Mental Health Needs Assessment for the Central School District in Norwood Young America, MN

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Executive Summary

In Minnesota, suicide is the second leading cause of death for 10 to 34 year-olds. The school district that serves the City of Norwood Young America, Central School District, experienced two very public student suicides in 2012. Additionally, the results of the 2013 Minnesota Student Survey data revealed that Central School students have higher than state-average rates of mental health problems. There have been many concerns from the school and community members as to how they can strengthen community resilience in regards to their adolescent mental health.

This research project was conducted by two University of Minnesota School of Public Health graduate students. The project is part of the Resilient Communities Project, which is an initiative of the Sustainability Faculty Network at the University of Minnesota. The goal of the Resilient Communities Project is to better connect University resources with communities, regional entities, and organizations interested in sustainability in various areas in Minnesota. For the 2015-2016 academic year, the Resilient Communities Project has selected Carver County as its community partner. In connection with the Carver County Public Health Department, we were matched with the Norwood Young America Community to address the mental health needs of the adolescents in the Central School District.

We used a qualitative approach for the project by interviewing key stakeholders within the community and school to get their perspective on the mental health priorities for adolescents. Using the results from the stakeholder interviews, and keeping in mind the socio-economics of

the community, further research was done on viable community-based interventions, used by "like" communities, for adolescent mental health.

Finally, three recommendations were chosen that were best fit and attainable for the community and school's mental health needs. The recommendations were based on the stakeholders' perspectives and other "like" communities that used adolescent mental health interventions. The three recommendations included less intensive options and ideas to bring the community and school together to become more aware of mental health and increase community resilience.

Introduction

Adolescence is a significant developmental period, particularly in regards to mental health and wellbeing (Rickwood, Deane, Wilson & Ciarrochi, 2005). An untreated mental health problem at this stage of life can profoundly impact a person (Kosky & Hardy, 1992). According to the World Health Organization (2014, p. 1), mental health is "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community." Mental health problems, or mental illness, is defined as "collectively all diagnosable mental disorders" or "health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning" (U.S. Department of Health and Human Services, 1999, p. 39). Mental health in childhood is characterized by the achievement of development and emotional milestones, healthy social development, and effective coping skills, such that mentally healthy children have a positive

quality of life and can function well at home, in school, and in their communities (Perou et al., 2013). Far too many children in our society do not achieve the state of optimal mental health.

Approximately 1 in 5 young people aged 13 through 18 (21.4%) experiences a mental disorder at some point during their life (U.S. Public Health Service, 2000). However, in any given year only 20 percent of youth with mental disorders are identified and receive mental health services (U.S. Public Health Service, 2000). Mental health problems pose significant financial and social burdens on the individual as well as on families and society as a whole. Untreated mental health issues can disrupt children's functioning at home, school and in the community. Adolescents with unidentified mental disorders are in poorer physical health, are more likely to perform high-risk behaviors, have increased risk of school failure, have more contact with the criminal justice system, have increased dependence on social services, and are at the highest risk for committing suicide (Perou et al., 2013).

Nearly one-half of all lifetime cases of mental illness begin by age 14, and three-fourths by age 24 (Kessler, Berglund, & Demler, 2005). It is vital to identify mental health disorders as early in life as possible. A lack of identification, as well as a lack of treatment among those diagnosed with mental illness, are two notable issues in the field of adolescent mental health (National Institute for Health Care Management, 2010). The prevalence of mental illness among adolescents and the lifelong physical, social and financial consequences of living with untreated mental illness point to the importance of public health's responsibility in identifying mental issues as early as possible.

Many communities have difficulty addressing mental health issues, especially rural communities. One-fourth of America's population lives in rural areas. Compared with urban Americans, rural residents have higher poverty rates, tend to be in poorer health, have fewer

doctors, hospitals, and other health resources, and experience difficulty in getting to health services (Lutfiyya, Bianco, Quinlan, Hall, & Waring, 2012). Furthermore, although rural Americans have shown that they need and will use mental health services, they are less likely than urban Americans to have health insurance that covers mental or behavioral health services (Sawyer, Gale, & Lambert, 2006).

The community that will be the focus of this project is the Central School District, the school district that serves the City of Norwood Young America, Minnesota. It is a rural community, situated about 35 miles from the nearest metropolitan area. The city experienced two very public suicides by students in 2012. Additionally, the results of the 2013 Minnesota Student Survey data revealed that Central School students have higher than state-average rates of mental health problems on measures such as depression, feelings of hopelessness, and suicide ideation (Minnesota Department of Health, 2013). Other stakeholders in the area (e.g. hospitals and school) have identified mental health as priority area to focus their resources. Stakeholders agree there is a need to better address the needs of adolescents with mental health problems in the community.

The purpose of the project was to first, identify the major priorities for addressing mental health among adolescents in the Norwood Young America community. Second, we identified community driven, strategies to address these priorities. Lastly, we developed recommendations for best practices to implement these strategies. This project will use the concept of "community resilience" to identify mental health needs and provide guidelines for best strategies to combat mental illness among adolescents.

Background

History of Community/School-Based Interventions

The concept of childhood mental illness did not arise until the late 19th century and it was not until the late 1980s that serious attempts to provide more mental health services for adolescents was developed (Hoagwood, Burns, Kiser, Ringeisen, Schoenwald, 2001). A number of factors influenced the initiation and expansion of mental health services, including rising rates of problems such as teen pregnancy, sexually transmitted diseases, drug and alcohol abuse, increasing levels of adolescent suicide and homicide, and school dropout rates (Flaherty, Weist, & Warne, 1996). The need to address these challenging problems helped to motivate the development of school-based mental health services (Flaherty, Weist, & Warne, 1996). However, increasingly, experts began to realize that school-based services for mental health were not enough to combat the variety of mental health issues that was experienced by children and adolescents.

