ADOLESCENT MENTAL HEALTH: A COMMUNITY NEEDS ASSESSMENT

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Adolescent Mental Health: A Community Needs Assessment

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DOCTOR OF NURSING PRACTICE

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ABSTRACT

Depression among adolescents has been trending upward with approximately 3.2 million adolescents aged 12-17 having at least one major depressive episode in the United States (U.S.) in 2016. The incidence of depression also rises with age among adolescents, with depressive episodes at 4.8% for 12-year-olds, 11.8% for 14-year-olds, and as high as 18.5% in adolescents aged 17 years. Interventions aimed at understanding mental health needs of adolescents and reducing barriers to care are essential to improve overall health outcomes for this population.

The goal of this community needs assessment was to better understand adolescent mental health and determine the needs of adolescents who experience mental health problems in rural areas. A qualitative approach was used to elicit the perspectives of adolescents, healthcare providers, educators, and parents regarding the mental health needs of adolescents in rural North Dakota. Individual, semi-structured interviews were conducted with a total of ten participants from the four target groups.

Facilitators to maintaining mental health were identified as support from family/friends, healthy diet, adequate sleep, limiting social media, avoiding video games, and physical activity. Barriers to discussing and accessing mental healthcare included stigma, confidentiality/privacy, shortage of mental health professionals, lack of routine discussion, lack of a standardized curriculum in schools, time, lack of understanding by adolescents, and healthcare provider/parent relationship.

Based on the interview results, recommendations were made to school administrators and clinic personnel to address the needs of adolescents in rural areas with mental health problems. Recommendations for school administrators included a universal approach to address students about mental health and implementation of a mentor program. The clinic received

recommendations for implementation of telehealth services to expand capabilities and implementation of youth-friendly services to create a more welcoming environment for adolescents.

The results of this community needs assessment revealed that adolescents identify anxiety and depression as top health priorities; however, barriers, such as fears of judgement, stigma associated with mental health, and lack of access to care, may prevent them from seeking care. Further research is needed to identify resources and interventions to improve the overall health and well-being of adolescents in rural areas.

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DEDICATION

This project is dedicated to my daughter, and all adolescents who experience depression and anxiety. I hope this project can shed even a glimmer of light to improve services for treating adolescents with mental health needs.

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CHAPTER 1. INTRODUCTION

Background and Significance

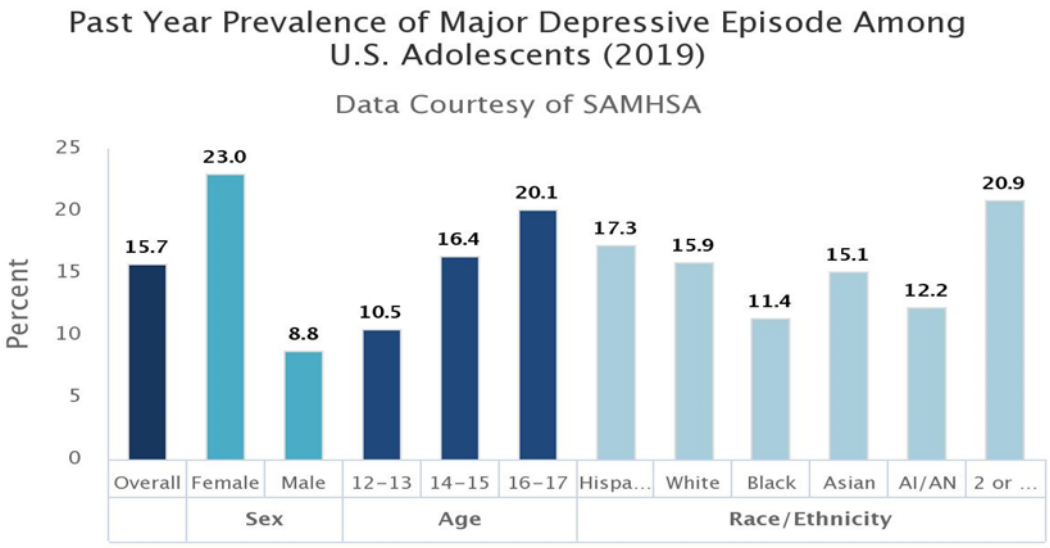
Depression is a significant problem with as many as 264 million people affected worldwide (World Health Organization, 2021). Depression is a mental health illness characterized by persistent sadness and a lack of interest or pleasure in activities that are normally pleasurable (NIMH, 2021). Additional symptoms may include sleep disturbances, decreased appetite, irritability, trouble concentrating, and poor work or school performance. According to the Patient Safety Monitor Journal (2019), depression is the leading cause of disability worldwide with as many as 16.2 million Americans experiencing a major depressive episode in 2016.

Depression often begins at an early age with prevalence of depression in adolescents trending upward from 8.3% in 2008 to 12.8% in 2016 (Sekhar et al., 2019). In fact, approximately 3.2 million adolescents aged 12-17 had at least one major depressive episode in the United States in 2016 (NIMH, 2017). Comparing these statistics to numbers from 2019 shows an increase in the number of adolescents who experience at least one MDD (major depressive disorder) with 3.8 million or 15.7% of the U.S. population aged 12-17 (NIMH, 2021). Furthermore, the estimated prevalence of depression among adolescents has increased by as much as 37% from 2005 to 2014 (Feiss et al., 2021). Data also shows that rates of depression rise with age, with depressive episodes at 4.8% for 12-year-olds, 11.8% for 14-year-olds, and as high as 18.5% in adolescents aged 17 years (Coley et al., 2019). With the increase in rates of depression as adolescents get older, an important notation is that females are more likely to experience depression than males by nearly three times with indications that this trend may be

increasing in recent years. Please see Figure 1 for further information regarding the prevalence of major depressive episodes among adolescents in the United States.

Figure 1

Past Year Prevalence of Major Depressive Episode Among U.S. Adolescents (2019) (NIMH, 2019)



Adolescence is a period of significant stress and variations (Toth et al., 2020). This period is marked by developmental changes in neurobiological, psychological, and social systems. These changes occur during the transition from childhood to adulthood, and when this transition is accompanied by associated risk factors such as poverty, family stress, or trauma, the likelihood of the development of psychopathology is increased. If left untreated, depression during adolescence can lead to significant adverse health and social consequences including academic failure, violence, self-mutilation, risky sexual behavior, and substance abuse (Lu, 2019).

Despite these possible serious implications, adolescent depression is under investigated in the United States (Lu, 2019). In the general adult population, roughly 7% experience major depressive disorder or MDD (Orlando et al., 2017). The prevalence among adolescents is much

higher, with 11.4% of youth aged 12-17 experiencing a MDD within the past year, and more than 72% of those, report having severe impairment as a consequence of experiencing a MDD. An estimated 2.3 million adolescents, a number which represents 9.4% of the population aged 12-17, experienced at least one major depressive disorder in the last year with severe impairment (NIMH, 2017). MDD also disproportionately affects females with rates up three times higher than in males (Orlando et al., 2017).

Even though the prevalence of depression is high among adolescents, few are diagnosed and even fewer receive treatment. Approximately 75% of adolescents are seen routinely by a primary care provider, but only 16-38% of primary care providers correctly identify the presence of a mental health disorder (Lu, 2019). According to Boyd et al. (2017), 11.4% of United States adolescents experienced a major depressive episode within the last year. Only 50% of adolescents with depression are identified, and of those identified, only about 38% receive treatment (Lu, 2019).

