The Relationship between Experience with Mental Illness and Stigmatizing Attitudes and Beliefs

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Purpose

This policy brief documents the relationship between self-reported experience with any mental illness (whether first-hand or second-hand) and public stigma associated with mental illness. Differences in the prevalence of experience with mental illness by geography are also explored.

Background

In the United States, the prevalence of any mental illness in the past year increased from 17.7 percent in 2008 to 21.0 percent in 2020 among adults 18 years and older according to the National Survey on Drug Use and Health (NSDUH).[1] According to NSDUH, any mental illness includes any mental, behavioral, or emotional disorder, but does not include substance use disorders and developmental disorders. Although estimates represent roughly one in five adults experiencing any mental illness in the past year, many individuals who experience any mental illness do not receive treatment. Estimates place receipt of any mental health service in the past year at approximately 16.1 percent (or 46.2 million people or approximately 1 in 6) in 2020, an increase from 2008 when approximately 13.0 percent (or 27.2 million people) reported receipt of any mental health service.[1] Despite the increase, there remains significant gaps between need for and receipt of mental health services. Gaps are often particularly pronounced in rural communities, where access to mental health services may be limited.[2] Given the prevalence of any mental illness combined with existing treatment gaps, understanding conditions influencing mental illness and its treatment is critical for advancing the well-being of rural individuals living with mental illness.

Stigma associated with any mental illness is an increasingly important social driver of health that impacts quality of life.[3]

Key Takeaways

- The prevalence of experience with mental illness (whether first-hand or second-hand) was similar among rural and urban respondents, with 81% of both rural and urban respondents reporting experience.
- Respondents reporting experience with mental illness held fewer negative stereotypes than respondents reporting no experience with mental illness.
- In order to reduce stigma, interventions should involve individuals who have experience with mental illness (lived experience).
- Due to the high prevalence of mental illness (21%), there is need to identify strategies to increase the access to and utilization of behavioral health services for individuals experiencing mental illness, particularly in rural communities where there are long-standing behavioral health workforce storages.

Stigma can negatively impact an individual's ability to access protective factors, including housing, employment, social relationships, health care, and more.[3–5] Public stigma refers to a unique set of beliefs and attitudes around mental illness that can lead to fear, discrimination, and other adverse consequences towards those living with any mental illness.[6,7] In addition to discrimination and other harmful effects, public stigma can impact an individual's ability to seek treatment and exacerbate symptoms of mental illness due to feelings of isolation and loneliness.[8–10] Public stigma may occur in the broader community context and/or within more immediate social circles, such as friends, families, and in the workplace.[11] Further, public stigma may impact self-stigma, meaning that the same negative attitudes held externally, may impact internally held attitudes by those with mental illness, compounding the problem and reinforcing negative stereotypes against oneself.[8,9,11]

Prior research indicates that a relationship may exist between experience or familiarity with mental illness and stigma. The direction of this relationship (i.e., whether stigma decreases or increases with experience), however, does not always appear to be consistent. One review, for example, identified multiple studies providing support for the existence of an inverse relationship when considering familiarity with mental illness and stigma.[12] At the same time, it identified a handful of studies that instead found more familiarity was positively correlated with greater stigma.[12] While the nature of this relationship could have important implications for stigma reduction strategies, limited research has examined this relationship in rural communities.

This policy brief examines the relationship between self-reported experience with mental illness and public stigma associated with any mental illness in rural and urban communities in the U.S. Data were from a nationally representative survey (AmeriSpeak® Panel), with experience defined as self-reporting personally having a mental illness or knowing someone with a mental illness. Our primary hypothesis is that the prevalence of public stigma associated with any mental illness differs between residents who have and do not have experience with any mental illness.

Methods

Data Collection

Data were collected using a survey administered through NORC at the University of Chicago's AmeriSpeak® Panel. AmeriSpeak® is a probability-based panel intended to represent the U.S. household population. Households are randomly selected and sampled using area probability and address-based sampling, with a known, non-zero probability of selection from the NORC National Sample Frame. These households are contacted by mail, telephone, and field interviewers. The panel offers sample coverage of approximately 97% of the U.S. household population. Persons with P.O. Box only addresses, some addresses not listed in the USPS Delivery Sequence File, and some newly constructed dwellings are excluded. While households generally participate in AmeriSpeak® surveys through the web, households without internet access can participate by telephone. Households that lack conventional internet access, but have web access through smartphones, can participate in surveys by web. Panelists participate in studies led by NORC or studies conducted by NORC on behalf of other entities. For purposes of this study, the AmeriSpeak® sample was constructed to specifically support comparisons of rural and urban respondents. Rural-Urban Commuting Area (RUCA) codes were used as the measure of rurality.[13] The

study sought to recruit 2,000 panelists 18 years or older, including a target goal 1,000 panelists living in rural areas (RUCA codes 4-10) and 1,000 panelists living in urban areas (RUCA codes 1-3). As a result of this sample size, the study was powered to identify small differences between groups.