One major problem was the failure of school-based mental health services, specifically those directed by academians, to fully integrate into their local communities (Flaherty, Weist, & Warne, 1996). In recent decades, extensive advances have been made in articulating program or implementation theories, yet there is relatively little progress in developing a theory of community change (McLeroy, Norton, Kegler, Burdine, & Sumaya, 2003). According to Flaherty and colleagues (1996),

> Mental health interventions are often conceived, planned and implemented by academicians who fail to seek guidance from local communities on aspects or targets of the intervention. Similarly, health and mental health services are commonly initiated with little, if any, meaningful input from community members. Another side of this problem is that even when services are developed with community input, they are often not effectively integrated with the array of available community resources and programs (p. 350).

The Importance of Community-Based Interventions

Public health has experienced a change in focus from social psychology to social ecology (Goodman, Wandersman, Chinman, Imm, & Morrissey, 1996). Instead of placing emphasis on individual behaviors and attitudes, public health professionals are placing greater attention on the social and cultural context in which behavior occurs. Although some individuals are genetically susceptible to development of mental illness and disorders, studies have concluded that environment powerfully affects mental health functioning (Whitlock & Schantz, 2008). Young people develop in the environments of their family, their school, their community, and the larger culture, which provide a variety of possibilities to support healthy development and prevent disorder (O'Connell, Boat, & Warner, 2009). According to McLeroy and colleagues (2003), social ecological models provide us "with not only a systems framework for thinking about behavioral change as an outcome of community-based interventions but also a framework for thinking about healthy communities" (p. 531-532).

Community interventions are useful and important because they can take into account all major influences on a behavior (O'Connell, Boat, & Warner, 2009). While not disregarding individual motivations and attitudes, community interventions focus on social factors, "such as community norms and the structure of community services including their comprehensiveness, coordination, and linkages" (Goodman, Wandersman, Chinman, Imm, & Morrissey, 1996, p. 34). O'Connell, Boat, & Warner (2009), believe that preventive interventions in communities have two components. The first component is directed at preventing outcomes in the entire community. The second component is to develop interventions, often through multiple approaches, that address various influences of behaviors such as one's physical and social

environment, family and peer support and impact, and mental and physical development (O'Connell, Boat, & Warner, 2009).

Currently, there are very few community-based programs designed specifically to support young people with mental health issues, and even fewer programs that have been evaluated for effectiveness (Walker & Gowen, 2011). However, some programs exist that empirical evidence suggests are "supported" or "promising" practices for improving mental health problems in adolescents (Walker & Gowen, 2011). Community-based programs that have evidence of effectiveness show the importance of emphasizing prevention and health promotion with interventions targeting risk and protective factors at community levels (Stiffman et al., 2010).

Community Resilience

The concept of resilience is "the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise" (Magis, 2010, p. 402). For a community to be resilient, its members must respond to change and adversity in a healthy manner. If residents, agencies, and community organizations take relevant and proactive actions, they can assist the community in reacting to change and restoring stability (Gurwitch, Pfefferbaum, Montgomery, Klopm, & Reissman, 2007; Goodman et al., 1996). Communities have numerous internal and external resources that they can draw from to respond and adapt to change (Fawcett et al., 1995). The city of Norwood Young America experienced a sense of unpredictability and change when two young students committed suicide. In order for the community to establish stability, there must be actions taken to combat the mental illness experienced by youth, as well as a contingency to build community resilience.

Prevalence of Mental Health in Minnesota

Mental illness may have devastating lifelong consequences if left untreated. Of Minnesota's approximate 5.2 million residents, 719,000 - or one in 4 - will experience a mental illness in their lifetime (Touchstone Mental Health, 2015). When mental health issues go untreated they are more likely to result in suicide, hospitalization, homelessness, incarceration, work insecurity and hazardous episodes of violence (Bijl, et al., 2003). In Minnesota, suicide is the second leading cause of death for person ages 10 to 34 (Heinen, Roesler, Gaichas, & Kinde, 2013). Furthermore, untreated mental health problems are associated with early mortality; individuals with serious mental illness die an average of 25 years earlier than those without (Parks et al., 2006). A study of Minnesotans receiving services through Minnesota Health Care Programs found that average life expectancy for people in Minnesota who have a serious mental illness is about 58, compared to 83 for persons without a mental illness (Trangle, Mager, Goering, & Christensen, 2010).

Minnesota Student Survey

Most of the information about the mental health of children and adolescents in the state of Minnesota comes from the Minnesota Student Survey (MSS) which is given to students in Minnesota schools every three years and includes questions on a variety of issues, such as substance abuse, mental health, school climate, violence and safety concerns, healthy eating, out-of-school activities, connections to school, community and family and many other questions (Minnesota Department of Health, 2013). The 2013 MSS was administered statewide in the first half of 2013 to public school students in grades 5, 8, 9 and 11 of various participating counties.

Table 1: Emotional Well-being & Distress during last 12 months among 8th to 11th graders in Carver County, MN

	Grade					
	8th		9th		11th	
	Male	Female	Male	Female	Male	Female
Feelings of depression	13%	34%	21%	33%	27%	48%
Thoughts of suicide	5%	23%	11%	18%	10%	16%
Sleep trouble	19%	40%	26%	34%	34%	43%
Anxious feelings	15%	36%	22%	37%	21%	45%
Distressed	21%	41%	22%	40%	25%	47%
Attempted suicide	1%	6%	2%	5%	2%	2%

Source: 2013 Minnesota Student Survey

Data from the MSS provided information on emotional well-being and distress among high-schoolers in the last 12 months. As can be seen on the table above (Table 1), high-school students in Carver County expressed feeling high degrees of depression, with the highest percent at 48% for 11th grade females. They also rated high in thoughts of suicide, anxiousness, and distress, as well as trouble sleeping. And most concerning, there are indications of attempted suicide in the county among high-schoolers, with the highest rating at 6% for 8th grade females.

