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Measuring Stigma around Mental Illness in North Dakota

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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."[1] 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.

More than 90% of individuals who die from suicide have at least one mental illness, and in North Dakota, suicide is the ninth leading cause of death for all age groups and the second leading cause of death among youth ages 10-24.[4] Of heightened concern, the death by suicide rate increased by 57.6% in North Dakota from 1999 to 2016; this is the most significant increase for any state in the U.S. during that time period.[5]

Stigma around mental illness can impact an individual's utilization of available behavioral health services, it may impact the care provided by healthcare professionals, and it can impact an individual's self-worth.[1-2] North Dakota is rural in nature, and many organizations, providers, and communities are working hard to address stigma around mental illness in our state. Our research team sought to measure levels of stigma between rural and urban areas in North Dakota. Once levels of stigma are identified, communities, programs, local public health units, and provider training programs can begin to offer resources and community specific education to address and reduce mental health stigma.

Although there are many tools that have been developed to measure stigma, they vary in their application and audience. For example, some instruments measure the views of mental health professionals rather than the general public.[6-7] Others assess public opinion regarding mental health services,[8] or they explore self (internalized) stigma.[9] The instrument employed in this study is theoretically guided by the six dimensions of stigma proposed and was developed specifically to assess the general public's attitudes toward people with mental illness.[10-11]

Methods

In response, researchers collected data utilizing an existing, tested, and nationally validated instrument for measuring stigma; i.e., Day's Mental Illness Stigma Scale.[11] This scale provides items that were identified as valid measures of stigma. Participants indicated their level of agreement (1 = strongly disagree to 7 = strongly agree) on 28 statements measuring stigma; some statements were reverse coded. The 28 statements each fell within seven topic areas: treatability, relationship disruption, hygiene, recovery, anxiety, visibility, and professional efficacy. The team added demographic questions to include gender, age, ZIP code, highest grade level of school completed, and relation to someone with a mental health disorder. Rural communities were defined through application of the Rural-Urban Commuting Area Codes and categorized into two geographies: (1) rural; and (2) urban.[12]

The instrument was initially disseminated electronically by North Dakota Chambers of Commerce in late October 2018. The e-invitation encouraged individuals to share the survey link with other contacts in the state. Participants included all North Dakota residents ages 18 and older. Responses were anonymous, and the research method was reviewed and approved by the University of North Dakota's Institutional Review Board.

Findings

A total of 749 surveys were completed by North Dakota residents. Participants were predominately female (81% of the respondents), rural (63%), between the ages of 18 and 41 (52%), held a college degree (65%), and either had a mental illness (21%) or had an immediate family member with a mental illness (31%). See Figures 1-2.

Figure 1. Participant Demographics, North Dakota (n=749)