Survey Design and Administration

We examined the peer-reviewed literature and national surveys to identify an existing set of validated items for consideration. We identified a validated scale with 11 items from Kobau and colleagues that was created to examine public attitudes about mental illness.[14] All items were scored using a five-point Likert scale (strongly disagree; somewhat disagree; neither disagree nor agree; somewhat agree; and strongly agree). Items were factored into the subscales "negative stereotypes" and "recovery and outcomes." In an effort to preserve scale validity while limiting the survey to 10 items, we identified two items to omit based on the results of prior research.[14] Two items, as opposed to one item, were omitted in order to include an additional item to explore the influence of experience with any mental illness (personally or someone else) on stigmatizing beliefs and attitudes. This allowed us to include experience but does not differentiate between first or second-hand experience. Similar to prior research, we did not provide a definition of mental illness but it was self-defined by respondents.[14–16] Respondent demographic information was also gathered through the AmeriSpeak® Panel.

Variables of Interest

The sample was purposefully designed to compare responses from individuals living in rural areas and individuals living in urban areas. Two groups were created using the RUCA codes of the panelists' sampling addresses. One group included those with RUCA code 1 to 3 (urban), while one group included those with RUCA codes 4 to 10 (rural). Gender was categorized as male and female. Race and ethnicity were combined into one variable and categorized as non-Hispanic White, non-Hispanic Black, Hispanic, and non-Hispanic Other. Age (in years) was categorized as 18-29, 30-44, 45-59, and 60 and older. Experience with mental illness was treated as a binary yes/no response from the survey question, "Have you had, or do you personally know anyone who has had a mental illness?".

Data Analysis

Selected items from the scale described by Kobau and colleagues were treated individually as continuous measures (1=strongly disagree to 5=strongly agree) and summed to form the two subscales: 1) four items for negative stereotypes with total score ranging from 4-20; and 2) five items for recovery and outcomes with total score ranging from 5-25.[14] Higher scores corresponded to more negative attitudes for negative stereotypes, whereas higher scores corresponded to more positive attitudes for recovery and outcomes. Comparisons of interest for each outcome were analyzed via two-sample t-tests for comparisons between two groups (experience with mental illness vs. no experience).

Descriptive statistics are presented for each outcome (subscales and individual items) and by groups of interest (experience with mental health and geography). All analyses were weighted to account for rural or urban residence in addition to the base sample weighting.[17] All results are reported as weighted values. While complete results are reported in Table 2, results reported in text only reflect mean values. This study was approved by the NORC and East Tennessee State University (ETSU) Institutional Review Boards.

Table 1: Sample Population Characteristics (N=2091)

	Total	Urban	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 (26)	286 (26)
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 (9)	64 (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)	255 (25)	221 (20)
$100,000 or more	403 (19)	262 (26)	141 (3)
Experience with Mental Illness	1564 (81)	742 (81)	822 (81)
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 †mean (SD)

Results

Sample Population Characteristics

Sample characteristics are presented in Table 1 for the 2,091 survey responses (52% residing in rural areas, 48% residing in urban areas). Approximately 51% of respondents were female. Respondents varied across age categories, including 18% of respondents who were 18-29 years and 32% who were 60+ years. Most respondents (70%) were non-Hispanic White, with 13% being Hispanic, 9% being non-Hispanic Black, and 7% being non-Hispanic other. The largest education category was some college (32%), while the smallest category was post-graduate study/professional degree (11%).

Rural and urban respondents differed significantly on multiple demographic characteristics. Compared to urban respondents, rural respondents were older ($p=.01$), had lower educational attainment ($p<.0001$), and had lower income levels ($p<.0001$). Nearly 80% of rural respondents were non-Hispanic White, whereas 61% of urban respondents were non-Hispanic White ($p<.0001$).

Experience with Mental Illness and Stigma

Approximately 81% of all respondents reported experience with mental illness, whether personal experience or knowing someone with mental illness (Table 1). In addition, the proportion of rural and urban respondents reporting experience with mental illness was not significantly different between groups, with the vast majority of both rural respondents (81%) and urban respondents (81%) reporting experience. Table 2 displays subscale items by experience with mental illness for the rural respondents, with the main findings summarized below.