Table 2: Selected results from the Developmental Assets Survey surveying 8th, 9th and 11th graders in Carver County, MN

In general, how does each of the following statements describe you?		Grade					
		8th		9th		11th	
		Male	Female	Male	Female	Male	Female
I feel safe at school.	Disagree/Strongly Disagree	7%	5%	4%	5%	8%	8%
I feel good about myself.	Not at all or rarely/ Somewhat	17%	50%	20%	42%	25%	50%
I find good ways to deal with things that are hard in my life	Not at all or rarely/ Somewhat	30%	44%	30%	38%	30%	38%
I feel valued and appreciated by others.	Not at all or rarely/ Somewhat	22%	40%	20%	28%	27%	42%
I stay away from bad influences.	Not at all or rarely/ Somewhat	13%	13%	22%	23%	34%	27%

Source: 2013 Minnesota Student Survey

The results of the MSS also revealed indications of negative self-descriptions in high-schoolers in Carver County (Table 2). A very high degree of students rated not all all/rarely/somewhat on the self-descriptor "I feel good about myself," with the highest percentage at 50% for 8th and 11th grade females. The results also showed high rates of not all all/rarely/somewhat in the self-descriptor "I stay away from bad influences," with the greatest percentage at 34% for 11th grade males.

Table 3: Percent of 8th, 9th, and 11th graders reporting bullying in the past 30 days in Carver County, MN

	Grade					
	8th		9th		11th	
	Male	Female	Male	Female	Male	Female
Your race or ethnicity	7%	4%	7%	4%	7%	2%
Your religion	5%	4%	11%	13%	3%	9%
Your gender	5%	6%	3%	9%	3%	8%
You are gay or lesbian	7%	7%	7%	5%	8%	3%
A physical or mental disability	6%	7%	7%	4%	6%	8%
Your weight or physical appearance	21%	27%	19%	25%	20%	25%

Source: 2013 Minnesota Student Survey

The MSS also provided data on reported bullying among high-schoolers in Carver County (Table 3). High-schoolers rated being bullied for several reasons, including their race or ethnicity, religion, gender, and sexual orientation. There are also indications of bullying students because of their physical or mental disability. The highest percentages of reported bullying by high-schoolers in Carver County are due to their weight or physical appearance.

Community of Norwood Young America

The City of Norwood Young America, the city of concentration, is situated in western Carver County approximately 35 miles southwest of Minneapolis (see Figure 1). Carver County is the

least populated of the seven metro counties and is geographically one of the metro area's smallest counties. However, it is the state's fourth fastest growing county (Carver County, 2013). The county is home to 11 cities and 10 townships.

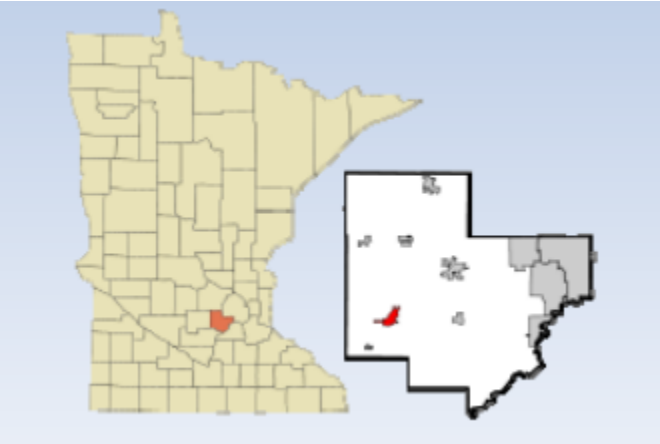

Figure 1: Carver County and City of Norwood Young America

As shown on Table 4, Carver County has a population size of 97,338 people (U.S. Census Bureau, 2014). The ethnic makeup of the county is predominantly white with the second most predominant race being Hispanic or Latino (U.S. Census Bureau, 2014). As of the census of 2014, there are 33,813 households, with a median household income of $83,773. The population density is 256.9 people per square mile.

Table 4: Demographic Characteristics of Minnesota, Carver County, and Norwood Young America

		Minnesota (U.S. Census Bureau, 2014)	Carver County (U.S. Census Bureau, 2014)	Norwood Young America (U.S. Census Bureau, 2010)
Total Population		5,489,594	97,338	3,549
Population per sq. mile		66.6	256.9	1,408.3
Land area in sq. miles		79,626.74	354.33	2.52
Gender	Males	49.7%	49.6%	49.5%
	Females	50.3%	50.4%	50.5%
Age	Under 5	6.4%	6.5%	4.1%
	Under 18	23.5%	27.9%	27.2%
Race	White	85.7%	93.5%	95.2%
	Black	5.9%	1.6%	0.4%
	American Indian	1.3%	0.3%	0.2%
	Asian	4.7%	3.0%	0.5%
	Native Hawaiian/ Pacific Islander	0.1%	0.0%	0.0%
	Two or more	2.3%	1.7%	1.2%
Hispanic or Latino	Yes	5.1%	4.1%	4.1%
	No	81.4%	89.8%	N/A
Households		2,115,337	33,813	1,389
Median household income		$60,828	$86,391	$64,470
Persons in poverty		11.5%	4.8%	15.2%
Persons without health insurance, under 65		6.8%	6.3%	5.6%

Source: U.S. Census Bureau

Norwood Young America has seen steady population growth over recent years, with a current estimated 3,549 residents, making up 3.6% of Carver County's population and 0.06% of the state's population. The ethnic makeup of the city is predominantly white with the second most prominent race being Hispanic or Latino (U.S. Census Bureau, 2010). The city's land area is 2.52 square miles, with a population density of 1,408.3 people per square mile. The estimated median household income is $64,470, which is 33% less than the county average but is 6% more than the state average (U.S. Census Bureau, 2010).