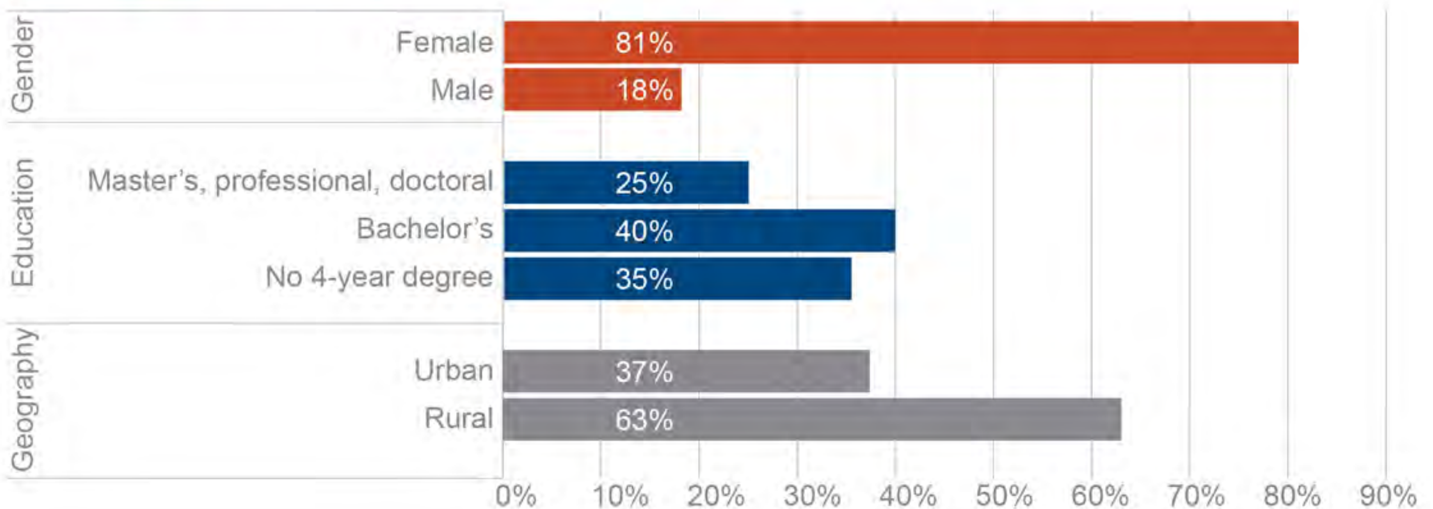
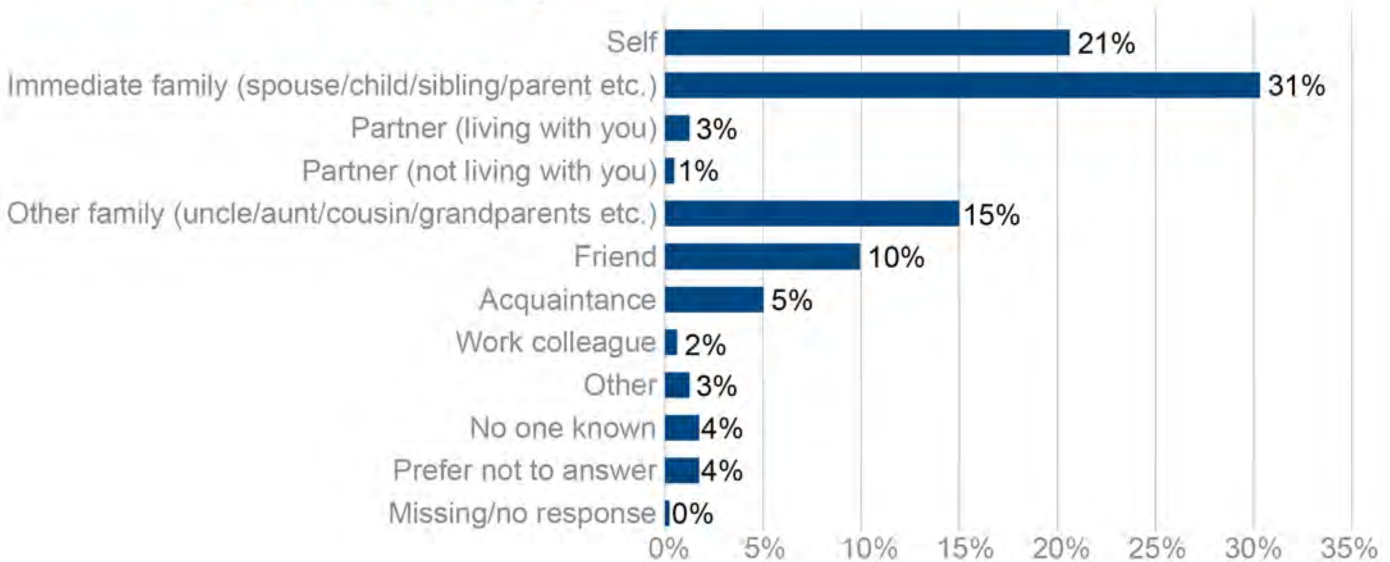


Figure 2. Participants' Closest Relation to Someone with Mental Illness, North Dakota (n=749)



Stigma was measured under seven topics: treatability, relationship disruption, hygiene, recovery, anxiety, visibility, and professional efficacy. Overall in North Dakota and across all demographic variables, there was a low level of stigma for people with mental illness. See Table 1.

