



Mountain Plains (HHS Region 8)

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Funded by Substance Abuse and Mental Health Services Administration

Measuring Stigma around Mental Illness in Rural Communities

National Rural Health Association, Annual Meeting

Atlanta, Georgia
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Research Purpose



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Mental Illness in North Dakota

- 17% (98,843) of North Dakota adults have Any Mental Illness (AMI)
- 4% (23,175) report Serious Mental Illness (SMI)
- 19,699 ND adults have co-occurring behavioral health disorders (SUD and AMI)
- 19.2% of ND middle school students report serious thoughts about killing themselves
- 16.7% of ND high school students reported an attempted suicide one or more times in the past year

North Dakota Department of Health & Department of Health and Human Services (2015 data):

<https://prevention.nd.gov/files/pdf/DataBook2019.pdf>





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Stigma

“The single most important barrier to overcome in the community is the stigma and associated discrimination towards persons suffering from mental and behavioural [sic] disorders”

- World Health Organization



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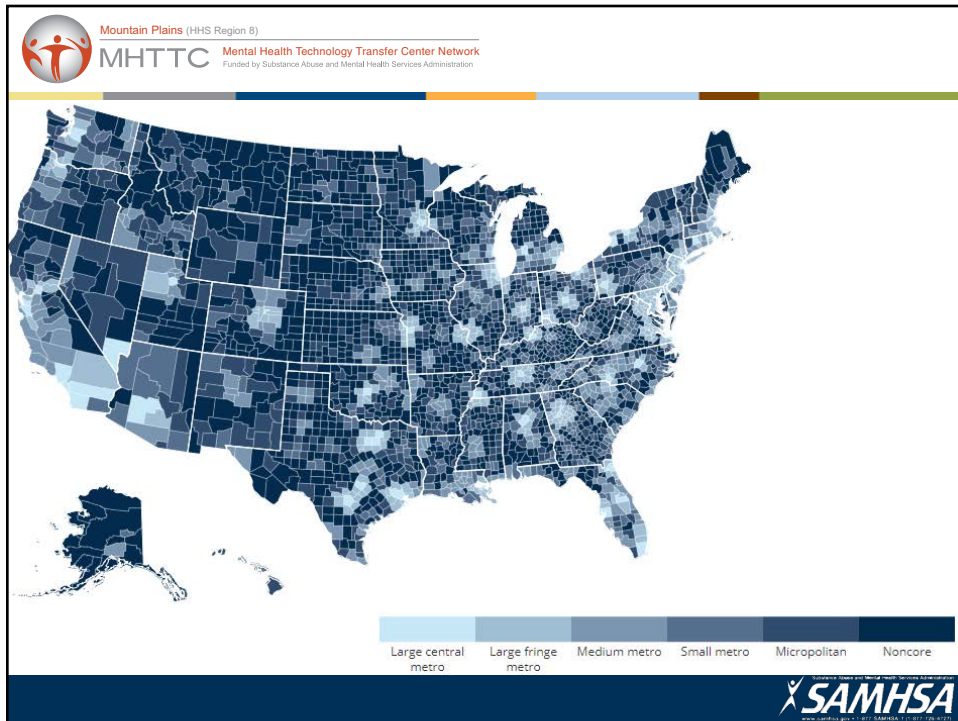
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Stigma

- Three out of four people with mental illness report experiencing stigma
- Experienced/perceived stigma impacts adherence to treatment, utilization of services, and self-esteem
- Stigma may impact both care seeking behavior and care provided
- Stigma may be felt more acutely in small rural and frontier areas because of the lack of anonymity





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Research Need: Summary

- North Dakota adults experience mental illness and SUD
- Stigma may impact utilization of services
- Stigma may be felt more acutely in rural communities
- North Dakota is largely rural
- Research on stigma around mental illness has overlooked the influence of geography

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Research Method

- Utilized Day's Mental Illness Stigma Scale
 - <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1559-1816.2007.00255.x>
- Developed survey in Qualtrics
- UND IRB Approval
- Collected demographic variables
- Disseminated electronically through local Chambers of Commerce (October, 2019)
 - 15 rural and urban chambers received the electronic link and invitation out of 29 who were contacted