Causes of Mental Health Issues in Adolescents

Most evidence points to multiple factors causing mental illness among young people (Weir, 2012). Research suggests that a combination of factors, including heredity, biology, psychological trauma, and environmental stressors, might be involved.

Many mental disorders run in families or through blood relatives who have a mental illness. This suggests that mental disorders or a vulnerability to such disorders, might be passed on from parents to children through genes (Tsuang, 2000). Health professionals believe that many mental conditions are related to problems in multiple genes, which is why an individual inherits a susceptibility to a mental disorder but may not always develop the condition (Baron, Endicott, & Ott, 1990). Onset of mental disorders occurs from the interaction of these genes and other environmental and psychological factors (Tsuang, 2000).

Some mental health conditions are associated with an abnormal balance of brain chemicals, or neurotransmitters, which assist in the communication of nerve cells in the brain (National Institute of Mental Health, 2013). Neurotransmitters affect mood, memory and the ability to concentrate. When these brain chemicals are out of balance or are not working correctly, there is a failure of messages to properly communicate to areas of the brain, leading to

symptoms of mental illness (National Institute of Mental Health, 2013). Additionally, injuries to the brain, as well as abnormalities in the brain structure are related to some mental conditions (National Institute of Mental Health, 2013).

Many mental illnesses have been linked to and triggered by psychological trauma suffered in childhood. Psychological trauma can include, severe emotional, physical, or sexual abuse; a significant early loss, such as the loss of a parent or sibling; and neglect (Perry, 2003). Traumatized children, when confronted with memories of the traumatic event, may struggle with pain and anxiety and become extremely overwhelmed, which in turn causes symptoms of mental illness (Perry, 2003). Researchers believe that an individual's social support system can be a reliable source for alleviating the effects of traumatic life events on a person's psychological state (Thoits, 1982).

Some researchers argue that mental illness falls into the realm of environmental health (Schmidt, 2007). Scientists define an individual's environment in relation to mental illness, as "everything that is not an inherited gene" (Schmidt, 2007). Environmental threats can include infectious agents, pollutants, and other exogenous factors that influence the individual's physical surroundings and may cause mental health conditions (Schmidt, 2007). Also, pharmaceutical and illicit drug use, injuries, and nutritional deficiencies during pregnancies can be linked to mental illness (Schmidt, 2007).

The social environment also plays a major role in a person's mental health. A growing body of research has documented associations between social and cultural factors and health (Hernandez & Blazer, 2006). Types of social variables include, socioeconomic status, race and ethnicity, poverty and deprivation, gender and sex roles, educational attainment, income, work environment, etc. (Hernandez & Blazer, 2006).

Methods

Using a qualitative research approach, we explored teacher, parent, and community stakeholder perspectives on priorities to addressing mental health in students in the Central School District. We also researched successful community driven strategies to address these priorities. Using the stakeholder perspectives and our research, we developed suggestions for best practice intervention ideas to address child and adolescent mental health in the community.

Participants

We used qualitative methods, specifically interviews, to conduct our research and collect data. We conducted interviews with ten key stakeholders in Carver County from February 2016 to March 2016. In qualitative methodological literature, key stakeholders are defined as individuals who are experienced with the local setting and issue under study, and who have critical information and knowledge about the situation to develop effective social change processes (Mallery et al., 2012). Key stakeholders were identified by community partners, including Central School staff members, and through telephone calls, emails and internet searches for relevant community collaborators. We also used referral sampling by asking recruited individuals to recommend additional potential relevant participants. Stakeholders included 2 school district central administrators (e.g., social worker, counselors), 1 local school staff (e.g., principals, teachers, school nurses), 3 county government employees (e.g., child health agencies, child mental health services), 1 hospital and clinic staff (e.g., doctors, nurses), 2 parents and 1 staff in a relevant community-based organization. All participants were English speaking and worked or resided in Carver County.

Interviews

The interviews were conducted over the phone, as requested by many stakeholders due to time constraints and busy schedules. This conversational technique permitted us to collect qualitative data that allowed respondents the time to talk about their thoughts and opinions on the subject matter. Ten phone interviews were completed. Two graduate student researchers conducted the interviews using a semi-structured protocol covering perceptions of mental illness as a health problem for Central students, barriers to mental health services, and ideas for intervention (see Appendix A for the interview guide). Open-ended questions were asked before closed-ended questions, per the interviewer protocol, to avoid biasing a respondent's answers. Probes were used if needed to elicit more details about a topic. The interviews took place over the phone and were carried out using a tape recorder. Interviews ranged from 10 to 20 minutes (average = 15 minutes) and thorough notes were taken during the interviews.

Each interview started with an introduction to the topic and collection of informant background information (e.g., name, profession). The stakeholders were first asked to give a review of what they knew on the current mental health strategies in the Central School District. Next, various questions were asked regarding the stakeholder's thoughts and experiences with mental health in the Central School District. Anecdotes were highly encouraged to share. The stakeholders' opinions were then asked about proposed strategies and interventions that could potentially be implemented in the Central School District.

Data Analysis

Our interviews collected articulated data or "data that arises in direct response to the questions and prompts provided in the discussion guide. This data offers, in the participants' own words,

their descriptions, interpretations, and commentary on the topics of interest" (Massey, 2011, p. 23).