Table 1. Average Stigma by Gender, Education, and Geography in North Dakota
(1 completely disagree – 7 completely agree)

		Gender		Education			Geography		Avg.
		Male	Female	No 4-year Degree	Bachelor's	Master's +	Rural	Urban	North Dakota
Treatability	There are effective medications for mental illnesses that allow people to return to normal and productive lives.	5.22	5.52	5.26	5.56	5.59	5.46	5.48	5.47
	There are no effective treatments for mental illnesses. [reverse]	6.24	6.27	6.08	6.4	6.29	6.21	6.35	6.27
	There is little that can be done to control the symptoms of mental illness. [reverse]	5.9	6.09	5.93	6.2	6.03	6.06	6.06	6.06
Relationship Disruption	I don't think that it is possible to have a normal relationship with someone with a mental illness.	2.46	2.02	2.24	1.98	2.09	2.07	2.15	2.1
	I would find it difficult to trust someone with a mental illness.	2.89	2.7	2.51	2.42	2.46	2.52	2.38	2.46
	It would be difficult to have a close, meaningful relationship with someone with a mental illness.	2.78	2.13	2.31	2.19	2.21	2.31	2.12	2.24
	A close relationship with someone with a mental illness would be like living on an emotional roller coaster.	3.6	3.33	3.51	3.27	3.41	3.46	3.26	3.39
	I think that a personal relationship with someone with a mental illness would be too demanding.	3.07	2.61	2.82	2.58	2.67	2.75	2.58	2.69
	Mental illnesses prevent people from having normal relationships with others.	2.71	2.4	2.41	2.43	2.52	2.46	2.42	2.45
Hygiene	People with mental illnesses tend to neglect their appearance.	2.71	2.23	2.46	2.26	2.21	2.35	2.27	2.32
	People with mental illnesses ignore their hygiene, such as bathing and using deodorant.	2.23	2.02	2.12	2.03	2.01	2.06	2.04	2.05
	People with mental illnesses do not groom themselves properly.	2.31	1.89	2.05	1.95	1.87	2.04	1.85	1.97
	People with mental illnesses need to take better care of their grooming (bathe, clean teeth, use deodorant).	2.6	2.17	2.36	2.21	2.14	2.34	2.08	2.24
Recovery	Once someone develops a mental illness, he or she will never be able to fully recover from it. [reverse]	5.78	5.8	5.78	5.86	5.75	5.86	5.71	5.81
	People with mental illnesses will remain ill for the rest of their lives. [reverse]	5.39	5.59	5.39	5.58	5.75	5.48	5.68	5.56

		Gender		Education			Geography		Avg.
		Male	Female	No 4-year Degree	Bachelor's	Master's +	Rural	Urban	North Dakota
Anxiety	I feel anxious and uncomfortable when I'm around someone with a mental illness.	2.59	2.15	2.22	2.18	2.28	2.27	2.14	2.22
	I tend to feel anxious and nervous when I am around someone with a mental illness.	2.47	2.13	2.24	2.14	2.17	2.24	2.1	2.19
	When talking with someone with a mental illness, I worry that I might say something that will upset him or her.	3.21	3.05	3.34	2.96	2.88	3.14	2.97	3.07
	I don't think that I can really relax and be myself when I'm around someone with a mental illness.	2.57	1.99	2.15	2.05	2.08	2.12	2.04	2.09
	When I am around someone with a mental illness, I worry that he or she might harm me physically.	1.99	1.86	2.06	1.83	1.75	1.96	1.78	1.89
	I would feel unsure about what to say or do if I were around someone with a mental illness.	2.74	2.26	2.44	2.31	2.26	2.42	2.22	2.34
	I feel nervous and uneasy when I'm near someone with a mental illness.	2.54	2.1	2.32	2.1	2.1	2.24	2.06	2.17
Visibility	It is easy for me to recognize the symptoms of mental illnesses.	3.14	3.64	3.41	3.54	3.81	3.47	3.72	3.56
	I probably wouldn't know that someone has a mental illness unless I was told. [reverse]	4.21	4.12	4.21	4.12	4.08	4.11	4.2	4.14
	I can tell that someone has a mental illness by the way he or she acts.	2.88	2.8	2.85	2.8	2.8	2.83	2.79	2.81
	I can tell that someone has a mental illness by the way they talk.	2.72	2.45	2.53	2.48	2.47	2.61	2.3	2.5
Professional Efficacy	Psychiatrists and psychologists have the knowledge and skills needed to effectively treat mental illnesses.	4.81	5.14	4.88	5.13	5.34	5.04	5.19	5.1
	Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for mental illnesses.	5.16	5.51	5.24	5.51	5.66	5.41	5.53	5.46