There are several factors that put adolescents at risk for MDD. According to the North Dakota Youth Risk Behavior Survey (NDYRBS) conducted in 2019, as many as 19.9% of North Dakota (ND) students were bullied on school grounds (North Dakota Department of Health [NDDOH], 2019). However, bullying may not end when the school day is over, as the same survey found that 14.7% of ND students were bullied online. In the United States, 15.7% of adolescents report online bullying. According to the NDYRBS, 7.7% of adolescents were physically forced to have sexual intercourse, and 9.2% experienced sexual violence. The most devastating consequence of MDD is suicide. The NDYRBS found the percentage of ND students who have seriously considered suicide was 18.8%. The results demonstrate that approximately one out of every five students in ND has seriously considered suicide and more

than one in four females has considered suicide. Together these statistics suggest that interventions during adolescence are important to help prevent MDD, as well as identify MDD earlier and implement strategies to improve the mental well-being of adolescents in ND and throughout the United States.

Adolescent Depression in Rural Settings

Adolescents in rural areas are more likely than their urban counterparts to experience MDD and contributing factors may include higher rates of exposure to poverty and lower family education levels (Orlando et al., 2017). Feiss and Pangelinan (2021) suggest that few studies have considered adolescents who are at greatest risk for physical and mental health issues, which are students in rural areas and living in low socioeconomic status (SES) environments. Students who are female, live in rural areas, and are from low SES homes are at the greatest risk of physical and mental health problems, including depression (Feiss & Pangelinan, 2021). Further, students of low SES backgrounds from rural areas may carry a greater health burden and higher rates of chronic diseases, such as obesity, hypertension, and diabetes. Other challenges that disproportionately affect rural adolescents include unemployment, teen pregnancy, obesity, and opioid abuse (Berryhill, et al., 2021).

Rates of suicide are also markedly higher in rural areas compared to urban areas with rates from nearly double to an astonishing 84% higher in rural areas than in urban areas (Berryhill et al., 2021; Orlando et al., 2017). Suicide is the second leading cause of death in the adolescent population with rates for ages 10-14 tripling from 2013 to 2017 and increasing by 76% among adolescent ages 15-19 (Berryhill et al., 2021). Adolescents in rural areas are also less likely to seek help for depression due to availability, accessibility, and acceptability of mental health services (Berryhill et al., 2021). Another complicating factor affecting accessibility

to mental health care is transportation to and from appointments and the time constraints associated with travel which for rural areas could be more than an hour away from home.

Statement of the Problem

The rates of adolescent depression are variable depending on the source; ultimately, however, the rates of adolescent depression are trending upward, and early intervention needs to be a high priority (Coley et al., 2019; Feiss et al., 2021; NIMH, 2019; Sehar et al., 2019). According to the Guidelines for Adolescent Depression in Primary Care (GLAD-PC), only 50% of adolescents with depression are diagnosed before they reach adulthood (Zuckerbrot et al., 2018). In addition, two out of three adolescents with depression are not identified by their primary care provider (PCP) and do not receive any form of treatment. Among adolescents that are diagnosed with depression by their PCPs, only half are treated properly.

The GLAD-PC (2018) provides recommendations for practice preparation, identification and surveillance, assessment and/or diagnosis, and initial management of depression for PCPs. However, many PCPs are not confident in their skills to identify and treat adolescent depression and other mental health disorders. Further, depression in adolescents is difficult to identify as it often manifests differently than in adults and getting youth to engage in treatment is very difficult (Forman-Hoffman & Viswanathan, 2018). In addition, many PCPs cite the box warning from the FDA in 2004 about increased suicidal ideation while taking selective serotonin reuptake inhibitors (SSRIs) as a reason for hesitancy in treating adolescents with depression.

PCPs remain a focus of the effort to diagnose and treat adolescents for depression, however, these efforts need to be supplemented by increased awareness and interventions at home and in school settings where greater numbers of adolescents can be reached and referred for appropriate treatment. Regarding concerns for adolescents with depression, Healthy People

2030 has set an objective of increasing the proportion of children and adolescents who get preventive mental health care in school (U.S. Department of Health and Human Services, 2021). This goal is developmental, meaning this is a high priority currently. In addition, another goal of Healthy People 2030 is to increase the proportion of children and adolescents who get appropriate treatment for anxiety or depression (U.S. Department of Health and Human Services, 2021). Interventions in school and home can help identify adolescents who may be at risk and assist adolescents in getting the help they need by establishing with a PCP who can determine appropriate referrals or initial treatment with resources to help guide their decisions.

Purpose

The purpose of this community needs assessment was to understand the mental health needs of the adolescents in rural North Dakota and increase awareness of depression and local resources. This project aimed to provide insight to primary care providers, parents, and schools regarding methods for improving mental health care access. This project sought to inform school officials of opportunities to implement programs within schools to address the mental health needs of adolescents. This project also aimed to provide information to parents and adolescents on mental health resources.

Objectives

The objectives of the community needs assessment included the following:

1. Assess the mental health needs of adolescents in rural ND from the perspective of adolescents, teachers, parents, and healthcare providers.
2. Assess barriers to discussing mental health and accessing mental healthcare from the perspective of adolescents, teachers, parents, and healthcare providers.

3. Provide information to parents and adolescents on resources available for mental health disorders.
4. Disseminate results of interviews to school administrators and healthcare providers and provide two evidence-based recommendations to each to better meet adolescent mental health needs.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

A thorough literature review was conducted to examine characteristics of adolescent depression in rural communities. Multiple databases were searched, including EBSCO, CINAHL, Medline, PsychARTICLES, PsychINFO, PubMed, and Google Scholar. Key words included: depression, adolescents, youth, screening, primary care, mental health, rural population, and rural community. Inclusion criteria included literature regarding rural communities, primary care, school interventions, and the youth population aged 13-24 who experienced depression. Articles that were not relevant to youth depression, rural communities, including school setting and primary care, and published prior to 2016 were excluded. Articles from 2012 pertaining to the Social Ecological Model were also included, as they contained information that is still pertinent to this project. In addition, information was included from the Diagnostic and Statistical Manual of Mental Health Disorders fifth edition ([DSM-5], 2015) due to its relevance to the subject and current application to mental health practice.

Literature Review

Depression

To feel sad after the death of a loved one or loss of a pet is a normal emotion, and the stages of grief when an event like this occurs are well defined. However, depression is different, and there are specific criteria that must be met to make a diagnosis of depression. Healthcare providers must be knowledgeable about the diagnostic criteria for depression and MDD when evaluating adolescents. The Diagnostic and Statistical Manual of Mental Health Disorders fifth edition (2015) is a guide for diagnosis of mental health disorders including depression. According to the guidelines established by the DSM-5, a patient meets the definition of depression if they have sustained and clearly present symptoms in five of nine categories. At

least one of those categories must be a depressed mood all or most of the day, nearly every day or diminished interest in doing things that are normally pleasurable. These symptoms can be identified either by subjective report or observation made by others such as parents, siblings, or friends. Other symptoms include significant weight loss or weight gain without trying to gain or lose weight, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue nearly every day, feelings of worthlessness or inappropriate guilt, diminished ability to think or concentrate, and recurrent thoughts of death or suicidal ideation. In addition to the previously listed criteria, the symptoms cannot be attributed to other physiological problems or explained by schizophrenia or schizoaffective disorder. Additionally, there should be no history of a manic or hypo-manic episode.

Risk Factors

The cause of depression is not fully understood but likely involves a combination of genetic, biological, and environmental factors (Siu, 2016). While the risk factors and possible causes of adolescent depression are complex, individuals with family history of depression and psychosocial distress are at higher risk of developing depression (Jones et al., 2018). Additional common risk factors include female gender, age, family history especially maternal, personal history of depression, other mental health disorders, behavioral problems, chronic medical illness, obesity, childhood abuse, and exposure to traumatic events. These risk factors will be explored in more detail in the following sections along with other potential issues identified by the review of literature for this project.

Risky Behaviors

Risk taking behavior is a substantial part of being an adolescent. Every year approximately 10,000 adolescents between the ages of 15 and 19 die from preventable causes

related to risky behavior (Maslowsky et al., 2019). Some of the leading causes of accidental death among adolescents include motor vehicle accidents due to risky driving, drownings, and poisonings, which includes alcohol and other drug overdose.