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Demographics

- Gender
- Age (numeric)
- ZIP Code (rural/urban)
- Education level
 - Less than grade 12
 - High school diploma, GED, or equivalent
 - Some college
 - Associate's degree
 - Bachelor's degree
 - Master's degree
 - Professional or doctoral degree
- Closest Relation with Mental Illness
 - Self
 - Immediate family
 - Partner living with you
 - Partner not living with you
 - Other family
 - Friend
 - Acquaintance
 - Work colleague
 - Other
 - No one known
 - Prefer not to answer



Stigma Scale/Categories	
1 (completely disagree) 2 3 4 5 6 7 (completely agree)	
Treatability	There are effective medications for mental illnesses that allow people to return to normal and productive lives. (1) There are no effective treatments for mental illnesses. (8) [reverse] There is little that can be done to control the symptoms of mental illness. (11) [reverse]
Relationship Disruption	I don't think that it is possible to have a normal relationship with someone with a mental illness. (2) I would find it difficult to trust someone with a mental illness. (3) It would be difficult to have a close meaningful relationship with someone with a mental illness. (5) A close relationship with someone with a mental illness would be like living on an emotional roller coaster. (10) I think that a personal relationship with someone with a mental illness would be too demanding. (12) Mental illnesses prevent people from having normal relationships with others. (15)
Hygiene	People with mental illnesses tend to neglect their appearance. (4) People with mental illnesses ignore their hygiene, such as bathing and using deodorant. (14) People with mental illnesses do not groom themselves properly. (19) People with mental illnesses need to take better care of their grooming (bathe, clean teeth, use deodorant). (27)
Recovery	Once someone develops a mental illness, he or she will never be able to fully recover from it. (13) [reverse] People with mental illnesses will remain ill for the rest of their lives. (20) [reverse] I feel anxious and uncomfortable when I'm around someone with a mental illness. (6) I tend to feel anxious and nervous when I am around someone with a mental illness. (16) When talking with someone with a mental illness, I worry that I might say something that will upset him or her. (17)
Anxiety	I don't think that I can really relax and be myself when I'm around someone with a mental illness. (21) When I am around someone with a mental illness I worry that he or she might harm me physically. (22) I would feel unsure about what to say or do if I were around someone with a mental illness. (24) I feel nervous and uneasy when I'm near someone with mental illness. (25)
Visibility	It is easy for me to recognize the symptoms of mental illnesses. (7) I probably wouldn't know that someone has a mental illness unless I was told (9) [reverse] I can tell that someone has a mental illness by the way he or she acts. (18) I can tell that someone has a mental illness by the way he or she talks. (26)
Professional Efficacy	Psychiatrists and psychologists have the knowledge and skills needed to effectively treat mental illnesses. (23) Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for mental illnesses. (28)



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Stigma Scale/Categories

1 (completely disagree) 2 3 4 5 6 7 (completely agree)

I don't think that it is possible to have a normal relationship with someone with a mental illness. (2)


Relationship Disruption I would find it difficult to trust someone with a mental illness. (3)

It would be difficult to have a close meaningful relationship with someone with a mental illness. (5)

A close relationship with someone with a mental illness would be like living on an emotional roller coaster. (10)

I think that a personal relationship with someone with a mental illness would be too demanding. (12)

Mental illnesses prevent people from having normal relationships with others. (15)