Although stigma was low across all demographic categories, there was significant variability between rural and urban among one of the seven topics – anxiety. However, neither group experienced "high" anxiety. Contrary to anecdotal evidence, rural residents (on average) agreed that people can recover from mental illness (5.48 on a 7 point scale of agreement) and that mental health professionals can provide effective treatments (5.41).

There was a difference between educational attainment and both treatability and recovery. Individuals with four-year college degrees or master's, professional, or doctoral degrees were more likely than those with no four-year degree to perceive that there are effective treatments 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 four-year college degrees or master's, professional, or doctoral degrees were more likely than

those with no four-year degree 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.

There was also variability between men and women with regard to four of the seven topics, but our data are heavily skewed by the overrepresentation of women who completed the survey; only 142 of the 749 respondents were men.

1. **Relationship Disruption** (p = .000): Men were more likely than women to perceive that mental illness would disrupt relationships; however, both men and women indicated low stigma around the impact of mental illness on relationships.
2. **Hygiene** (p = .001): Men were more likely than women to hold stigma about personal hygiene for those with mental illness; however, both men and women indicated low stigma around the impact of mental illness on personal hygiene.
3. **Anxiety** (p =.000): Men were more likely than women to report anxiety interacting with individuals with mental illness; however, both men and women reported low anxiety across all factors.
4. **Professional Efficacy** (p =.002): Women were more likely than men 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.

The greatest variability related to whether the respondent had a mental illness or had a familial relation to someone with a mental illness. When data compared those who had, or were related to someone with, a mental illness to those with no lived experience, there was significant variation among five of the seven topics. See Figures 3-6.

1. **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 with treatment, individuals can return to normal and productive lives; however, all respondents illustrated high perceptions of treatability. See Figure 3.
2. **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. See Figure 3.
3. **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. See Figure 4.
4. **Anxiety** (p = .000): Those with mental illness were less likely than any other groups to report anxiety interacting with individuals with mental illness; however, all respondents reported low anxiety across all factors. See Figure 5.
5. **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. See Figure 6.

Figure 3. Average Score for Recovery and Treatability Factors by Relation to Mental Illness (1 completely disagree – 7 completely agree)