We used qualitative analysis methods to identify topics (general areas of information covered) and themes (groups of similar ideas found within topics) from the key stakeholder interviews (Miles & Huberman, 1994). Two researchers reviewed the transcripts and identified topics and themes within the interview responses. The researchers independently identified distinct units of text (phrases, sentences, short paragraphs) that corresponded to specific codes. They compared their coding and resolved any variations through discussion. The codebooks were refined through this process of assignment, discussion and resolution, which resulted in a total of ten codes (see Appendix B for a list of the codes). Using the topics and themes of the articulated data collected from the stakeholder interviews, we will summarize the results to address our research questions.

Results

Stakeholders provided perspectives on various subjects of mental health in adolescents in the Central School District. Results are displayed according to key themes and topics that arose during interviews with community stakeholders. Our first objective was to identify the major priorities for addressing mental health among adolescents in the Norwood Young America community. The the themes that emerged in the stakeholder interviews are summarized in Table 5.

Table 5: Perceived priorities for addressing mental health in adolescents in the Central School District

Physical access	● Immediacy of services ● Distance of services from the community ● Transportation to services
Lack of awareness and education about mental health and services	● Not knowing what services there are ● Unaware of how to use services ● Lack of education about mental health
Mental health stigma	● Embarrassment to get treatment ● Mental illness making a statement about who they are as a person
Drug and alcohol abuse	● Drug and alcohol contribution to mental illness ● Lack of focus on chemical and substance abuse in community
Confusion about "normal" adolescent experience	● Distinguishing between mental illness and normal adolescent development ● Knowing when it's time to seek out services
Lack of parent support	● Not supporting child's mental health treatment ● Difficulty bringing child to services ● Thinking mental illness is just a phase ● Not wanting child grouped into mentally ill

Stakeholders identified a number of priority areas for addressing the mental health of adolescents in the community. Stakeholders noted the challenge in physically accessing mental health providers and services in the community (N=8). Of greatest concern was the lack of services available within the rural community. Participants also said that services were not affordable, inappropriate, or located too far away. Physical barriers, such as low population density, geographical distance from large metropolitan areas, lack of transportation and other reasons, may reduce access to mental health services for individuals living in small, rural communities. Respondent 2 provided a typical response that was addressed by stakeholders. When asked about the challenges to meeting the mental health needs of young people in the community. Respondent 2 said:

"Out in Norwood, it's difficult for people in that community to access health services because of their distance from services. They're located at the far west end of Carver County. So I guess it's an access thing."

Second, stakeholders brought up the problem of awareness and education about mental health for individuals and families living in the community (N=6). They reported that people in the community are often unaware of how to access mental health care or even lacking in knowledge of what options are available. Further, they felt that limited knowledge about mental illness can prevent individuals or parents from recognizing mental illness and seeking treatment. When addressing the weaknesses of mental health services within the community, Respondent 3 provided a usual response saying:

"I don't know if people are aware so much, even though it's out there. And maybe the school could do a better job in terms of letting them know of the resources...People are just not aware of where to go to get help. Maybe make it a mission to make people more aware."

A third theme that emerged as a priority area was stigma. Stakeholders felt that the stigma associated with mental illness often prevents students from seeking services and adhering to treatment (N=7). Respondent 2 provided a typical response when asked about existing barriers to meeting the mental health needs in the community. Respondent 2 said:

"I do think there's a stigma. A little bit more... embarrassment. Noticeably students are… I just think that students see therapeutic services as a statement about who they are and maybe not wanting their peers to know. It's once they come in and understand the process and get an idea what the service provides… it makes them more comfortable. I just think it's keeping them more open to the idea. That's been the hard part."

Many stakeholders noted the connection between substance abuse and mental health disorders (N=6). They argued that a person experiencing a mental health condition may turn to drugs and alcohol as a form of self-medication to improve the troubling mental health symptoms they experience. Research shows substance abuse can create additional problems for young people with mental illness, as it increases the severity of the original mental health symptom or

symptoms (SAMHSA, 2015). Providing a recurring response related to drug and alcohol abuse, Respondent 4 said during the interview:

> *"I just think there is a lack of focus on chemical abuse and the piece it has in contributing to mental health. I just thing the whole connection is bad, and it could be a good thing to explore."*

Confusion about normal adolescent experiences was another theme that emerged among participants. Stakeholders pointed to the possibility of students' inability to distinguish between what is normal adolescent development and what is actually a mental issue (N=5). Adolescence is a significant period developmentally in an individual's life cycle and can produce a period of heightened stress, due to the many changes experienced simultaneously. It can sometimes be difficult for adolescents and their families to distinguish between the regular ups and downs of growing up and a more serious mental health issue. It is important to make a clear distinction between the normal ups and downs of mood and outlook, and diagnosable mental disorders. Adolescents are biologically prone to have more of these mood swings because of the hormonal changes associated with this period in life, coupled with the fact that their brains are still developing (Murphey, Barry, & Vaughn, 2013). When asked about the mental health problems faced by adolescents in the community, Respondent 7 believed that adolescents were interpreting their normal moods and life stressors as a mental health problem:

> *"They think that they're sad, depressed and suicidal. That kind of thing. Their normal adolescent development gets sometimes mistaken for a more acute kind of condition. But I think it's because people are so hyper aware. And it's knowing what's the difference. People don't know that right now."*

Another barrier that was noted by stakeholders was parental support. An unexpected obstacle to mental illness diagnosis and treatment can be the parents themselves, and stakeholders have addressed this during interviews (N=7). They noted that parents may be unsupportive in getting their child help for various reasons. There can be fear that their children

will be labelled or stigmatized, they may have little time to bring their child to services, and/or a parent may not believe their child is in need of attention or services for mental health issues. Respondent 4 addressed this frequent idea of parental support when talking about the challenges to meeting the mental health needs of young people. Respondent 4 said:

> *"I think it's hard for parents to take it seriously. They say things like 'Oh yeah, they're in a really bad mood.' or 'They're just sad.' Parents maybe understanding what point should you go on. There could be more educating them."*

The second objective of this research project was to identify potential community driven strategies to address the priorities. Respondents were asked about the most important need for combating the mental health issues experienced by adolescents in the community.