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Results



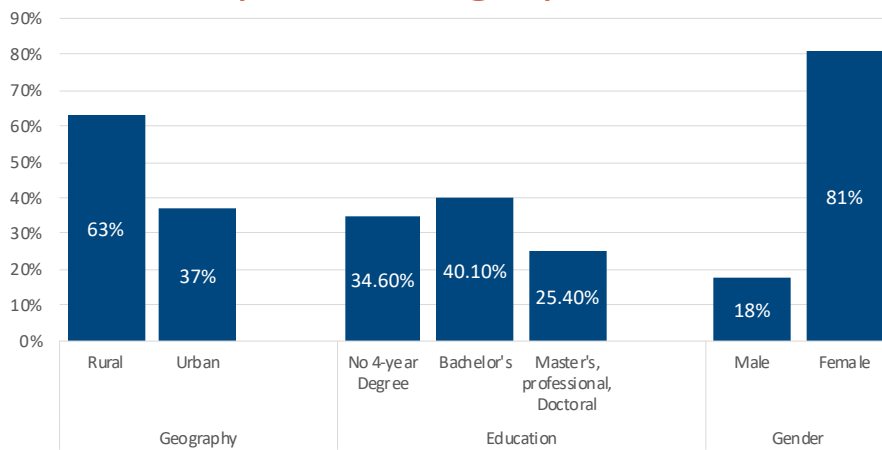
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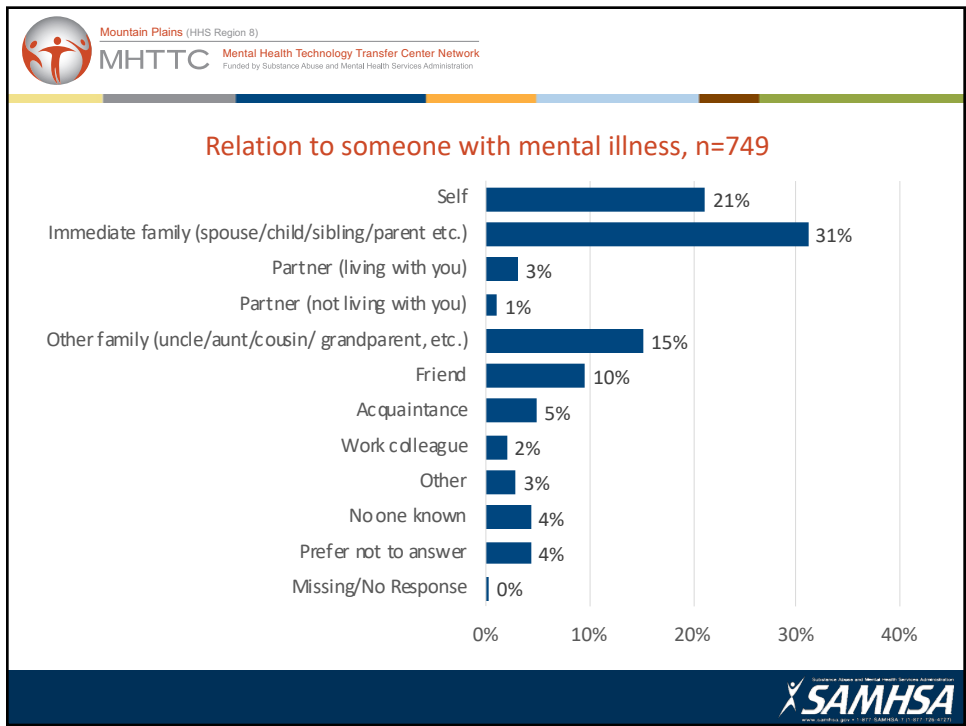
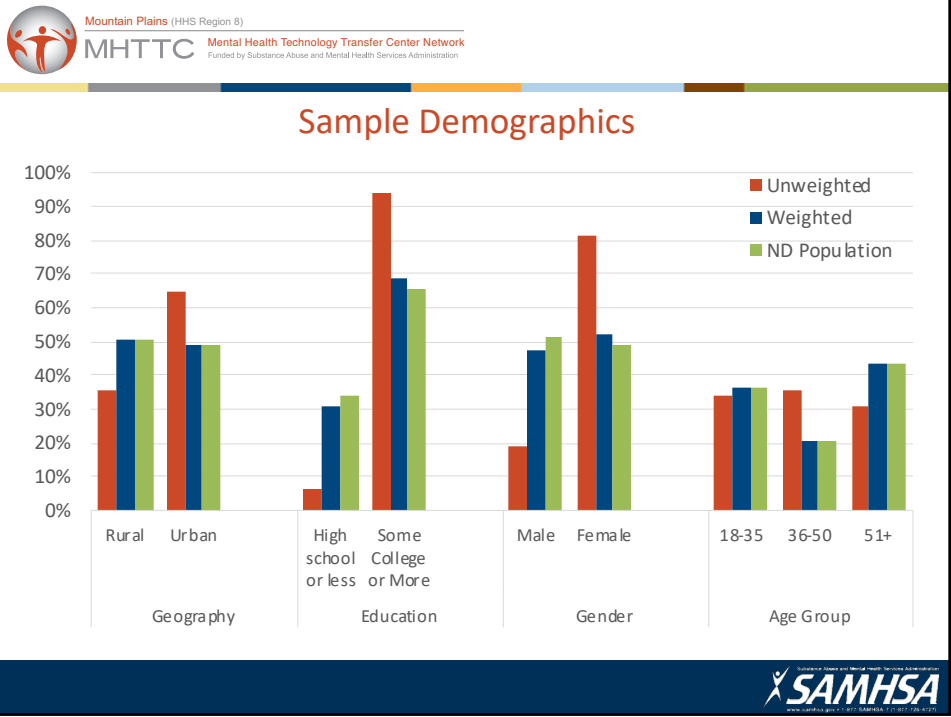
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Sample Demographics (n = 749)