Having a basic understanding of the development of the brain helps to explain the risk-taking behavior that many adolescents partake in. The dual systems theory posits that risk behavior among adolescents stems from an imbalance between risk/reward behavior and the ability to self-regulate (Maslowsky et al., 2019). The dual systems model is similar to the accelerator and brake in a car. Impulsive risky behavior is amplified by motivational activity in the striatal regions of the brain, the accelerator, while the cognitive control of the prefrontal cortex is immature, having little effect as a brake in trying to stop or slow risky behavior (Xu et al., 2021). This phenomenon in adolescents predisposes them to possible harms but also promotes growth and learning as adolescents accumulate knowledge about risky behavior, which helps them calculate the potential consequences of the impending risky behavior (Maslowsky et al., 2019).

The adolescent brain is undergoing a significant and intense transition that leaves it vulnerable to many influences (Best & Ban, 2021). The neurological development in adolescence and increased activity in the brain are thought to be a causal factor to the increased occurrence of mental illness among adolescents, including depression. Risk behavior can be influenced by anxiety and depression through mechanisms including drug and alcohol abuse, poor coping skills, and impaired ability to make safe decisions (Hill et al., 2017). Additionally, consequences from risky behaviors may contribute to anxiety and depression among adolescents.

Substance Abuse

Adolescents who experience MDD or anxiety are at higher risk for substance abuse, and damaging alcohol consumption is frequently observed in adolescents with MDD (Gardvik et al., 2021). Alcohol, tobacco, and marijuana are the three most commonly abused substances by adolescents (Thrash & Warner, 2016). In fact, two out of three high school students have drunk alcohol and at least one-half of twelfth graders have been drunk at least once in their life. Beyond alcohol, marijuana is also readily available and used. Twenty percent of all people aged 12 or older report that they smoked marijuana in their lifetime, and nearly half of adolescents aged 12-17 report that marijuana would be easy to obtain if they desired. Adolescents' perception about the harmfulness of substance abuse is also alarming. In 2014, 36% of high school students perceived marijuana use as harmful, which is the lowest percentage in 37 years (Thrash & Warner, 2016).

Numbers from the North Dakota Youth Risk Behavior Survey (NDYRBS) indicate ND students also participate in risky behaviors, including the use of alcohol and other drugs. Approximately 56.6% of adolescents in ND reported ever consuming alcohol (NDDOH, 2019). The percent who currently drink alcohol is 27.6%, and the percentage of students who ever used marijuana is 27.2%. From the same report, the percentage of students who took prescription pain medications without a prescription was 14.5%, and the percentage of students who ever used cocaine was 3.4%. The percentage of students who have ever had sexual intercourse is 38.3%; while the percent who are currently sexually active was 29.6% (North Dakota Department of Health, 2019). These numbers bear out the dangers adolescents face with risk taking behavior when sex, alcohol, and other drugs are involved.

Adverse Childhood Experiences

Adverse childhood experiences (ACEs) refer to a wide range of stressful and traumatic events including abuse, neglect, household dysfunction, bullying, school violence, and community violence (Tsehay et al., 2020). ACEs are strongly associated with the development of a child and can be linked to several health problems throughout the lifespan of the child. Researchers have found that adolescents who have mental health disorders including depression often have a history of experiencing a number of ACEs during their developmental stages (Lee et al., 2020).

The normal response to any stressful situation for the body is the release of corticotrophin-releasing hormone (CRH), which is a protective mechanism that creates a heightened sense of awareness and alertness (Tsehay et al., 2020). For an adolescent who is repeatedly exposed to ACEs, this can become a debilitating response, as they are in a perpetual never ending state of heightened alertness and unable to return to a steady state. For an adolescent in this state of constant heightened neurological alertness, thinking rationally or concentrating may be very difficult, making learning nearly impossible.

Adolescents who face abuse and neglect are at an increased risk of mental health disorders as an adult including depression, alcoholism, drug abuse, high-risk sexual behavior, and suicide (Tsehay et al., 2020). There are several mental health concerns that have been recognized, but the most pronounced and widespread issue in adolescents have been accepted as depression and anxiety (Lee et al., 2020). The likelihood that adolescent depression will persist into adulthood is quite high, demonstrating the importance of implementing interventions during adolescence (Toth et al., 2020).

Peer Victimization or Bullying

Peer victimization or bullying can also increase the risk for mental health problems among adolescents. In general, victims of bullying experience a multitude of negative consequences including social, emotional, academic, and health difficulties, which includes depressive symptoms (Davis et al., 2019). Research has shown a consistent link between victimization (bullying) and mental health problems. School belonging, defined as, a student's sense of being accepted, respected, and included by peers and adults in the school setting, has been shown to be a buffer between peer aggression and internalizing symptoms. In addition, school belonging has been found to be inversely associated with involvement in aggression at school, citing close interpersonal relationships and clarity and fairness of rules as potential mechanisms against aggression (Davis et al., 2019). Students who report higher levels of bully victimization also report decreased levels of school belonging. Friendship has also been shown to act as a mediator between victimization and depression in early adolescence (Davis et al., 2019).

Peer victimization and bulling may affect females and males differently. Boys that reported victimization in early adolescence were more likely to have depression and negative self-esteem, increased anxiety, and increased suicidal ideation (Davis et al., 2019). Interestingly, peer victimization predicted depression in both boys and girls at age 13, but at age 15, the same held true only for boys. This difference was explained theoretically that boys who display depressive symptoms are made a target for bullying. Additionally, depressive symptoms were also shown to predict unpopularity among boys. Differences were also noted in school belonging acting as a buffer against bullying and depressive symptoms between boys and girls. There was no evidence showing a direct or indirect buffering for boys, while girls who felt a sense of school belonging experienced fewer depressive symptoms.

COVID-19 Pandemic

Adolescence is a period of rapid change and development and a period of vulnerability. During times of a pandemic, there is an increased risk of Post-Traumatic Stress Disorder (PTSD), depression, and anxiety (Guessoum et al., 2020). A study of American families exposed to H1N1 and SARS-CoV viruses reported PTSD in 30% of children exposed to quarantine measures. The COVID-19 pandemic has placed many adolescents at increased risk for depression and anxiety for a variety of reasons including excessive worry, social isolation, school disruption, and ubiquitous issues of death. According to Singh et al. (2020), older adolescents have anxiety about cancellation of examinations, exchange programs, and academic events.

Although quarantining measures are implemented for the overall good of the population, their impact on mental health cannot be overlooked or ignored (Singh et al., 2020). In children and adolescents, time out of school is associated with decreased physical activity, more screen time, irregular sleep patterns, and inconsistent diets (Guessoum et al., 2020). In addition, a prolonged confinement at home predisposes children to internet compulsivity with greater exposure to objectionable content and more vulnerability to being bullied or abused (Singh et al., 2020). Internet addiction is also a possibility and is believed to be associated with online games and social applications. Internet addiction is also associated with depression (Guessoum et al., 2020). For adolescents with pre-existing mental health disorders, the pandemic has created significant challenges. A survey of 2,111 students with a mental health history reported that 83% concurred that the pandemic had worsened their symptoms, and 26% stated they were no longer able to access mental healthcare (Guessoum et al., 2020).

Unmet Health Care Needs

In the United States, there is a shortage of mental healthcare providers, which contributes to lack of access to behavioral healthcare and other necessary resources (Orlando et al., 2017). Rural areas are disproportionately affected by these shortages. In fact, rural areas are four times more likely to experience a shortage of mental health providers than urban areas. According to the Rural Health Information Hub (RHI) 90 million people in the United States live in a shortage area for mental health professionals (Berryhill et.al., 2021). Additionally, rural communities often do not have specialists focusing on psychiatric or mental healthcare, which results in patients not receiving care or pursuing alternative methods for seeking mental healthcare. One alternative to seeing a mental health specialist is to see a primary care provider (PCP), however, rural PCPs may lack the knowledge or resources to provide adequate evidence-based mental healthcare.