Table 6: Themes related to community driven solutions for addressing mental health among Adolescents in Central School District

Community Driven Solutions for Addressing Mental Health	
Increasing awareness and education	● More education about mental health ● Ensuring that people know about the available services ● Providing information on how to access the available services
More community options for treatment	● Group support and therapy options ● Less intensive opportunities ● More immediate options
Increase support from parents	● Educating parents about mental illness ● Encouraging parents to have greater awareness and support of their child's mental health ● Parents are best resource for child to get help
Community collaboration efforts	● Community working together ● Community talking about mental health

Stakeholders provided various possible solutions to addressing the mental health needs of young people in the Norwood Young America community. One major perceived solution was to increase awareness and education about mental health and the available services. Stakeholders concurred that a major barrier to accessing mental health services was the lack of public knowledge of potential services (N=9). Adolescents and their parents are not always fully aware of the services that are available in the community. When addressing the most important thing the community could do to overcome the challenges of meeting the mental health needs of young people, Respondent 2 provided a common response saying:

> *"I think for that community in particular, just more public information about accessing therapeutic services. I think it's just a matter of not ignorance, but not knowing what options are out there or being aware of services. So communicating and advertising what options are available for students."*

Stakeholders also addressed the need for more immediate and less intensive community options for adolescents who do not necessarily need intensive therapeutic options for their mental health issues (N=6). Providing more options for support that are more accessible in the community could help in reducing the physical accessibility barrier in addressing mental health. When asked about the most important need in addressing mental health in the Norwood Young America community, Respondent 6 provided a common response saying:

> *"I think to have readily accessible services for them… and more immediately. Having something available because children are at higher risk for endangering themselves. They are developmentally more impulsive."*

Family members, parents and caregivers often play a large role in helping and supporting adolescents with mental illness. Stakeholders noted the need for greater parental support and education in order to successfully address the mental health needs of adolescents (N=6). Stakeholders observed that parents need to be more knowledgeable of the benefits of early identification and intervention in regards to mental illness in their children. Stakeholders asserted

that parents are a major key in successful mental health treatment in young people. When addressing the idea of increased parental support, Respondent 5 provided a frequent response. Respondent 5 said during the interview:

> *"The connection with parents is huge, and the parents understanding the problem their child is having and then them getting services. The parents are the best resource we have for them to get help... I would love to see more parent support. I would love to see more parent education offered."*

Stakeholders believe that there is a need for more community collaboration in order to address the mental health issues faced by the city of Norwood Young America (N=4). For example, Respondent 3 said:

> *"Part of the strength of mental health is the ability to bounce back and to be more resilient and accept the fact that you're going to fail. That is something we can do more of. Have better communication with the social worker, counselor, the school, the principal, and teachers. We used to be better at getting together to talk."*

Stakeholders noted the importance for communities to develop clear steps to address their mental health needs in a way that complements existing local activities. Stakeholders believe that hosting a community conference would get others talking about mental health to break down misperceptions and promote recovery and a healthy community. They thought that it could help to develop innovative community-based solutions to mental health needs, with a focus on helping young people.

Recommendations

This study explored stakeholder perspectives to obtain a better understanding of the mental health issues and priorities in the Central School District, in order to recommend community-driven interventions. Stakeholders agreed that it was necessary for treatment opportunities to have a more community-wide approach. Stakeholder perspectives also affirmed the need for an

increase in awareness and outreach, more community therapy options, an increase in parent support, and more community collaboration efforts.

Three recommendations for the Central School District and Norwood Young America community emerged from this research. These three recommendations are consistent with stakeholders' perspectives and advice, and are based in research about community-driven mental health interventions for adolescents. We also felt that recommendations should be realistic and viable options for the school/community to implement within a one to two-year timeframe.

Recommendation #1 - Implement animal-based therapy within school, provided by the community as an option for a less intensive mental health/wellness program.

Animal therapy can bring less intensive mental health support services, provided by the community, to adolescents at school for little to no cost.

Many stakeholders reported physical access to mental health services was a barrier to meeting the needs of adolescents. Because physical access is a complex issue to resolve for many reasons, a viable solution is providing more supportive mental health services for adolescents in the community. One option is to bring in less intensive mental health services to the school, provided by community members and organizations, on a bi-annual basis during the school year. These services should provide less intensive treatments that could provide support for students who do not necessarily need therapy or assistance from a medical professional. We recommend bringing in domesticated animals as a type of "animal therapy" as a viable option for the Central School District and Norwood Young America to adopt.

Animal-assisted interventions (AAI) is a type of therapy that involves the use of animals as a form of treatment. The goal of AAI is to improve a patient's social, emotional, or cognitive functioning (Fine, 2011). AAI is not a new intervention or treatment option, and an increasing

amount of research is being conducted on its benefits (Walsh, 2009). Although empirical research regarding AAI's effects on the behavior of young people within a school setting is limited (Heimlich, 2001); however, there is some research that supports the social, physiological, and psychological benefits of interactions with animals in a wide range of settings, including schools (Walsh, 2009).

Researchers have found many benefits with animal-assisted interventions within mental health settings for adolescents (Kruger, Trachtenberg, & Serpell, 2004). Animal-assisted therapy is an economically feasible option to provide adolescents many varying benefits, including anxiety reduction, improved positive social behavior, increased comfort, and enhanced rapport and communication (Kruger, Trachtenberg, & Serpell, 2004). Many of these benefits could potentially assist with the broad range of stress related issues and less intensive mental health problems among the adolescents within the Central School District.