There were significant differences in subscale scores for negative stereotypes between rural respondents with and without experience with mental illness. Respondents reporting experience with mental illness had lower mean subscale scores (9.86) than respondents reporting no experience with mental illness (11.10) on negative stereotypes ($p<.0001$). These results suggest that respondents without mental illness experience had more negative stereotypes regarding mental illness relative to those with experience.

In the subsample of rural respondents, only one subscale item for recovery and outcomes was significantly different based on experience with mental illness. Compared to respondents not reporting experience (3.68), rural respondents reporting experience with mental illness were more likely to believe that persons with mental illness can be as successful at work as others (4.05; $p<0.001$). Respondents did not differ on any other item or the overall subscale for recovery and outcomes based on experience with mental illness.

Table 2: Subscale and Item Scores by Experience with Mental Illness in Rural Respondents

Experience with Mental Illness	Yes	No
	Mean (SD)	Mean (SD)
Negative Stereotypes		
Total Score***	9.86 (2.68)	11.10 (2.97)
Is a danger to others***	2.56 (0.98)	2.87 (1.12)
Is unpredictable***	3.21 (0.98)	3.51 (1.06)
Is hard to talk with***	2.68 (1.08)	3.05 (1.01)
Has only themselves to blame for their condition***	1.41 (0.75)	1.68 (0.88)
Recovery and Outcomes		
Total Score	19.58 (3.16)	19.32 (3.43)
Would improve if given treatment and support	4.21 (0.86)	4.27 (0.72)
Feels the way we all do at times	3.46 (1.24)	3.49 (1.11)
Can eventually recover	3.63 (1.00)	3.66 (0.94)
Can be as successful at work as others***	4.05 (0.99)	3.68 (1.12)
Treatment can help people with mental illness lead normal lives	4.21 (0.84)	4.21 (0.82)

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

Discussion

This study describes the relationship between self-reported experience with mental illness and public stigma associated with any mental illness in rural and urban communities in the United States. It yielded several important findings. We found that a similar percentage of rural and urban respondents reported experience with mental illness. In addition, we found that rural respondents reporting experience with mental illness had lower negative stereotypes compared to rural respondents reporting no experience. Although there was one recovery and outcomes item where there were differences between rural respondents with and without experience with mental illness, there was no difference in the overall (or total) score for this subscale. These findings could inform efforts to reduce public stigma and enhance services for mental illness.

Our findings suggest that the prevalence of experience with mental illness was not only similar, but also substantial among both rural and urban respondents. The vast majority—over 80% of rural and urban respondents—reported experience with mental illness. Building on prior research,[14] experience was defined as having or personally knowing someone who has had a mental illness. While substantial, the prevalence of self-reported experience that was observed is not surprising. Approximately 50% of adults could experience a mental illness over the course of their lifetimes.[18] These findings underscore the need to identify strategies to increase access to and utilization of behavioral health services for individuals

experiencing mental illness. This is particularly critical in rural communities, where there are long-standing behavioral health workforce shortages.[2]

Consistent with our hypothesis, this study's findings indicate that the prevalence of public stigma associated with any mental illness differed between respondents who have and do not have experience with mental illness. Rural respondents reporting experience with mental illness held fewer negative stereotypes than rural respondents reporting no experience with mental illness. There were no differences in recovery outcomes between rural respondents with and without mental illness experience, indicating overall positive attitudes towards individuals with mental illness. Experience and exposure to individuals with mental illness could be a strong predictor of lower levels of stigmatizing attitudes and beliefs. These findings are consistent with the original Kobau et al. study as well as at least 19 other studies from a review completed in 2019.[12,14] In addition, they could support community-level efforts to reduce public stigma. Specifically, they indicate that efforts aimed at reducing negative stereotypes and increasing positive attitudes concerning recovery and outcomes associated with mental illness among individuals lacking experience could be beneficial. Given the observed differences and evidence of the potential utility of contact with individuals with mental illness for stigma reduction,[12,19,20] consideration could be given to interventions involving contact.[21]

Limitations

This study has limitations that should be acknowledged. While AmeriSpeak® applies methods to enhance representativeness and generalizability, the characteristics of respondents who participate in panel surveys could differ from those of individuals who do not participate and/or the general population. While statistically significant, small differences in stigmatizing attitudes and beliefs between groups observed in this study may not represent meaningful differences in attitudes or beliefs. Further, experience with mental illness was self-reported by respondents, introducing the potential for bias. Experience was also measured using a single item, preventing further exploration of the type or extent of experience with mental illness.

References

1. Substance Abuse and Mental Health Services Administration (SAMSA). Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health. https://www.samhsa.gov/data/sites/default/files/reports/rpt35323/NSDUHDetailedTabs2020v25/NSDUHDetailedTabs2020v25/NSDUHDetTabsSect8pe2020.htm. Published 2021. Accessed June 13, 2023.

