college	665 (32)	309 (31)	356 (33)
Bachelor's degree	302 (14)	168 (17)	134 (12)
Graduate/prof degree	223 (11)	151 (15)	72 (7)
Income Level***			
Less than \$30,000	597 (29)	228 (23)	369 (34)
\$30,000 to under \$60,000	616 (29)	256 (26)	360 (33)
\$60,000 to under \$100,000	476 (23)	225 (25)	221 (20)
\$100,000 or more	403 (19)	262 (26)	141 (13)
Negative Stereotypes (total score)	10.19 (2.72)	10.16 (2.76)	10.22 (2.67)
Recovery Outcomes (total score)	19.50 (3.20)	19.45 (3.20)	19.56 (3.19)

*p<=0.05 **p<=0.01 ***p<=0.001

Some differences in demographic characteristics were found between rural and non-rural respondents. Rural respondents were significantly older (p=.01), had lower levels of educational attainment (p<.0001), and had lower incomes (p<.0001). Almost 80% of rural respondents were non-Hispanic White compared to 61% of non-rural respondents (p<.0001).

Overall Stigma Scores

For the negative stereotypes total score, the average score for all respondents was 10.19 (SD=2.72) on a scale of 4 to 20. This indicates that overall, respondents were fairly neutral (not strongly negative or strongly positive) in their negative stereotyping attitudes related to any mental illness. The average score for the recovery and outcomes total score was 19.50 (SD=3.20) on a scale of 5 to 25, indicating that respondents overall held positive attitudes related to individuals abilities to recover from any mental illness. Table 2 presents subscale and item scores by geography and demographic characteristics. Key findings are described hereafter.

Rural and Stigma

The most notable finding from this study was that rural respondents did not have significantly different subscale scores on negative stereotypes, implying **rural respondents held no more negative stereotyping attitudes as compared to non-rural respondents**. Only one of the four negative stereotype items, “I believe a person with mental illness is hard to talk with” differed significantly between rural and non-rural respondents. Rural respondents (2.77) scored higher than non-rural respondents (2.66) on the item ($p=.01$), indicating they were more likely to agree with that statement than non-rural respondents. Consistent with subscales for negative stereotypes, rural and non-rural respondents did not have significantly different subscale scores for recovery and outcomes. Similarly, there were no item-specific differences on recovery and outcomes between rural and non-rural respondents.

Gender and Stigma

Male and female respondents did not have significantly different scores for the negative stereotypes subscale or item-specific questions. Female respondents (19.71), however, had higher subscale scores than male respondents (19.28) on recovery and outcomes ($p=.002$), indicating **female respondents overall had more positive attitudes on items related to recovery and outcomes than male respondents**. Within the subset of recovery and outcomes items, there were additional significant differences. Female respondents responded more positively than male respondents to the statements that a person with mental illness would improve if given treatment and support (4.29 vs. 4.18) ($p=.001$), a person with mental illness can be as successful at work as others (4.04 vs. 3.92) ($p=.003$), and treatment can help people with mental illness lead normal lives (4.25 vs. 4.13) ($p=.002$).

Similar gender trends were found among rural respondents. Rural male and rural female respondents did not have significantly different subscale or item-specific scores on negative stereotypes. Compared to rural male respondents (19.21), rural female respondents (19.68) had higher subscale scores for items related to recovery and outcomes ($p=.02$). Rural female respondents also responded more positively to the statement that treatment can help people with mental illness lead normal lives than male respondents ($p=.003$).

Race/Ethnicity and Stigma

There were significant differences by race and ethnicity in subscale scores for negative stereotypes. Black, non-Hispanic respondents and Other, non-Hispanic respondents had the highest mean subscale scores on negative stereotypes (10.85 and 10.81, respectively), followed by Hispanic respondents (10.20), and White, non-Hispanic respondents (10.03) with the lowest subscale scores ($p=.004$). Black, non-Hispanic and Other, non-Hispanic respondents overall thus had more negative stereotypes regarding mental illness relative to White, non-Hispanic and Hispanic respondents. Similarly, there were significant differences by race and ethnicity in three of four negative stereotype items. For the item, “I believe that a person with mental illness is a danger to others”, White, non-Hispanic respondents had the lowest mean scores, followed by Hispanic, Black, non-Hispanic, and Other, non-Hispanic ($p=.02$). Across racial and ethnic groups, scores were higher for the item, “I believe a person with mental illness is unpredictable” relative to other individual negative stereotype items. For the item “I believe a person with mental illness has only himself/herself to blame for his/her condition”, Black, non-Hispanic respondents had the highest item scores, followed by Hispanic, Other, non-Hispanic, and White, non-Hispanic respondents ($p=.02$). Across racial and ethnic groups, scores for this item were much lower relative to other negative stereotype items. In contrast to negative stereotypes, there were no subscale or item-specific score differences by race and ethnicity on recovery and outcomes.