There may also be a correlation between the care provided by PCPs and their level of confidence in providing mental health care to adolescents. Espinet et al. (2019) found that PCPs who reported less confidence in treating mental health issues were more apt to refer out than to attempt even initial treatment. Early referrals to mental healthcare providers that are in high demand may contribute to the long wait times and delay access to care. In addition, referrals may be a stressor to families who live in rural communities due to the extra time needed to drive to appointments and expenses incurred with travel and seeing a specialist. There are also internal barriers that may prevent PCPs from implementing mental health care interventions, such as limited time, poor reimbursement, lack of staff training, and a lack of interest in mental healthcare (Mahoney et al., 2017).

The United States Preventive Services Task Force (USPSTF) updated their recommendations for screening of adolescents with depression assigning a "B" grade to importance of screening (Siu, 2016). The letter grade assigned by the USPSTF suggests that there is high certainty that the net benefit of providing this service will result in a moderate benefit or there is moderate certainty that the benefit will be moderate to substantial (USPSTF, 2017). By contrast a letter grade of "A" means there is high certainty the benefit will be substantial. With either an "A" or "B" grade, the recommendation to providers is to provide or offer the service (USPSTF, 2017). For adolescent depression the USPSTF (2017) recommends screening where adequate systems are in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up is available. This is a problem for many rural areas due to the provider shortages because there is not adequate follow-up available (Orlando et al., 2017). In addition to provider shortages in rural areas, individuals may also be reluctant to seek mental healthcare due to a perceived stigma and a lack of anonymity associated with receiving mental healthcare in rural communities. Highlighting the unmet healthcare needs at Trinity Health in Minot, North Dakota, a community needs assessment has been published, which lists access to care, substance abuse, mental health, and obesity as the top four healthcare needs in the Minot area (Trinity Hospital, 2019). Their conclusions come after talking to a wide variety of people including the following:

- People with special knowledge or expertise in public health
- Government health departments and other government agencies
- Leaders, representatives, or members of low-income populations
- Leaders, representatives, or members of minority populations

- Leaders, representatives, or members of other medically underserved populations, such as young, elderly, and rural individuals

Trinity hospital also explains that, despite Ward County being listed as having adequate mental healthcare coverage, the community, is not adequately staffed to cover all the mental healthcare needs of the city of Minot and the surrounding areas that rely on Trinity Hospital for their healthcare needs. This is explained in terms of substance abuse and mental healthcare being very closely related and often found as comorbid conditions (Trinity Hospital, 2019). The number of acute care beds available to treat mental health patients are taken by patients who experience substance abuse problems meaning people who need to be treated for mental health problems have trouble finding space within the system to receive treatment (Trinity Hospital, 2019). The report also cites dramatic increases in use of mental health facilities in recent years, a trend which they expect to continue. There is a perceived need for additional doctors, nurses, counselors and more in the coming years to meet the needs of the growing population both within Trinity and other facilities capable of treating mental health issues (Trinity Hospital, 2019). What may be most alarming is this report was filed prior to the pandemic which began in spring of the year 2020.

Potential Resources and Barriers

Despite a lack of mental healthcare providers in the U.S. there are other resources available for adolescents who experience MDD. Parents, schools, and PCPs can all serve as a resource for adolescents. However, if there is a lack of knowledge, support, or comfort, this can also serve as another barrier.

Primary Care Providers

Despite the evidence that there are several treatments available for depression, only 40.9% of adolescents who experienced MDD in 2016 received treatment (Forman-Hoffman & Viswanathan, 2018). PCPs are in a unique position to recognize and treat depression in adolescent patients, and PCPs can serve as one of the main sources for assessing, diagnosing, and treating adolescent depression due to a shortage of mental health providers. PCPs may be able to detect depression in its early stages by simply following up on complaints of their adolescent patients. For instance, adolescents who experience MDD may present with some vague complaints or unusual problems including poor school performance, sudden outbursts, frequent arguments, unexplained medical or somatic symptoms, withdrawal from friends and family, or suicidal ideation.

Unfortunately, many PCPs lack confidence and report inadequate training to manage adolescent depression (Espinet et al., 2019). As a result, adolescents and their families who turn to PCPs for help may feel unheard or dismissed, which leaves them with more questions than answers including bewilderment about where to find help. In general, PCPs report that they feel both parents and adolescent patients support screening at appointments. However, PCPs cite a lack of training, confidence, and time during appointments, as well as a lack of adequate referral systems for appropriate follow up as barriers to routine screening and management of depression (Forman-Hoffman & Viswanathan, 2018). Additional barriers reported by PCPs include the Food and Drug Administration (FDA) box warning issued in 2004 about potential increased suicidal ideation with the use of selective serotonin reuptake inhibitors (SSRIs).

Parents

There is an old saying "knowledge is power." When it comes to mental health, parents' knowledge can have a direct effect on their willingness to seek help for their adolescent children (Hurley et al., 2019). Additionally, a parent's knowledge or lack thereof, may also directly affect the adolescent's motivation to seek help for mental health disorders, such as depression. Nationally, as many as 8% of adolescents have reported a major depressive disorder in the last year (Arrojo & Hooshmand, 2021). However, fewer than one half of depressed adolescents are diagnosed or treated. According to Hurley et al. (2019), prominent barriers for parents included recognition of a problem and need to seek help, lack of knowledge of help-seeking options, stigma, and a lack of trust in mental healthcare. Some signs of adolescent depression according to the NIMH (2017) that parents should be alert to include the following:

- Lost interest in things they used to enjoy
- Low energy
- Sleep too much or too little
- Spending more time alone and avoiding social activities with friends or family
- Engaging in self-harm such as cutting or burning oneself
- Thoughts of suicide

This is not an all-inclusive list but demonstrates that depression can manifest itself in different ways, and the signs may be subtle and difficult to recognize (Hurley et al., 2019) Knowledge about depression can be improved at an individual, community, and population level through face-to-face interaction, mass media coverage, and self-directed online channels. However, despite recent efforts at improving knowledge, parents' knowledge about mental health remains inadequate.

Overall, many parents are in favor of seeking help for their adolescent children; however, fear, mistrust, and stigma may reduce help-seeking behaviors (Hurley et al., 2019). Parents who have had a personal history or experience with mental illness were associated with higher levels of help-seeking behavior. Additionally, parental interest and support for their adolescent children seeking help for depression is associated with higher engagement and sustained retention in mental healthcare by adolescents with depression or other mental health illness (Hurley et. al., 2019). In most cases the preferred method for parents when seeking professional help was their PCP or general practitioner (Hurley et. al., 2019).

Schools

School mental health programs are a primary source for mental healthcare. In fact, students accessed school-based mental health programs twice as often as specialty mental healthcare (Berryhill et al., 2021). Integrating rural school mental health programs can increase access to mental healthcare, as well as improve attendance, behavior in school, academic performance, and adolescent development. Since schools are also a more familiar setting for adolescents, mental health programs within the school can break the stigma barrier associated with mental healthcare. In addition, successful school mental health programs can have improved follow through with care and affords an opportunity to observe the adolescent in their natural setting with friends and classmates.

Little is known about school-based programs in rural schools where resources are not as accessible, and trained staff are not likely to be available (Berryhill et al., 2021). To provide this type of service, rural schools must consider the time it may take to have staff trained, the cost of training, and the feasibility of initiating a program that would require continuous follow through

(Orlando et al., 2017). For many rural schools, this can pose a significant challenge in sustaining a successful program.

Screening measures for depression are an example of an intervention that can be administered by teachers, counselors, or a school nurse; however, reading and interpreting the results should be conducted by an individual who has had training in psychometric screening measures (Orlando et al., 2017). One possible option for both rural schools and rural clinics is an online approach. Online programs have shown promising outcomes with improved program adherence and significant reductions in depressive symptoms (Orlando et al., 2017).