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Weighted Mean [1 completely disagree 2 3 4 5 6 7 completely agree]

There are effective medications for mental illnesses that allow people to return to normal and productive lives.	5.25
Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for mental illnesses.	5.2
Psychiatrists and psychologists have the knowledge and skills needed to effectively treat mental illnesses.	4.78
I probably wouldn't know that someone has a mental illness unless I was told. [reverse]	3.67
A close relationship with someone with a mental illness would be like living on an emotional roller coaster.	3.5
It is easy for me to recognize the symptoms of mental illnesses.	3.48
When talking with someone with a mental illness, I worry that I might say something that will upset him or her.	3.15
I can tell that someone has a mental illness by the way he or she acts.	2.93
I think that a personal relationship with someone with a mental illness would be too demanding.	2.83
I would find it difficult to trust someone with a mental illness.	2.74
I can tell that someone has a mental illness by the way he or she talks.	2.63
It would be difficult to have a close meaningful relationship with someone with a mental illness.	2.62
Mental illnesses prevent people from having normal relationships with others.	2.59



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Weighted Mean [1 completely disagree 2 3 4 5 6 7 completely agree]

People with mental illnesses tend to neglect their appearance.	2.57
I would feel unsure about what to say or do if I were around someone with a mental illness.	2.54
People with mental illnesses will remain ill for the rest of their lives. [reverse]	2.53
People with mental illnesses need to take better care of their grooming (bathe, clean teeth, use deodorant).	2.52
I feel nervous and uneasy when I'm near someone with mental illness.	2.38
I don't think that it is possible to have a normal relationship with someone with a mental illness.	2.35
Once someone develops a mental illness, he or she will never be able to fully recover from it. [reverse]	2.32
I don't think that I can really relax and be myself when I'm around someone with a mental illness.	2.31
I feel anxious and uncomfortable when I'm around someone with a mental illness.	2.3
I tend to feel anxious and nervous when I am around someone with a mental illness.	2.26
People with mental illnesses ignore their hygiene, such as bathing and using deodorant.	2.18
People with mental illnesses do not groom themselves properly.	2.18
There is little that can be done to control the symptoms of mental illness. [reverse]	2.07
When I am around someone with a mental illness I worry that he or she might harm me physically.	1.97
There are no effective treatments for mental illnesses. [reverse]	1.76





General Results

- Low stigma overall regardless of demographic comparison
- Little variability by geography or education
- Gender differences between groups
 - Men reported greater stigma than women; stigma centered on measures related to anxiety being around persons with mental illness, perceived relationship disruption, and personal hygiene
- Age differences between groups
 - People ages 18-35 reported the lowest average stigma scores; Variable stigma present in all categories except for treatability and professional efficacy