2. Andrilla CHA, Patterson DG, Garberson LA, Coulthard C, Larson EH. Geographic Variation in the Supply of Selected Behavioral Health Providers. *Am J Prev Med*. 2018;54(6):S199-S207. doi:10.1016/j.amepre.2018.01.004

3. Hatzenbuehler ML, Phelan JC, Link BG. Stigma as a fundamental cause of population health inequalities. *Am J Public Health*. 2013;103(5):813-821. doi:10.2105/AJPH.2012.301069

4. Sickel AE, Seacat JD, Nabors NA. Mental health stigma update: A review of consequences. *Adv Ment Heal*. 2014;12(3):202-215. doi:10.1080/18374905.2014.11081898

5. Corrigan PW, Watson AC. Understanding the impact of stigma on people with mental illness. *World Psychiatry*. 2002;1(1):16-20. http://www.ncbi.nlm.nih.gov/pubmed/16946807. Accessed February 24, 2022.

6. Corrigan PW, Penn DL. Lessons from social psychology on discrediting psychiatric stigma. *Am Psychol*. 1999;54(9):765-776. doi:10.1037/0003-066X.54.9.765

7. Parcesepe AM, Cabassa LJ. Public stigma of mental illness in the united states: A systematic literature review. *Adm Policy Ment Heal Ment Heal Serv Res*. 2013;40(5):384-399. doi:10.1007/s10488-012-0430-z

8. Van der Sanden RLM, Bos AER, Stutterheim SE, Pryor JB, Kok G. Experiences of stigma by association among family members of people with mental illness. *Rehabil Psychol*. 2013;58(1):73-80. doi:10.1037/a0031752

9. Rüsch N, Angermeyer MC, Corrigan PW. Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *Eur Psychiatry*. 2005;20(8):529-539. doi:10.1016/j.eurpsy.2005.04.004

10. Pattyn E, Verhaeghe M, Sercu C, Bracke P. Public stigma and self-stigma: Differential association with attitudes toward formal and informal help seeking. *Psychiatr Serv*. 2014;65(2):232-238. doi:10.1176/appi.ps.201200561

11. Pescosolido BA. The Public Stigma of Mental Illness: What Do We Think; What Do We Know; What Can We Prove? *J Health Soc Behav*. 2013;54(1):1-21. doi:10.1177/0022146512471197

12. Corrigan PW, Nieweglowski K. How does familiarity impact the stigma of mental illness? *Clin Psychol Rev*. 2019;70:40-50. doi:10.1016/j.cpr.2019.02.001

13. USDA. Rural-Urban Commuting Area Codes. https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/. Published 2020. Accessed April 4, 2022.

14. Kobau R, Diiorio C, Chapman D, Delvecchio P. Attitudes about mental illness and its treatment: Validation of a generic scale for public health surveillance of mental illness associated stigma. *Community Ment Health J*. 2010;46(2):164-176. doi:10.1007/s10597-009-9191-x

15. Taylor SM, Dear MJ. Scaling community attitudes toward the mentally ill. *Schizophr Bull*. 1981;7(2):225-240. doi:10.1093/schbul/7.2.225

16. Cohen J, Struening EL. Opinions about mental illness in the personnel of two large mental hospitals. *J Abnorm Soc Psychol*. 1962;64(5):349-360. doi:10.1037/h0045526

17. Dennis J. Technical Overview of the AmeriSpeak Panel NORC's Probability-Based Household Panel. *NORC Univ Chicago*. 2019.

18. Merikangas KR, He JP, Burstein M, et al. Lifetime prevalence of mental disorders in U.S. adolescents: Results from the national comorbidity survey replication-adolescent supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry*. 2010;49(10):980-989. doi:10.1016/j.jaac.2010.05.017

19. Corrigan PW, Kosyluk KA, Rüsch N. Reducing self-stigma by coming out proud. *Am J Public Health*. 2013;103(5):794-800. doi:10.2105/AJPH.2012.301037

20. Corrigan PW, Morris SB, Michaels PJ, Rafacz JD, Rüsch N. Challenging the public stigma of mental illness: A meta-analysis of outcome studies. *Psychiatr Serv*. 2012;63(10):963-973. doi:10.1176/appi.ps.201100529

21. Committee on the Science of Changing Behavioral Health Social Norms; Board on Behavioral, Cognitive, and Sensory Sciences; Division of Behavioral and Social Sciences and Education; National Academies of Sciences, Engineering. Approaches to Reducing Stigma. August 2016.

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