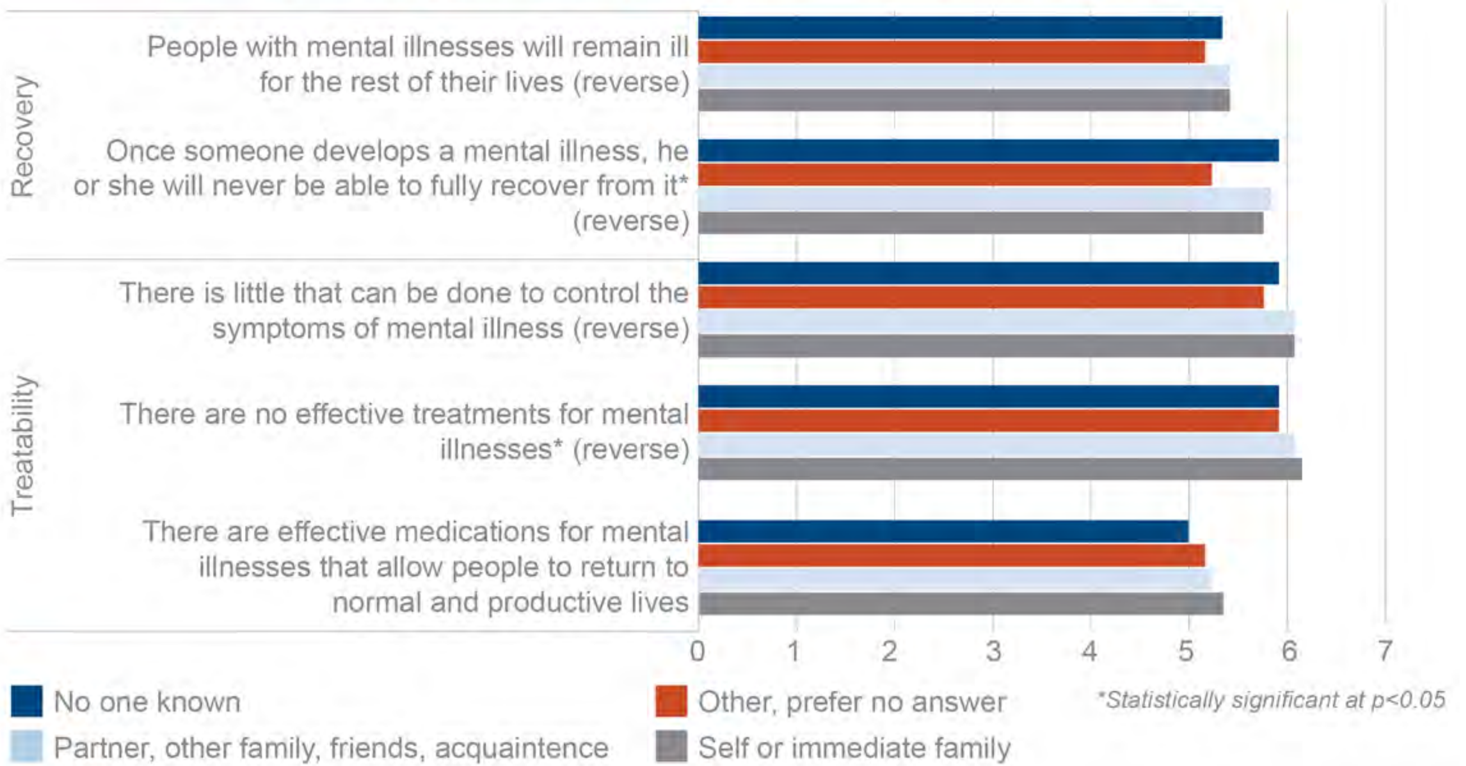


Figure 4. Average Score for Hygiene Factors by Relation to Mental Illness (1 completely disagree – 7 completely agree)