Stigma

Stigma over mental illness characterized as "the ultimate stigma" has changed very little over time despite efforts to destigmatize mental illness (Mueller et al., 2016). The concept of stigma is broad and includes labelling, stereotyping, and discrimination, and it has a direct effect on an adolescent's decision whether to seek help for depression or other mental illness. Perhaps one reason little has changed is because stigmatized attitudes and beliefs about mental illness are consistently reported from age seven or eight and endure into young adulthood.

Stigma around mental health has predominantly been studied from two vantage points: 1) how individuals with mental illness internalize stigma and 2) societal opinions of mental illness (Krendal & Freeman, 2019). The latter is an important point to understand, as it is a positive predictor of the extent to which an adolescent with mental illness will internalize their stigma. In adolescents, stigma is derived partly from their beliefs of the cause of mental illness. Midgley et al. (2017) found three themes related to casual belief about depression: 1) incomprehension about why they are depressed; 2) depression is a result of rejection, victimization, and stress; and

3) something inside is to blame. These casual beliefs about depression are important in predicting how adolescents will manage their depression and or seek help.

Only about one-third of adolescents with depression or anxiety will seek help or treatment for their depression (Georgakakou & Williams, 2016). The most common reason among adolescents for not seeking help is a low perception of the need for help. When asked about their own beliefs about depression, most adults will attribute their depression to life events and an inability to cope or to heredity, and few patients ever consider biological factors as a cause of their depression (Midgley et al., 2017). Adolescent girls will often attribute their depression to rejection and social withdrawal or relational difficulties such as a breakup. Additionally, adolescents are more likely than adults to assign blame for their depression on psychosocial stressors. From a public health standpoint, it is important to learn more about adolescents' beliefs about depression and other mental illnesses so that effective interventions can be developed.

Interventions

Adolescent depression is a significant problem, and early intervention must be a priority to prevent the long-term health consequences associated with depression. One problem with early intervention is that depression is difficult to recognize in the adolescent population and involving young people in prevention and early intervention may be very challenging for health care providers (Jones et al., 2018). Jones et al. (2018) looked at psychoeducational interventions (PIs) to deliver accurate information about health issues and self-management. PIs have been found to help with understanding of depression, help to recognize symptoms, improve communication, engagement, and outcomes among adults. PIs have been shown to be effective in improving the clinical course, treatment adherence, and psychosocial functioning of adults

with depression; however, there are no published reviews on the effectiveness of PIs in adolescents.

Although PIs have been beneficial for adults with depression, the appearance and management of depression in adolescents is different than in adults, and their response to PIs may also be different. In a systematic review conducted by Jones et al. (2018), PIs were found to be of benefit on several measures for adolescents with depression including knowledge/understanding, behavior and attitudes, treatment adherence, and outcomes. In addition, increased parental understanding was shown to enhance communication, conflict resolution, and problem solving, which has important implications in managing the symptoms of depression. While intervention with PIs appears to be beneficial, there are barriers that may reduce the effectiveness for some adolescents with depression. For example, difficulty concentrating is one of the symptoms of depression, and some participants felt there was too much information in the program, resulting in anxiety, self-checking, and rumination (Jones et al., 2018). There may also tend to be an over-reliance on the facilitator or an over-reliance on self-management strategies.

Adolescent Friendly Health Services

The World Health Organization (WHO) carries out a range of functions to improve youth health through evidence-based guidelines that help make recommendations to governments on adolescent health (Mulugeta et al., 2019). The ultimate goal is to provide high-quality, age-appropriate services to adolescents and raise awareness of health issues including depression. Youth Friendly Services (YFS) is one of the WHO strategies for improving health services for adolescents by providing health services that are appropriate, accessible, and acceptable. In addition, the services are provided in the right place, at the right price, and delivered in the right

style to be acceptable to adolescents. However, evidence shows that services for adolescents in both high and low-income countries is inconsistent, poorly coordinated, and uneven in quality.

University of Michigan Adolescent Health Initiative (2016) has some recommendations for improving YFS. Knowing that adolescents will avoid health care for a variety of reasons provides motivation for making improvements to increase accessibility and providing care that is appropriate for adolescents. Recommendations for YFS include making services more accessible, such as offering services at times that youth are available, providing services to youth at short notice, providing services in locations that youth can easily access, and bringing your services to young people (University of Michigan, 2016). Additionally, environmental modification is also recommended, including providing auditory and visual privacy and developing and posting non-discriminatory policy so all youth will feel welcome. University of Michigan (2016) also has suggestions for identifying the needs of young people and connecting to the appropriate resources. These recommendations include scheduling longer visits with young people to ensure enough time to address all their needs and establishing an effective referral system. Other ideas for improving YFS include providing confidential services where applicable, implementing a youth friendly marketing campaign, and soliciting youth feedback.

School-Based Interventions

School-based programs are often targeted to aid in recognition and early intervention for adolescents with depression and other internalizing mental health disorders (Feiss et al., 2019). In large part, this is due to the school's ability to reach large numbers of adolescents simultaneously. In addition, school-based programs can effectively identify adolescents who are at high risk for mental health disorders and may need more help beyond what the school may be able to offer. Schools may also be beneficial in assisting adolescents who experience depression

to improve their academic performance through school-based mental health programs. School-based programs aimed at reducing depression have been shown to be effective; however, programs aimed at reducing stress have not been as successful. Additionally, targeted programs directed toward those who have a high-risk profile or have subclinical symptoms have been more effective than universal programs in reducing depression and anxiety symptoms. This is not to say that universal programs do not work. Studies of universal programs, which are delivered on a large scale to prevent depression, are often impractical and can be excessively expensive (Werner-Seidler et al., 2017). Some advantages of universal programs over targeted programs include the removal of the need for screening, minimization of stigma because no student is singled out, and good chance of catching youth who may not yet be at risk but may go on to have symptoms in the future.

School programs where teachers worked with students to learn how to work with peers through role playing showed decreased rates of victimization (Davis et al., 2019). School-based programs that address academic and social functioning with a focus on direct social-emotional competencies and social-cognitive interventions targeting specific risk and protective factors including anger, empathy, perspective-taking, respect for promoting school belonging, and victimization reduction also interrupt the link between victimization and depression.

In addition to school programs the Centers for Disease Control and Prevention have published recommendations to meet adolescent mental health needs in middle through high school. Their recommendations include one counselor for every 250 students, one social worker for every 400 students, and one psychologist for every 1,000 students (CDC, 2017). In rural ND schools do not begin to reach those types of numbers which brings up the question, what recommendations should rural schools follow?

Parents

Depression in adolescence can sometimes be very difficult to recognize. For parents it is important to be aware of the signs and symptoms of depression in adolescents, which includes but is not limited to fatigue, sleeping difficulties, anxiety and tension, and somatic symptoms (Jaakkola et al., 2019; NIMH, 2017). Parent-adolescent communication can be an important factor in the developing mental health of an adolescent (Loffe et al., 2020). Types of communication within families can have an influence on internalizing symptoms among early adolescents. Two types of communication that are beneficial for adolescents are open communication, where the adolescent feels free to talk and share their problems with their parents, and co-problem solving, where parents provide information and instrumental support to help adolescents resolve problems. Each method has been linked with positive outcomes for healthy adolescent mental health.

Specific aspects of open communication include self-disclosure, attentive listening, clarity, staying on topic, and demonstration of empathy (Loffe et al., 2020). Co-problem solving includes introduction of a problem, identifying response options, and discussion or enactment of solutions to the problem. Co-problem solving includes both instrumental and informational support from the parents. Informational support includes providing suggestions, advice, or specific information to the adolescent while instrumental support includes providing necessary materials or financial support to help resolve the issue. By contrast, co-rumination, where the parent repetitively discusses the negative impacts or aspects of a problem with their child, has been linked to negative mental health outcomes such as higher levels of anxiety and depression. Improving parent and adolescent communication through education has the potential to improve adolescent mental health outcomes.