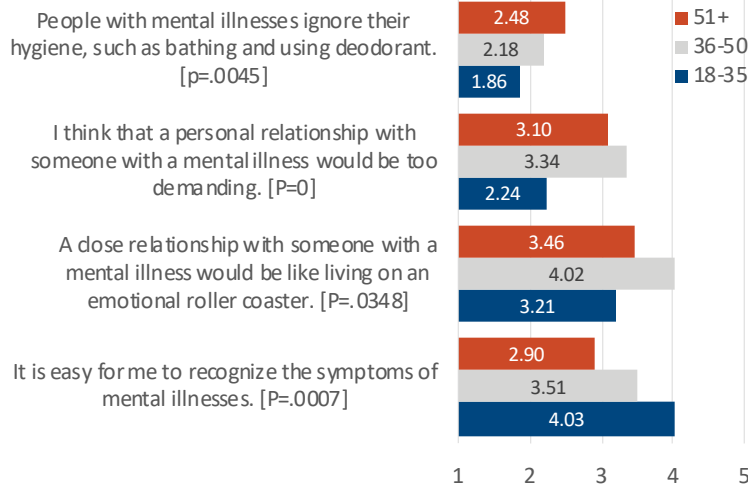
Age Group Differences

Nine of the 28 measures of stigma had a statistically significant adjusted p-value ($p \leq 0.05$)

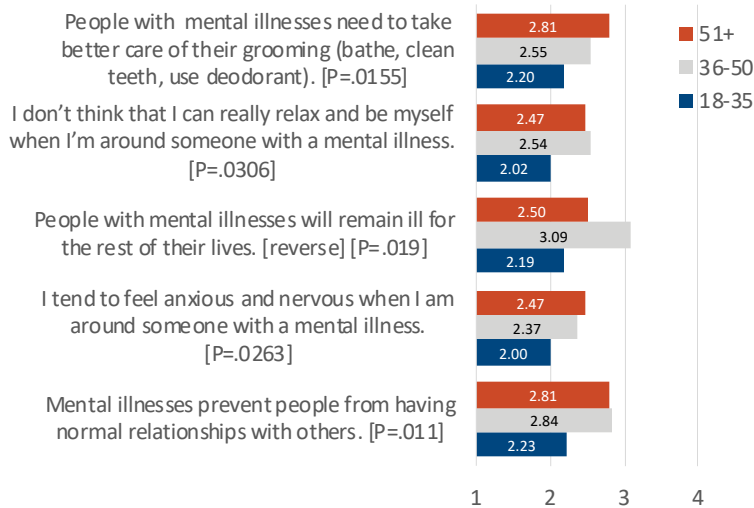
- It is easy for me to recognize the symptoms of mental illnesses. [P=.0007]
- A close relationship with someone with a mental illness would be like living on an emotional roller coaster. [P=.0348]
- I think that a personal relationship with someone with a mental illness would be too demanding. [P=0]
- People with mental illnesses ignore their hygiene, such as bathing and using deodorant. [p=.0045]
- Mental illnesses prevent people from having normal relationships with others. [P=.011]
- I tend to feel anxious and nervous when I am around someone with a mental illness. [P=.0263]
- People with mental illnesses will remain ill for the rest of their lives. [reverse] [P=.019]
- I don't think that I can really relax and be myself when I'm around someone with a mental illness. [P=.0306]
- People with mental illnesses need to take better care of their grooming (bathe, clean teeth, use deodorant). [P=.0155]



Age Group Differences



Age Group Differences, cont.





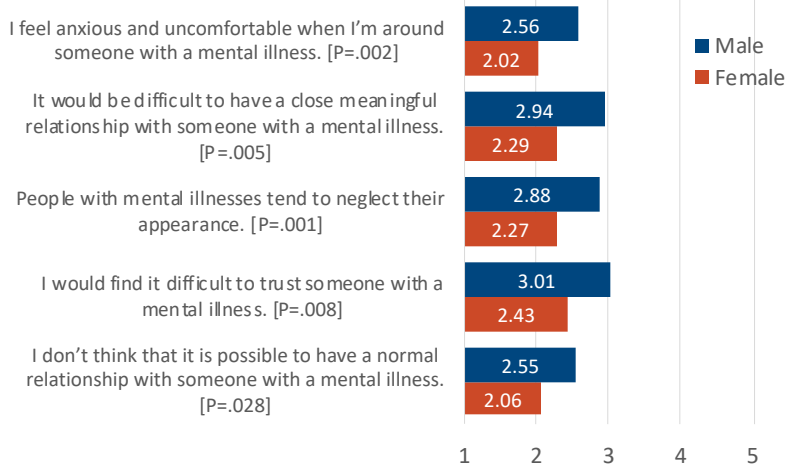
Gender Group Differences

Ten of the 28 measures of stigma had a statistically significant adjusted p-value ($p \leq 0.05$)