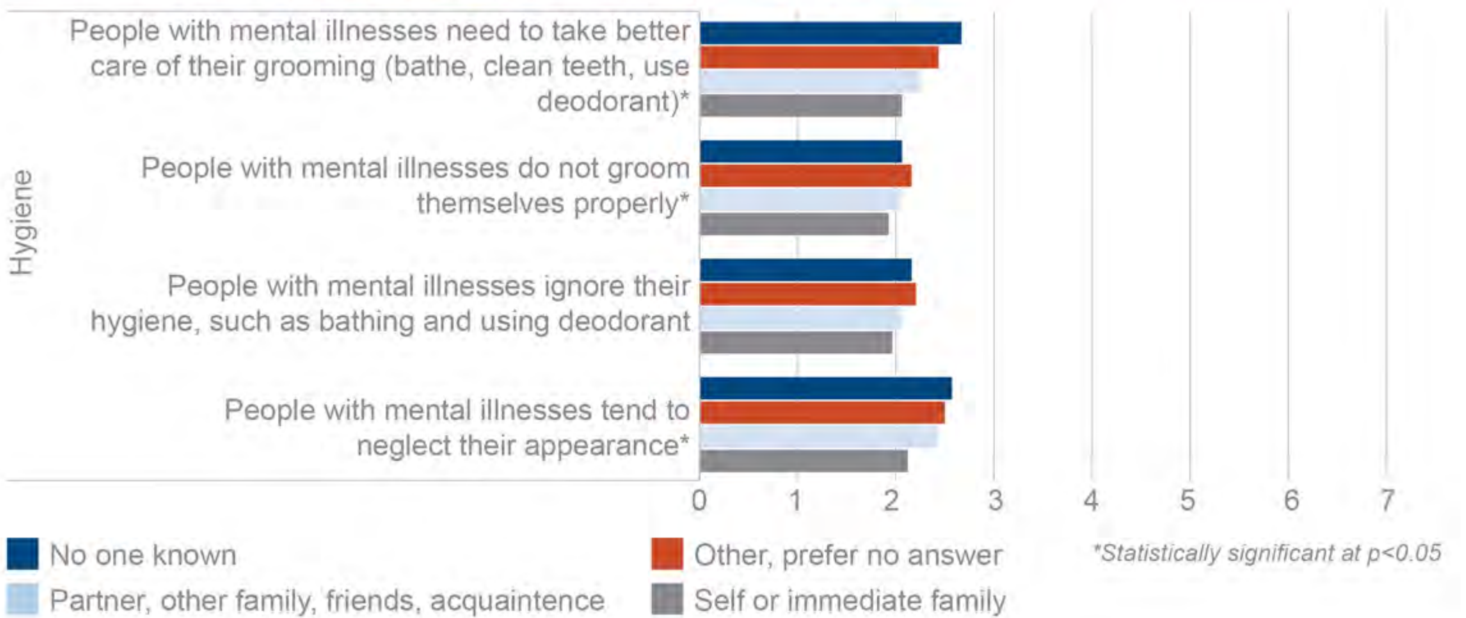


Figure 5. Average Score for Anxiety Factors by Relation to Mental Illness (1 completely disagree – 7 completely agree)

Anxiety

I feel nervous and uneasy when I'm near someone with a mental illness*

I would feel unsure about what to say or do if I were around someone with a mental illness*

When I am around someone with a mental illness, I worry that he or she might harm me physically*

I don't think that I can really relax and be myself when I'm around someone with a mental illness*

When talking with someone with a mental illness, I worry that I might say something that will upset him or her*

I tend to feel anxious and nervous when I am around someone with a mental illness.