Theoretical Framework

The theoretical model used to guide this needs assessment was the Social Ecological Model (SEM). The SEM is a framework commonly used in public health research and practice (Golden et al., 2015). According to the SEM, individuals are rooted within larger social systems, and the SEM helps explain the interaction between individuals and their environments that help shape health decisions and outcomes (Golden & Earp, 2012). The SEM originates from a systems orientation in which individuals are believed to influence their environment and be influenced by their environment (Golden et al., 2015). The SEM (Figure 2) below depicts the individual with five levels of influence beginning with individual, interpersonal, organizational, community, and public policy. Please see Appendix A for approval to use the SEM theoretical framework.

Each level of the SEM expands on the influences that shape an individual's decisions regarding health care (Golden et al., 2015). At the center of SEM is the individual who is influenced by their own beliefs and values. An individual's own knowledge or level of mental health literacy will be a major factor in influencing their decision to seek help or internalize their problems. The individual's ability to adapt or cope with stressful situations are factors that should be considered here. This level of the SEM is also dynamic, changing with age, knowledge, and experiences. Through personal interviews with adolescents, this project helped learn more about adolescent knowledge of mental health, stressors that may influence their decision making, and barriers to seeking help for mental health problems as well as resources they may use to help them cope.

Moving out from the center of the SEM represents an expansion of influences and begins with the interpersonal or relationships level, which involves friends and family as an influence in

the individual's life (Golden et al., 2015). Social roles and connections are major players at this level, and social isolation can be damaging to the health of the individual (Bronfenbrenner, 2021). Parenting style has an impact at this stage, and peers also play a significant role in shaping an individual's choices. By interviewing parents of adolescents this project identified parental styles that may act as barriers for adolescents who need help with mental health problems. This project also identified resources that contribute to successful outcomes for adolescents who experience mental health problems.

The organizational level is next and is representative of school, work, religious, or other organizations that may have an influence on an individual's decision making (Bronfenbrenner, 2021). School counselors, teachers, pastors, or other influential people within these organizations have the greatest impact on an individual and help them make decisions. Local 4-H clubs are also a great example of the organizational level of the SEM. Adolescents in grades 7-12 who participate in 4-H have been shown to be as much as four times more likely to contribute to their communities; in grades 8-12 they are twice as likely to be civically active and those in grades 10-12 are two times more likely to participate in science programs during out-of-school time (Lerner & Lerner, 2013). You can learn more about 4-H by contacting your county extension agent. Also included in this level of the SEM are public health units. Another aspect of this level is the development of mental health programs in schools and rural communities which can greatly enhance accessibility for adolescents who live in rural settings. Interviews with teachers helped reveal some barriers to addressing adolescent mental health in rural school settings and also helped identify programs that are currently being implemented or trialed to address the issue of adolescent mental health.

Moving further out to the community level, adolescents are influenced by factors such as social well-being (Bronfenbrenner, 2021). An individual living in poverty may not have the same accessibility to care as an individual living in an affluent neighborhood. Likewise, an adolescent living in a rural community may be less likely to seek help because of the accessibility of help; whereas an individual living in an urban area has more accessibility and a much shorter distance to travel to receive help. Socioeconomic status may also be a major factor for an adolescent to seek or deny themselves the help they need. Adolescents who feel it would cause a financial hardship on the family to seek help for mental health problems may be less likely to seek assistance and internalize their problems. Adolescent interviews helped understand what motivates them to seek or deny themselves help for mental health problems and whether financial concerns, stigma, or other issues may impede their access to help.

The next layer of the SEM is the policy level, which represents laws and policies formed at state and national levels that have potential to affect health care decisions (Bronfenbrenner, 2021). Perhaps one of the best examples of this is the Affordable Care Act, which was signed into law during the Obama administration. Policies within the school such attendance or grading standards can also be a factor at this level. An adolescent who is worried about achieving a high grade might avoid missing school for an appointment due to concerns about missing a test or instruction from a teacher that might affect their grade. Policies within rural clinics might also affect whether an adolescent speaks out about their troubles or internalizes them. For example, if clinic staff initiate screening for depression an adolescent may feel safe to acknowledge they have a problem that they would like to talk about. However, if the clinic staff avoid the subject of mental health an adolescent patient may be more likely to internalize their problems and miss out

on the help they need. Interviews with adolescents and teachers helped identify some of these potential barriers, as well as some potential solutions.

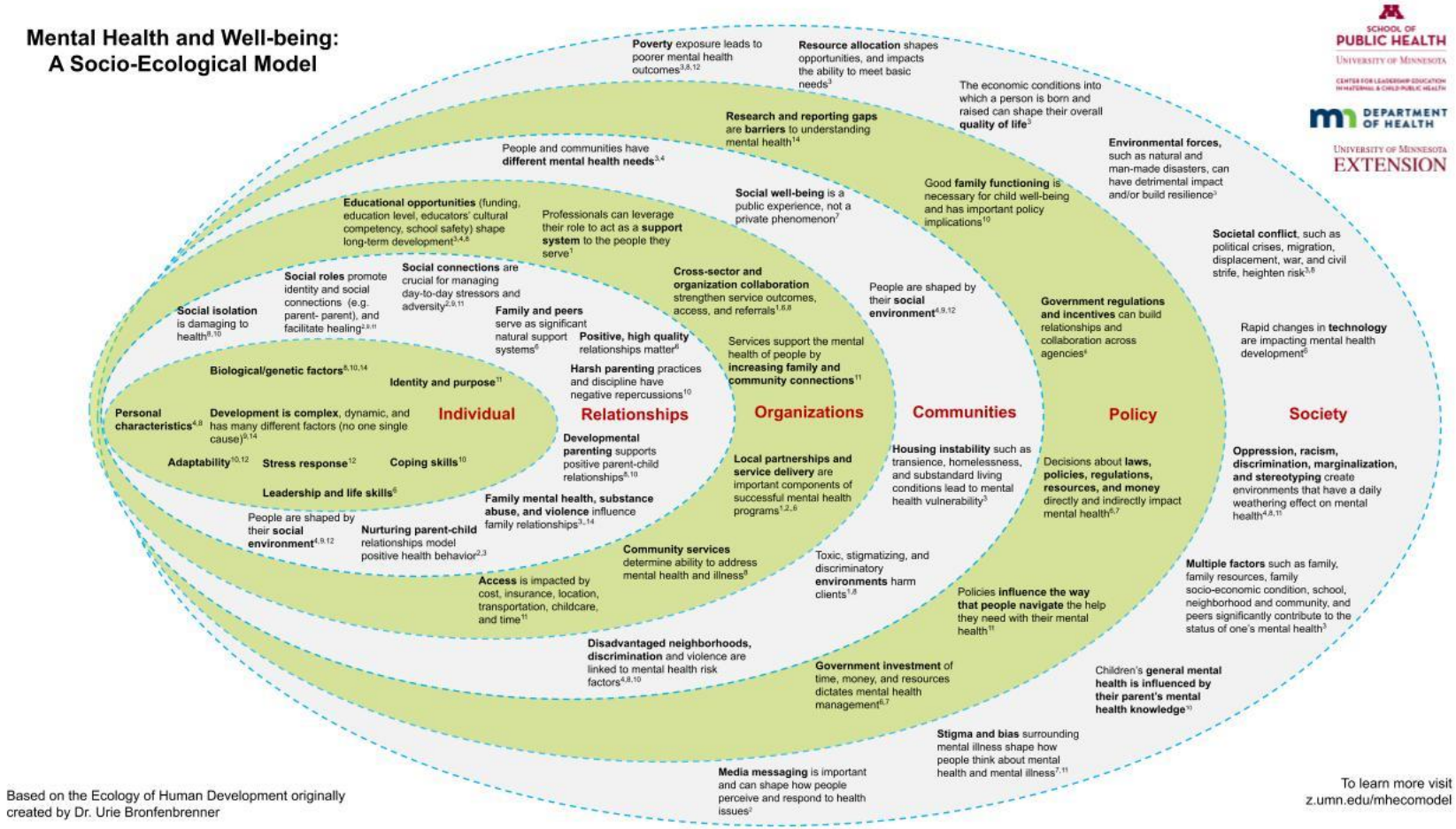
The outermost level of the SEM is society where there are multiple factors that may influence decisions. Stigma and bias may be at the top of this list when considering depression or other forms of mental health (Bronfenbrenner, 2021). Racism and media messaging, particularly social media, are likely two of the most common factors affecting decisions. In recent times social media has proven to be a major factor in shaping decisions or feelings of people who depend on those platforms for their information. Media can also be biased in their reporting which may lead people to make conclusions about something with only partial information provided by a biased media source. These factors can easily play into how an adolescent feels about mental health issues and whether to seek help or internalize their emotions and thoughts. Conducting interviews with adolescents, parents, teachers, and healthcare providers produced some evidence of how these influences shape their decisions. Please refer to Figure 2 for more information on the SEM, which is provided with permission from the University of Minnesota school of Public Health. Please see Appendix B for permission to use the model.