- I don't think that it is possible to have a normal relationship with someone with a mental illness. [P=.028]
- I would find it difficult to trust someone with a mental illness. [P=.008]
- People with mental illnesses tend to neglect their appearance. [P=.001]
- It would be difficult to have a close meaningful relationship with someone with a mental illness. [P=.005]
- I feel anxious and uncomfortable when I'm around someone with a mental illness. [P=.002]
- I think that a personal relationship with someone with a mental illness would be too demanding. [P=.004]
- I tend to feel anxious and nervous when I am around someone with a mental illness. [P=.008]
- People with mental illnesses do not groom themselves properly. [P=.049]
- I don't think that I can really relax and be myself when I'm around someone with a mental illness. [P=.000]
- I feel nervous and uneasy when I'm near someone with mental illness. [P=.016]

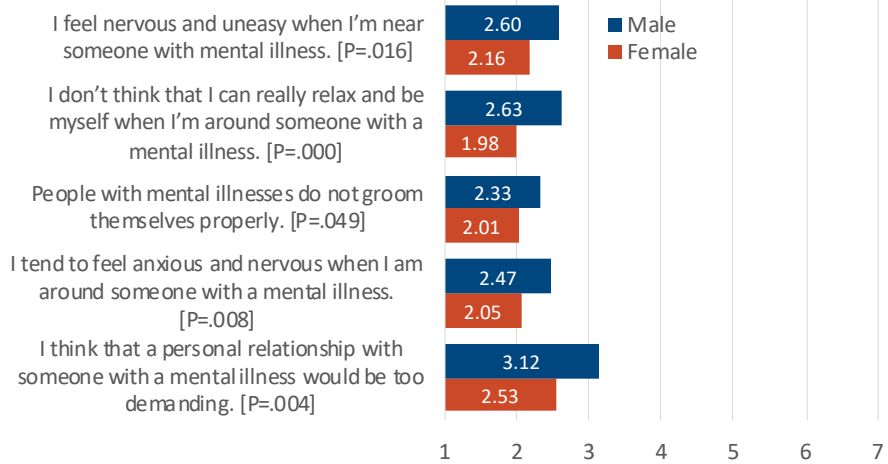


Gender Group Differences



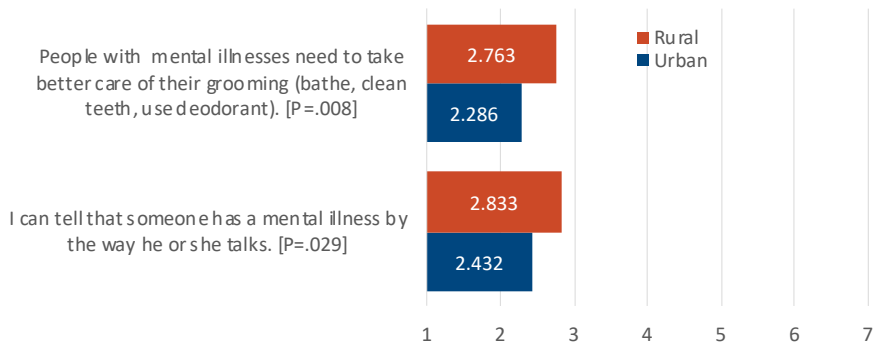


Gender Group Differences, cont.