A randomized controlled trial was conducted by the Child Neurology and Psychiatry unit of Meyer Pediatric Hospital, using dogs to study animal assisted therapy for the treatment of acute mental disorders among adolescents. Subjects' ranged from 11 to 17 years old and all had a psychiatric diagnosis. All participants' demographics, clinical and behavioral conditions were similar at baseline. Of the 34 subjects, 17 were placed in the treatment group and 17 in the control group. The study was blind to both the evaluators and clinicians.

The effect of the intervention was measured using four instruments. The following instruments were used pre and post study; The Children Global Assessment Scale, a 100-point scale used to measure global functioning in children and adolescents age 6 -17 years old, format of hospital care, a 3-point rating scale used to assess clinical severity, ordinary school attendance, a 3-point rating scale used to measure attendance of school and hospital attendance,

and videotaped observation used to code 28 behavior patterns on a 4-point scale (Stefanini, Martino, Allori, Galeotti, Tani, 2015). The study took place over a 14-month period with weekly 45-minute sessions using dogs in the treatment group. The animal interaction consisted of "play activities, physical contact, grooming, cleaning, basic obedience commands, walking, and agility routes" (Stefanini, Martino, Allori, Galeotti, Tani, 2015). The control group received standard care that followed the therapeutic protocol.

The results from the study showed significant clinical and behavioral improvements in treatment patients. The authors found that the treatment group's global functioning increased, time spent in hospital decreased, and school attendance increased in comparison to the control group. Additionally, it was noted that the treatment group showed improvement with social skills as well as positive interactions towards their therapy animal using during the study. Researchers concluded that "animals may represent a valid help in therapeutic contexts thanks to their ability to catalyze social interactions and to create a more relaxed environment" (Stefanini, Martino, Allori, Galeotti, Tani, 2015).

We recommend the use of North Star Therapy Animals for Central Schools. North Star Therapy Animals is a 100% volunteer organization that provides high-quality therapy animal teams and services to a wide variety of facilities (North Star Therapy Animals, 2016). Their volunteer teams currently visit over 50 locations, including hospitals, elder care and assisted-living residences, hospice units, libraries, and schools with a goal of enhancing an individual's quality of life by providing them with joy and companionship (North Star Therapy Animals, 2016).

Another viable option is Pet Away Worry and Stress (PAWS), an animal therapy program that has been implemented and practiced on campus by the University of Minnesota

Boynton Health Services. PAWS is a pilot initiative developed in collaboration with the Animal-Assisted Interactions program at the Minnesota Landscape Arboretum, which offers therapeutic human-animal connections (Becker, 2014). AAI teams are volunteer handlers who are specially trained and evaluated and who provide sessions of animal therapy in order to give students a way to effectively manage their stress (Becker, 2014). Based on the Stefanini et al. (2015) clinical trial, weekly 45-minute sessions with animals are recommended, preferably for 1 year or longer.

Recommendation #2 - Mental Health Awareness Campaign/Fair

Host an annual mental health awareness campaign/fair at the school, for families in the community, to increase and promote mental health awareness.

The second recommendation for the city of Norwood Young America and the Central School District is to implement an annual mental health awareness campaign/fair to be hosted at a community event already popularly attended by community members, for families and individuals to attend. This event would be provided for families with children of all ages within the school district. The intervention would help to improve issues with in distinguishing between mental illness and normal adolescent development, as well as potentially improve parental support and reduce mental health stigma. As noted by stakeholders during interviews, there is a need for more community collaboration efforts as well as an increase in awareness and education about mental illness. A mental health awareness fair could assist in enhancing and improving mental health education in the community, as well as bring together community members and adolescents to talk about mental health.

Generally, the driving force behind the implementation and use of health fairs is an inclination to improve the health and wellness of participants (Swarbrick et al., 2014). A health fair is a community health strategy used to meet community members' needs for health

promotion, education, and prevention (Dillon & Sternas, 1997). The major benefits of attending a health fair include education, support, training, and tangible resources (Swarbrick et al., 2014).

Health fairs can include information tables, booths staffed by health providers and self-help group representatives, stress relieving activities, and brief exercise classes like aerobics or yoga. Information tables are especially important because they assist in making people aware of health issues and providing tools to manage them (Swarbrick et al., 2014). The school and community could organize a key speaker for the campaign/fair to talk about the importance of awareness of mental illness and stigma that surrounds mental health illness among adolescents. The fair should also provide reliable information about the mental health services available within the community and surrounding area, as well as how to access those services.

Recommendation #3 - Media-based Information System

Develop and promote a media-based mental health information system for adolescents in the community.

The final recommendation for the Central School District and Norwood Young America community is to implement a media-based intervention for adolescents to access outside of school. Ideally, this media-based mental health information system would be a website or mobile application for adolescents to access in order to learn more about mental health and coping strategies. Stakeholders noted the need for more community options and less intensive therapy choices for students in the community. The use of a media-based intervention would assist in improving awareness and education, reducing confusion and stigma, and providing an option that could be physically accessed more efficiently by students.

Although media sources, such as websites and mobile apps, have been in use within the medical community for years, the adoption of the technology for specific use in behavioral

health care has been slower, but is on the rise (Luxton, McCann, Bush, Mishkind, & Reger, 2011). The media can play a vital role in forming and influencing attitudes and behavior of individuals (Saunders & Goddard, 2002). According to O'Connell, Boat, and Warner (2009), "the media and the Internet are emerging as means to reach local communities beyond schools and families, as well as the broader community, more widely." Studies have shown that media, such as computer-assisted interventions and websites, have had positive outcomes in cognitive-behavioral mood management skills and mental health intervention techniques (O'Connell, Boat, & Warner, 2009). Furthermore, social support is a commonly focused area in clinical practice, and social networking using the Internet or other media access points is recognized for its potential to provide new opportunities for social engagement and connection (Luxton, McCann, Bush, Mishkind, & Reger, 2011).