The SEM can be used as a guide to help determine what influences have the most impact on adolescent decision making (Golden et al., 2015). Further, that information can be used to help shape policy or change messaging to have a positive influence on adolescents to make informed healthcare decisions that will have a positive impact on their life. By conducting individual interviews using the SEM as a guide and allowing adolescents, teachers, parents, and healthcare providers to express their point of view regarding adolescent mental health needs, the information gained from this project has the potential to help shape policy and improve current

systems to better serve the adolescent population and improve the long-term outcomes for adolescents who experience depression or other mental illnesses.

Figure 2

Social Ecological Model (Mental Health and Well-being Ecological Model: Leadership Education in Maternal & Child Public Health)



Conclusion

Adolescent depression is a significant health problem. Rates of depression are variable, but recent trends show an increase in the adolescent population (NIMH, 2019). While rates of depression are trending upward, there is simultaneously a shortage of mental health professionals to help treat adolescents who experience depression or other mental health disorders (Berryhill et al., 2021). This has created a dilemma, especially for adolescents who live in rural areas, to find help for mental health problems. School programs aimed at addressing adolescent mental health are difficult to initiate and maintain for rural schools due to a lack of resources. Parents also lack knowledge about adolescent mental health, which leads to barriers such as an inability to recognize a problem and seek help (Hurley et al., 2019). PCPs are often the go to person for adolescents in rural communities. However, PCPs in rural communities often lack confidence in their ability to diagnose and treat mental health disorders citing a lack of training, little interest, and lack of reimbursement as reasons for not screening and treating adolescents with mental health problems. Another potential problem that PCPs may face is a lack of appropriate referral sources for adolescents experiencing mental illness. Despite these significant issues faced by rural communities, few studies have been conducted to look at the needs of adolescents in rural communities. Enhanced understanding of adolescent mental health needs and the issues faced by adolescents, parents, teachers, and healthcare providers in rural communities has the potential to improve patient outcomes and quality of care.

CHAPTER 3. PROJECT DESCRIPTION

Project Design

The purpose of this community needs assessment was to understand the mental health needs of the adolescents in rural North Dakota and increase awareness of depression and local resources. The following objectives guided this project:

1. Assess the mental health needs of adolescents in rural ND from the perspective of adolescents, teachers, parents, and healthcare providers.
2. Assess barriers to discussing mental health and accessing mental healthcare from the perspective of adolescents, teachers, parents, and healthcare providers.
3. Provide information to parents and adolescents on resources available for mental health disorders.
4. Disseminate results of interviews to school administrators and healthcare providers and provide two evidence-based recommendations to each to better meet adolescent mental health needs.

Methods

A qualitative approach was utilized to gather information from healthcare providers, adolescents, teachers, and parents, pertaining to the mental health needs of adolescents in rural ND. Individual interviews were conducted with participants in each of the target groups, which included adolescents in grades 9-12, teachers, parents, and healthcare providers. Each interview, conducted in person, was recorded using a Sony ICD-PX470 electronic recording device. Interviews conducted via zoom were recorded on the coinvestigator's personal laptop computer, which is password protected. Interviews lasted approximately 10-15 minutes. All participants provided written consent, and all participants under the age of 18 obtained parental consent to

participate in the interviews. Please see Appendix C for questions that were included in each of the interviews. The questions for each of the interviews were derived from a previous needs assessment dissertation with permission from the author. The questions were minimally changed from the original topic to a focus on mental health rather than reproductive health. Email correspondence granting this permission can be found in Appendix D.

The interviews included twelve questions for the adolescent target group, nine questions for educators, seven questions for parents, and eight questions for healthcare providers. Questions attempted to elicit responses about recognizing and reacting to depression. Questions were also designed to help gain a better understanding of adolescent depression from the perspective of adolescents, teachers, parents, and healthcare providers. Participants were recruited via listserv email with cooperation from the school, and a convenience sampling of willing participants was used to assemble the participants for the interviews. There was a total of three emails sent for recruitment purposes. In addition, adolescent participants were offered a $10 Scheels gift card for their participation. Please refer to Appendix E for the recruitment letter.

Setting

This project took place in a small rural community in north central ND. The community has a population of about 1,000 people with elementary and high school combined in one building. The school provides a full-time guidance counselor who works to help students find career interests as they prepare for life after graduation. Healthcare within the school is provided through the first district health unit; however, there is no school nurse, and the guidance counselor is not trained in healthcare needs (K. Howe, personal communication, March 3, 2022). The community also has a small clinic with one full-time provider, a nurse practitioner, and a part-time physician who is in the clinic for a half day twice a month. Additionally, the

community does have volunteer ambulance and fire services, while law enforcement is provided through the county sheriff's department.

Evaluation

After the interviews were conducted, the recordings of each interview were transcribed verbatim and checked for accuracy by rereading the transcriptions. Descriptive content analysis was used to evaluate the mental health needs of adolescents from the viewpoint of adolescents, teachers, parents, and healthcare providers. Objective one was assessed with questions eight through twelve of the adolescent questions. These questions specifically asked about mental health needs, where to find help, who adolescents can talk to for help, and what barriers adolescents feel exist. Questions seven through nine for educators also helped to assess objective one. These questions are directed at services that are provided, what services are needed for adolescents with mental health needs, and how mental health issues are addressed with adolescents. In the interview with parents, objective one was assessed with questions three, five, and six. These questions refer to barriers discussing mental health, finding help for adolescents, and whether parents have ever witnessed a healthcare provider discuss mental health with their adolescent children. Questions four, seven, and eight for healthcare providers were directed at existing barriers, services provided, and specific needs for adolescent's mental health and were also helpful in assessing objective one.

Objective two focused on identifying barriers to accessing mental healthcare and was evaluated by question twelve for adolescents, which directly asks about existing barriers. Likewise, question four for educators and healthcare providers, and question three for parents all asked about existing or perceived barriers to discussing or accessing mental healthcare.

Objective three was to provide information to parents and adolescents on resources available for mental health disorders and was addressed at the end of each interview. Each of the adolescents and parents who participated in the interview were given a handout with a list of providers and services available locally. This list titled Minot Community Resource Guide was obtained from the First District Health Unit website (www.fdhu.org) and contained services for mental health evaluations, therapy, peer support groups, medication, and family counseling services. Parents and adolescents also received a printout from the Substance Abuse and Mental Health Administration (SAMHSA), which offered tips for discussing mental health problems. Please refer to Appendix F for a copy of these documents.