Consistent with the full sample, there were no subscale or item-specific score differences by race and ethnicity on items related to recovery and outcomes among rural respondents. In contrast to the full sample, however, there were no subscale or item-specific score differences by race and ethnicity on negative stereotypes among rural respondents.

Age and Stigma

There were significant differences by age in the subscale scores for negative stereotypes; **younger respondents had fewer negative stereotypes relative to older respondents**. Respondents aged 18-29 years had the lowest mean subscale scores on negative stereotypes (9.63), followed by respondents aged 45-59 years (10.08). Respondents aged 30-44 years (10.14), and respondents aged 60 and over (10.62) ($p=.0008$) had the highest mean scores. Similarly, there were significant differences by age on three of four negative stereotypes items. For the item, “I believe that a person with mental illness is a danger to others”, respondents aged 45-59 years and aged 60 years and older had the highest item scores, followed by respondents aged 30-44 years, and respondents aged 18-29 years ($p=.005$). For the item, “I believe a person with mental illness is unpredictable”, respondents aged 60 years and over had the highest scores, followed by respondents aged 30-44 years, respondents aged 45-59 years, and respondents aged 18-29 years ($p=.003$). For the third item, “I believe a person with mental illness is hard to talk with”, scores followed a similar trend by age group ($p<.0001$). With regard to recovery and outcomes, there were no significant differences by age in subscale scores; however, there was one item-specific difference. For the item, “I believe a person with mental illness can be as successful at work as others”, with the oldest respondents having the lowest score and youngest group having the highest scores ($p=.001$).

Similar trends by age were found among a subset of rural respondents. Rural respondents aged 18-29 years had the lowest subscale scores on negative stereotypes (9.36), followed by rural respondents aged 30-44 years (9.87), rural respondents aged 45-59 years (10.19), and rural respondents aged 60 and over (10.73) ($p=.001$). In addition, there were significant differences by age on the same set of three of four negative stereotype items among rural respondents. Specifically, for the item, “I believe that a person with mental illness is a danger to others”, rural respondents aged 60 years and over had the highest item scores and rural respondents aged 18-29 years having the lowest scores ($p=.01$). Similarly for the items, “I believe a person with mental illness is unpredictable” and “I believe a person with mental illness is hard to talk with”, rural respondents aged 60 years and over likewise had the highest item scores, followed by rural respondents aged 45-59 years, rural respondents aged 30-44 years, and rural respondents aged 18-29 years ($p=.0002$). Consistent with the full sample, there was only one item-specific difference for recovery and outcomes among rural respondents. For the item, “I believe a person with mental illness can be as successful at work as others” there were significant differences ($p=.003$).

Discussion

This study examined public stigma associated with any mental illness in rural and non-rural communities in the United States. A key finding was that overall, rural respondents held no more negative attitudes towards individuals with mental illness than non-rural respondents. While this finding contrasts with prior studies suggesting rural populations hold more stigma,^{10,11} it could speak to changes over time in the acceptance of and exposure to any mental illness across communities. Our findings are consistent with studies that found decreases in public stigma related to any mental illness overtime in the U.S.^{23,24} Understanding the scale of public stigma associated with mental illness is a necessary step for mitigating negative consequences resulting from it and advancing the quality of health care, behavioral health, and quality of life of individuals experiencing mental illness. Given comparable population dynamics associated with mental health stigma among both rural and non-rural respondents, similar stigma reduction strategies could be successful in rural and urban communities. These could include targeting the intrapersonal level with education and counseling, the interpersonal level through intergroup contact

between members of the community with and without mental illness, and the structural level through advertising, mass media, and large scale educational interventions.^{25,26} Additionally, working with schools and employers to address mental health stigma have been shown to have positive impacts.^{27,28}

Rural communities experience disparities in behavioral health services. Delivery of and access to mental health services such as assessment, treatment, and medication management and monitoring are often limited in rural communities.^{12,13,29} Given that stigma is a widely recognized barrier to receipt of mental health services, targeted strategies could improve access to and engagement in services among individuals experiencing mental illness in rural communities. Our findings suggest that among rural respondents, female respondents held more positive attitudes towards recovery and outcomes than male respondents, while older respondents held more negative stereotypes than younger respondents. Accordingly, stigma reduction strategies aimed at challenging negative stereotypes among male and older rural adults may be impactful. In addition, our findings suggest Black, non-Hispanic and Other, non-Hispanic respondents overall hold more negative stereotypes relative to White, non-Hispanic and Hispanic respondents. Addressing behavioral health access and stigma issues in communities of color can help to address health inequities.