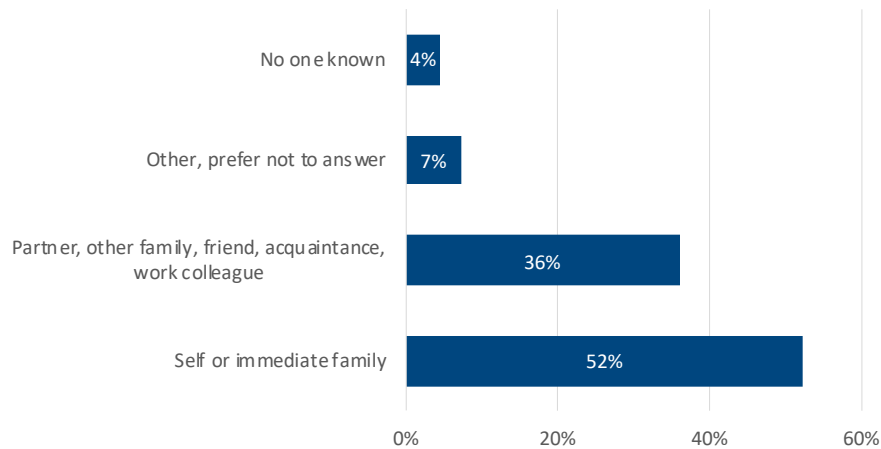
Geography Group Differences

Only two of the 28 measures of stigma had a statistically significant adjusted p-value ($p \leq 0.05$)





Relation to someone with mental illness, n=749



Relation to Someone with Mental Illness

There is significant variability between an individual's relation to someone with mental illness and stigma associated with:

- **Treatability** ($p = .003$): Individuals with mental illness as well as those with immediate family members with mental illness were more likely than others to perceive that there are effective treatments for mental illness, symptoms can be controlled, and that with treatment individuals can return to normal and productive lives; however, all respondents illustrated high perceptions of treatability.
- **Recovery** ($p = .045$): Individuals who preferred not to answer or indicated "other" relationships reported greater stigma than others related to recovery; however, all respondents had positive perceptions around recovery.
- **Hygiene** ($p = .004$): Those with mental illness or with an immediate relation were less likely than others to hold stigma about personal hygiene; however, all respondents indicated low stigma around the impact of mental illness on personal hygiene.
- **Anxiety** ($p = .000$): Those with mental illness less likely than any other groups to report anxiety interacting with individuals with mental illness; however, all respondents reported low anxiety across all factors.
- **Relationship Disruption** ($p = .002$): Those with mental illness were less likely than any other groups to perceive that mental illness would disrupt relationships; however all respondents indicated low stigma around the impact of mental illness on relationships.



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Rural Implications

Contrary to previous literature, rural respondents:

- Agreed that psychiatrists and psychologists have the knowledge and skills needed to effectively treat mental illnesses
- Agreed that mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for mental illnesses.
- Disagreed that once someone develops a mental illness, he or she will never be able to fully recover from it.



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Implications and Future Research

- Program development
 - Utilize family members to combat stigma
 - Target education and mental health literacy by age category and gender
- Weighted categorical comparisons
- Expand survey to include additional states in Region 8 with new sample techniques





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Additional Resources



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Mountain Plains MHTTC


The Mountain Plains MHTTC serves the states of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming (HHS Region 8). The primary focus of the center is to provide training, resources, and technical assistance to individuals serving persons with mental health disorders, especially those with serious mental illness or a serious emotional disturbance.



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March, 2019



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Measuring Stigma around Mental Illness in North Dakota

Shawanda Schroeder, PhD
Thomasine Heikamp, LICSW
Chih Ming Tan, PhD

Introduction


The World Health Organization has stated the "single most important barrier to overcome in the community is the stigma and associated discrimination towards persons suffering from mental and behavioural [sic] disorders." This problem may be more difficult in rural communities. Three out of four people diagnosed with mental illness report experiencing stigma, which can subsequently impact adherence to treatment, utilization of services, and self-esteem.^{1,2} Stigma may be felt more acutely in small rural and frontier areas because of the lack of anonymity. As a result, it is imperative to measure levels of stigma in rural and urban areas in an effort to tailor education and to create a safe environment for accessing treatment in North Dakota.