I feel anxious and uncomfortable when I'm around someone with a mental illness*

0 1 2 3 4 5 6 7

No one known

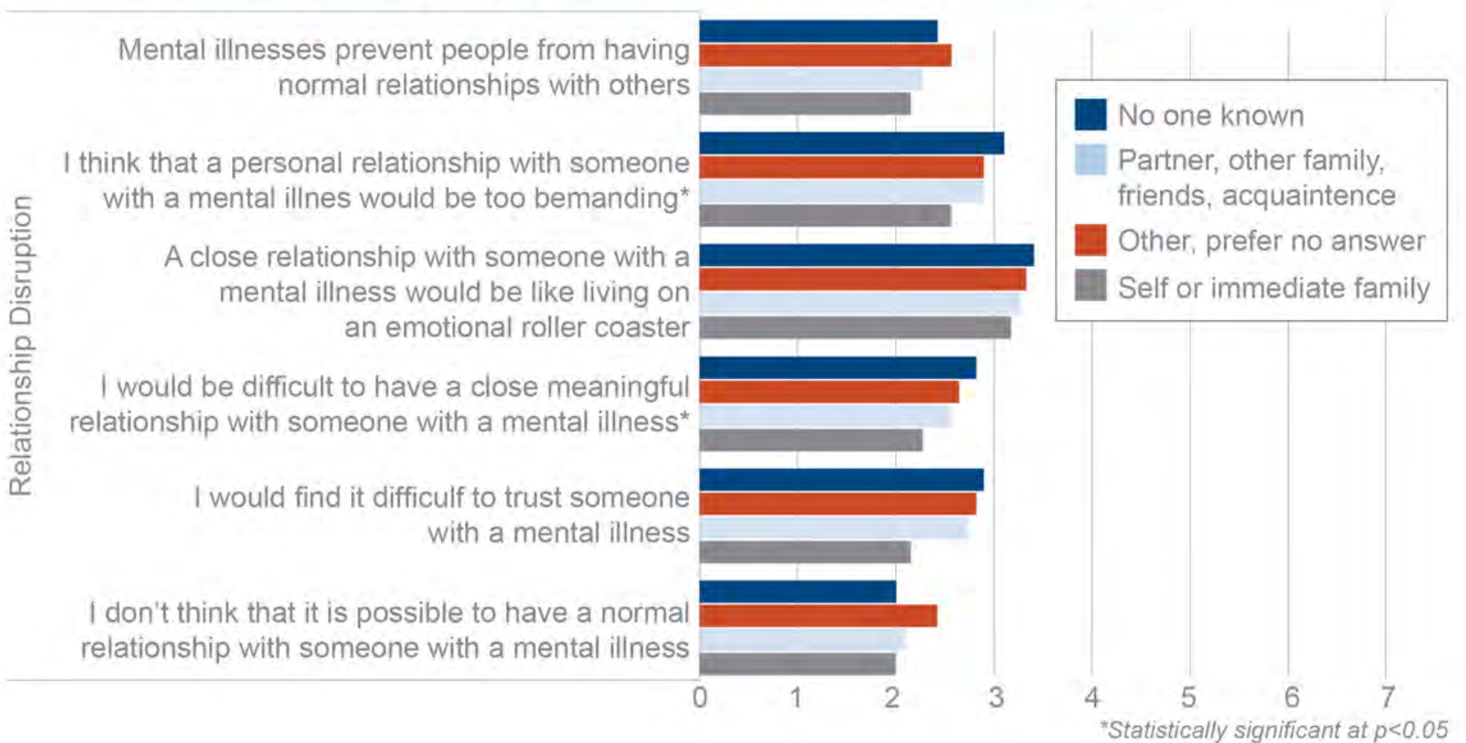
Partner, other family, friends, acquaintence

Other, prefer no answer

Self or immediate family

*Statistically significant at $p<0.05$

Figure 6. Average Score for Relationship Disruption Factors by Relation to Mental Illness (1 completely disagree – 7 completely agree)



Discussion

Prior to the discussion, it is important to recognize a significant limitation in the previous analyses. The data are skewed and not an accurate representation of the state's population as a whole. As an example, 81% of the 749 survey respondents were female, but only 48.7% of the total state population is female.[13] Similarly, only 28.9% of the state's population has a bachelor's degree or higher, yet this was true for 65% of survey respondents.[13] The reported results are preliminary and not descriptive of the general North Dakota population. The research team has weighted the data and will be publishing results that are representative of the state's population at a later date.

Regardless, the preliminary results, which illustrate perceptions largely among women and individuals in the state with college degrees, indicated low stigma overall in both rural and urban communities. Rural as well as urban respondents agreed that people can recover from mental illnesses and that mental health professionals can provide effective treatments. Individuals with mental illnesses or those with immediate members of their families with mental illnesses reported significantly less stigma on average than those with no lived experience or familial relation. This indicates an opportunity to work with family members by providing them with the resources and support they need to advocate for individuals with mental illnesses and to dispel myths around mental illness and to address stigma in their own communities.

The Mountain Plains Mental Health Technology Transfer Center (MHTTC) will utilize these data to identify and develop trainings and technical assistance to address stigma in North Dakota and other states within HHS Region 8 (Colorado, Montana, South Dakota, Utah, and Wyoming).

Acknowledgements

Thank you to the local North Dakota Chambers of Commerce who were willing to share our survey electronically with all of their respective chamber members. Thank you also to the individuals who took the time to respond to the survey, to call and share their stories, and to send the survey to other friends and family in the state.

Citations

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