This study has limitations that should be noted. Individuals who participate in panels could differ from those who do not participate and/or the general population. AmeriSpeak®, however, has rigorous sampling, recruitment, and weighting procedures that improve representativeness and generalizability. Further, given the sample size (n=2091), small, statistically significant differences reported in this study may not necessarily translate into meaningful differences in attitudes between groups.

Table 2. Subscale and Item Scores by Geography and Demographic Characteristics



	Geography		Gender		Race and Ethnicity				Age (in years)			
	Rural	Non-Rural	Male	Female	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other	Hispanic	18-29	30-44	45-59	60+
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Negative Stereotypes												
Total Score	10.16 (2.76)	10.22 (2.67)	10.29 (2.65)	10.09 (2.77)	10.03 (2.61)*	10.85 (3.00)*	10.81 (2.39)*	10.20 (3.33)*	9.63 (3.25)***	10.14 (2.80)***	10.08 (2.58)***	10.62 (2.48)***
Is a danger to others	2.64 (1.02)	2.71 (0.96)	2.70 (0.98)	2.64 (1.01)	2.62 (0.95)**	2.83 (1.21)**	2.91 (0.88)**	2.71 (1.14)**	2.45 (1.20)**	2.63 (0.97)**	2.77 (0.94)**	2.76 (0.94)**
Is unpredictable	3.27 (1.00)	3.33 (1.00)	3.31 (0.99)	3.29 (1.00)	3.26 (0.96)*	3.56 (1.05)*	3.56 (0.90)*	3.21 (1.20)*	3.10 (1.27)**	3.32 (0.98)**	3.25 (0.97)**	3.44 (0.89)**
Is hard to talk with	2.77 (1.06)**	2.66 (1.03)**	2.75 (1.02)	2.69 (1.07)	2.72 (1.01)	2.76 (1.26)	2.79 (0.86)	2.66 (1.24)	2.52 (1.14)***	2.62 (1.12)***	2.64 (0.98)***	2.97 (0.97)***
Has only themselves to blame for their condition	1.47 (0.79)	1.54 (0.87)	1.53 (0.83)	1.48 (0.82)	1.45 (0.76)**	1.69 (1.03)**	1.55 (0.65)**	1.64 (1.13)**	1.55 (1.05)	1.57 (0.93)	1.43 (0.69)	1.47 (0.74)
Recovery and Outcomes												
Total Score	19.45 (3.20)	19.56 (3.19)	19.28 (3.25)***	19.71 (3.14)***	19.55 (3.05)	19.50 (3.94)	19.61 (2.71)	19.20 (3.91)	19.77 (3.73)	19.51 (3.26)	19.48 (3.11)	19.36 (3.00)
Would improve if given treatment and support	4.22 (0.83)	4.26 (0.79)	4.18 (0.81)**	4.29 (0.81)**	4.25 (0.80)	4.18 (0.93)	4.27 (0.57)	4.20 (0.96)	4.30 (0.96)	4.13 (0.86)	4.29 (0.74)	4.25 (0.76)
Feels the way we all do at times	3.43 (1.22)	3.45 (1.22)	3.42 (1.23)	3.47 (1.22)	3.42 (1.23)	3.62 (1.34)	3.54 (0.92)	3.40 (1.34)	3.47 (1.48)	3.48 (1.24)	3.38 (1.21)	3.44 (1.11)
Can eventually recover	3.62 (0.98)	3.65 (0.95)	3.63 (0.94)	3.65 (0.99)	3.64 (0.93)	3.69 (1.11)	3.66 (0.88)	3.57 (1.11)	3.71 (1.07)	3.65 (1.04)	3.56 (0.94)	3.64 (0.88)
Can be as successful at work as others	3.97 (1.02)	4.00 (0.94)	3.92 (0.99)**	4.04 (0.97)**	3.99 (0.96)	3.93 (1.12)	3.98 (0.86)	3.96 (1.13)	4.14 (1.13)***	4.04 (0.98)***	4.02 (0.95)***	3.82 (0.94)***
Treatment can help people with mental illness lead normal lives	4.20 (0.83)	4.19 (0.83)	4.13 (0.85)**	4.25 (0.81)**	4.24 (0.78)	3.99 (1.08)	4.22 (0.63)	4.07 (1.04)	4.16 (1.04)	4.18 (0.82)	4.22 (0.81)	4.21 (0.76)

*p<=0.05 **p<=0.01 ***p<=0.001

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