The creation of a mental health website or mobile app could provide a variety of resources for students in the Norwood Young America community. The media source could present educational materials including information on identification of symptoms, coping strategies, and how to seek out mental health help within their community and school. The media source could also provide a support venue where adolescents could communicate with community health professional volunteers regarding stress and anxiety related symptoms, feelings of depression and suicide ideation, or general support contact.

As just mentioned, the mental health information website could provide volunteer community professional mentors that adolescents could connect with to talk with either in-person or via email or telephone about positive and healthy lifestyles. These volunteer community mentors would have various health-related backgrounds in order to provide a full spectrum of

information for adolescents seeking health advice. Each volunteer should create their own page on the website with information about themselves, services, or advice for adolescents.

Because this recommendation would be the most complex of the interventions, researchers recommend that the Central School District, in partnership with the Carver County Public Health Department, seek out a graduate student for the media-based intervention to be designed and implemented as a master's project. The graduate student would be responsible for the creation of the website or mobile app, as well as reaching out to health professional community members for volunteer mentors that could be accessible via email on the media source.

Conclusion

An untreated mental health problem during adolescence can profoundly impact a person (Kosky & Hardy, 1992) Individuals who have mental health problems early in life are at risk for mental illness later in life (Kessler, 2010). Therefore, early intervention is important. With Minnesota's second leading cause of death being suicide for 10 to 34 year-olds, and the two recent suicides among students in the Central School District, the community of Norwood Young America and Carver County Public Health Department have recognized the need for a community intervention.

Our recommendations focus on prevention along the continuum of mental health problems. Animal therapy will help provide less intensive therapeutic options that are easily accessible by the school. The awareness campaign/fair can help educate families and individuals in the community on the signs, stigmas and treatment centers/options available within the community. Finally, the media-based information system would be created with intent to connect

and educate students on mental health resources available in the community. To be effective, the information system would need to be monitored and moderated by qualified community volunteers.

The crucial next step is for the community of Norwood Young America, in collaboration with the Central School District and Carver County Public Health Department, to implement the recommendations. These recommendations were carefully selected based on the community and schools perceived priorities in regards to addressing their mental health issues. The interventions we suggested will provide the community and school with strategies to address mental health concerns, as well as providing preventative measures against more intensive mental health problems. They will help add to the strived for "community resilience" that stakeholders and the school have agreed is necessary for becoming more stable and adverse. Having mentally healthy adolescents is an attainable goal for this community that should be continually pursued.

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Appendix A: Interview Guide

Hi, my name is ____. I am a graduate student at the University of Minnesota's School of Public Health.

In partnership with the Carver County Public Health Department, I am completing a project about the mental health needs of adolescents in the Central School District, which serves the City of Norwood Young America. We would like your perspective about the needs and possible solutions. Would you mind if I recorded our conversation, it's for transcribing purposes only. Your name will not be used on the report. Before we start, do you have any questions?

1. Please start by telling me how long you have lived in the community and a little about your job.
    a. Does your job involve dealing with mental health among adolescents?
2. What do you think are the mental health problems faced by adolescents in your community?
    a. Are the problems getting worse or better?
    b. Are there particular subgroups of adolescents most at risk?
3. Are you aware of current services offered in the community for adolescents with mental illness?
    a. Which are the best/strongest?
    b. Which need work/are the weakest?
    c. What is the most important need? (Want them to be specific)
4. What are the challenges to meeting the mental health needs of young people in your community? (Get beyond services and identify the most important)
    a. Do you think there are other major challenges?
        i. Access to services/health care?
        ii. Attitudes/stigma?
        iii. Lack of coordination of care?
5. What is the most important thing your community can do to overcome these challenges?
6. Do you have any recommendations for what your community could be doing to help adolescents be more resilient?
    a. Community solutions
    b. Could you give me an example of a program that could do that?
    c. Could you give me an example of how a program like that might work?
7. Is there anything else you would like to tell us that would be helpful to us in making recommendations for addressing the mental health of adolescents in the community?
    a. Is there anyone that you recommend we talk to regarding this subject?

Appendix B: Codebook

Major Priorities/Barriers to Addressing Mental Health

- **PA** = Physical access (N=8)
  - Immediacy of services
  - Distance of services from the community
  - Transportation to services
- **PS** = Lack of parent support (N=7)
  - Not supporting child's treatment
  - Bringing child to services
  - Thinking mental illness is just a phase
  - Not wanting child grouped into mentally ill
- **DA** = Drug and alcohol abuse (N=6)
  - Drug and alcohol contribution to mental illness
  - Lack of concentration of chemical abuse in community
- **CO** = Confusion (N=5)
  - Distinguishing between mental illness and normal adolescent development
  - Knowing when it's time to seek out services
- **ST** = Stigma (N=7)
  - Embarrassment to get treatment
  - Mental illness making a statement about who they are as a person
- **LA** = Lack of awareness (N=6)
  - Not knowing what services there are
  - Unaware of how to use services
  - Lack of education about mental health

Community Driven Strategies to Address the Priorities

- **IA** = Increasing awareness and information (N=9)
  - More education about mental health
  - Ensuring that people know about the available services
  - Providing information on how to access the services available
- **MO** = More community options (N=6)
  - Group support and therapy options
  - Less intensive opportunities
  - More immediate options
- **IP** = Increase support from parents (N=6)
  - Educating parents on mental illness
  - Encouraging parents to have greater awareness & support in their child's mental health
  - Parents are best resource for child to get help
- **CC** = Community collaboration efforts (N=4)
  - Community talking about mental health
  - Community support