Key Findings

- More than half of respondents indicated they either had a mental illness (21%) or had an immediate family member (spouse, parent, child, sibling) with a mental illness (31%).
- Overall levels of stigma for each measured topic were low across all demographic categories. The seven topics included treatability, relationship disruption, hygiene, recovery, anxiety, visibility, and professional efficacy. There was significant variability between an individual's relation to someone with mental illness and their level of stigma associated with treatability, recovery, hygiene, anxiety, and relationship disruption. Those without lived experience or family members struggling with mental illness reported greater stigma, though average levels of stigma were low overall.
- Although there was low anxiety overall, rural residents reported greater anxiety when being with people with mental illness than did urban respondents.
- Individuals with college degrees were more likely than those with no four-year degrees to believe effective treatments exist for mental illness, symptoms can be controlled, and with treatment, individuals can return to normal and productive lives. However, all respondents illustrated high perceptions of treatability.
- Individuals with college degrees were more likely than those with no four-year degrees to perceive psychiatrists and psychologists as knowledgeable and able to provide effective treatment for mental illness; however, all respondents illustrated high perceptions of professional efficacy.

Background

It is predicted that by 2020, worldwide, mental and substance use disorders will surpass all physical diseases as a major cause of disability. In 2014, 91,912 or 16.1% of North Dakotan adults (ages 18 and older) reported any mental illness in the past year; 4% of the state's population (22,835 residents) reported serious mental illness in the past year.³ Untreated mental illness may also lead to suicide.





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Rural Mental Health

There is a significant need for mental health services in rural America. According to the [Results from the 2012 National Survey on Drug Use and Health: Detailed Tables](#), 19.1% of residents aged 18 or older of nonmetropolitan counties had any **mental illness (MI)** in 2012, approximately 6.8 million people. In addition, 4.9%, or nearly 1.7 million, of residents of nonmetropolitan counties experienced serious thoughts of suicide during the year.

While the prevalence of mental illness is similar between rural and urban residents, the services available are very different. Mental healthcare needs are not met in many rural communities across the country because adequate services are not present. Providing mental health services can be challenging in rural areas. According to WICHE's [Rural Mental Health: Challenges and Opportunities Caring for the Country](#), the following factors are particular challenges to the provision of mental health services in rural communities:

- **Accessibility** – Rural residents often travel long distances to receive services, are less likely to be insured for mental health services, and are less likely to recognize an illness.
- **Availability** – Chronic shortages of mental health professionals exist and mental health providers are more likely to practice in urban centers.
- **Acceptability** – The stigma of needing or receiving mental healthcare and fewer choices of trained professionals who

<https://www.ruralhealthresearch.org/topics/mental-and-behavioral-health>

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Mental and behavioral health

Research Findings

View publications, including policy briefs, working papers, and journal publications, on this topic:

- [Research Products](#) - (54)
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Projects on this Topic

Learn more about the research questions guiding each study, the lead researcher for each, and when the Research Center anticipates releasing completed product(s) under each project.

The Centers have [11 research projects currently underway](#) to explore this issue. In the past, [44 research projects have been completed](#) on this topic.

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References

World Health Organization. (2001). *The world health report: 2001: Mental health: New understanding, new hope*. Geneva, Switzerland: WHO Library Cataloguing in Publication Data.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, 59, 614–625.

Gilbert, D. C., & Levinson, D. J. (1956). Ideology, personality, and institutional policy in the mental hospital. *Journal of Abnormal and Social Psychology*, 53, 263–271.

Baker, F., & Schulberg, H. C. (1967). The development of a community mental health ideology scale. *Community Mental Health Journal*, 3, 216–225.

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin*, 7, 225–240.

Boyd, J. E., Adler, E. P., Otilingam, P. G., & Peters, T. (2014). Internalized stigma of mental illness (ISMI) scale: a multinational review. *Comprehensive Psychiatry*, 55, pp. 221–231.

Day, E. N., Edgren, K., & Eshleman, A. (2007). Measuring stigma toward mental illness: development and application of the mental illness stigma scale. *Journal of Applied Social Psychology*, 37, 10, pp. 2191–2219.

Jones, E. E., Farina, A., Hastorf, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships*. New York: W. H. Freeman.

United States Department of Agriculture: Economic Research Service. (2013). *2010 rural-urban commuting area codes*. Retrieved from <https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/>

United States Census Bureau. (2018). Quick facts: North Dakota. Retrieved from <https://www.census.gov/quickfacts/nd>

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