Objective four was to disseminate the results of interviews to school administrators and healthcare providers and to provide two evidence-based recommendations to each to better meet adolescent mental health needs. To address this objective, a meeting was held with school administrators and healthcare providers on March 15, 2022. A PowerPoint presentation was made to review the results of the interviews and use that information to make evidence-based suggestions. Evaluation included whether either the school or healthcare providers intended to implement the evidence-based recommendations based on the responses and questions asked during the presentation.

Timeline

The proposal meeting for this project occurred on November 29, 2021, with implementation taking place in January and February 2022. The interviews were conducted in a classroom provided by the local high school with the permission of the school superintendent and via zoom meeting. Dissemination of the results to school administrators and healthcare providers occurred in March 2022, and a final defense occurred in April 2022. A copy of the

correspondence between the coinvestigator and the school superintendent is available in Appendix G.

Dissemination

Dissemination of the results occurred through a variety of methods. Dissemination consisted of a15-20 minute presentation provided for school officials and healthcare providers and included background information gathered during review of literature, results of the project, and two evidence-based suggestions for school administrators and healthcare providers to better meet adolescent mental health needs. The project and/or results were also disseminated at the North Dakota Nurse Practitioner Pharmacology Conference and North Dakota State University Poster Presentations. Future opportunities for dissemination through publication will also be explored.

Resources

To successfully complete this community needs assessment of adolescent depression certain resources were needed: a) a vehicle to travel back and forth to the rural ND town; b) a recording device to be used during the interview process; c) dissertation committee members for this community needs assessment; d) a laptop computer and Zoom application for recording interviews and creating transcription of each interview; and d) the participants who volunteered for each interview.

Protection of Human Subjects

Preceding implementation of project, approval was obtained on December 29, 2021, from the North Dakota State University Institutional Review Board (IRB). The goal of this community needs assessment was to learn adolescents', teachers', parents', and healthcare providers' current understanding of adolescent mental health needs and available resources in rural ND. Data for

this needs assessment was obtained through interviewing individuals in each of the target groups and allowing each participant to speak freely. Prior to the interview, written consent was obtained, and each adolescent under the age of 18 was required to gain parental consent. Consent forms can be found in the appendices, please see Appendix H for the adult consent form, Appendix I for the youth assent form, and Appendix J for the legally authorized representative consent form. Also, for the adolescent participants under the age of 18, NDSU IRB required that the co-investigator briefly meet with at least one parent or legally authorized representative to gain verbal consent, which was completed. Additionally, a short opening statement was read to each participant explaining the interview and reaffirming their participation in the interview is voluntary, as well as informing participants they are free to leave at any time if they feel uncomfortable with the subject or the questions being asked. A copy of the statement is available in Appendix K. Written consents were scanned and stored in the interviewer's password protected personal computer and confidentiality was maintained throughout the interview process for all participants. The only demographic information collected during the interview process was age, gender, and grade of the adolescent participants in the adolescent target group. A copy of the expedited approval letter from the IRB can be found in Appendix L.

CHAPTER 4. RESULTS

A total of ten volunteers participated in this project. Participants included adolescents (*n*=3), parents (*n*=3), educators (*n*=2), and healthcare providers (*n*=2). Each of the volunteers participated in one-to-one semi-structured interviews in person or via zoom with each interview lasting approximately 10-15 minutes. All the participants in this project were female (*n*=9) with exception of one parent who was male (*n*=1). The results of the project are presented in the following sections with quotes from the interviews to better illustrate the findings (see Table 1 for combined responses).

Table 1

Combined Responses

Theme	Exemplars
Adolescents (*n*=3)	
Experience discussing mental health	*Parents* • Yes, since Covid • Yes, to let me know they are there for me • Yes sometimes *Healthcare Providers* • Yes, but not in-depth • Yes, if I need help • Yes, asked about anxiety and depression, talked about options for treatment. *Teachers* • Counselor has brought more awareness about it • Yes, just offer support if I need it • Yes, talked about coping, speakers on mental health *Friends* • Yes, quite a few, talk about what they are going through • Yes, provide support for me • No, not really
Timing of discussions on regarding mental health	• If somebody has something going on • Working out/ Being active • Talk about it a bit in school
Barriers to discussing mental health and/or accessing care	• Denial of problems • Financial resources • Social status • Judgement from other people • Discomfort feeing bad about what you are feeling
Facilitators to discussing mental health	• More awareness from school • Supportive friends and family
Resources available	• Counselor • Parent or adult • Principal • Friends
Important health topics	• Anxiety and Depression • Eating healthy and staying active • Physical Health
Needs	• Physical activity • Strong family and friend support • Limits on screen time • Balanced diet
Experience discussing mental health	• Discuss on regular basis • Very comfortable • Perfectly ok with it
Timing of discussions regarding mental health	• When stuff comes up • Try to explain to other kids about sibling with anxiety • If adolescent is having a tough day; or situation

Table 1. *Combined Responses (continued)*

Theme	Exemplars
Parents (*n*=3)	
Barriers to discussing mental health and/or accessing care	• Privacy • Embarrassment for adolescent • Adolescents brush things off • Adolescents don't understand implication of not having mental health needs met
Facilitators to discussing mental health	• More awareness • Trust • Rapport • Openness
Guidelines	• I don't know if there are any guidelines out there • No • No real guidelines but knowing what limits I can push with my child
Resources available	• School • Behavioral health services • Not many resources in North Dakota
Needs	• Routine PCP discussion regarding mental health • Guidelines • Additional resources • More timely access to care
Educators (*n*=2)	
Experience discussing mental health	• Counselor available but not always, which may lead to teacher-led discussions • Varies, but almost daily
Timing of discussions regarding mental health	• Always touching base on mental health • Daily
Barriers to discussing mental health and/or accessing care	• Shame • Family • Time
Facilitators to discussing mental health	• Rapport • Established trusting relationship • Willingness of adolescent to talk with educator
Guidelines	• Providing a safe space to speak • Referral to additional resources
Resources available	• School counselor
Needs	• Full-time school counselors • Mental health professionals • Social workers • Medical mental health professionals
Healthcare Provider (*n*=2)	
Experience discussing mental health	• More significant this last year with Covid. • Three to four times a week
Timing of discussions regarding mental health	• Well child or sports physical and at any annual physical. • Every annual physical or well child exam
Barriers to discussing mental health and/or accessing care	• Parents • Adolescents • Stigma around mental health • Parent/provider relationship

Table 1. *Combined Responses (continued)*

Theme	Exemplars
Facilitators to discussing mental health	• More attention on mental health • Increased acceptance in talking about mental health. • Therapeutic adolescent/provider relationship
Guidelines	• Start with a PHQ2 and then move to a PHQ9 if needed. • CAGE questionnaire • GAD7
Resources Available	• Counselor/psychiatrist referral for therapy • Medication management • Patient education on coping skills
Needs	• Continue to talk about and raise awareness of the problem to drop the stigma • Parental involvement

Objective One

The first objective was to assess the mental health needs of adolescents from the perspective of adolescents, parents, educators, and healthcare providers. Responses were categorized into main areas using the interview guide to create a *priori* categories. The result of each category is described in the following sections.

Adolescents

The adolescents (n =3) who participated in this project ranged in age from 16-18 years, and all adolescents identified as female. Two of the adolescent participants were juniors in high school, while one adolescent participant was a senior in high school.

Experience Discussing Mental Health

The adolescent participants felt having someone to talk to is important to maintain good mental health. Many of the adolescents felt they could talk with their school counselor to get help if they are feeling depressed. One participant expressed that talking to parents may be difficult. On the other hand, the two other adolescents felt it is helpful for parents to express their willingness to provide support and encourage adolescents to share their feelings.

> I think you can go to your school counselor. If you feel comfortable with them, your parents, can probably be hard to talk to your parents about that if you are struggling but definitely an adult.
>
> - Adolescent participant

> Our school principal or high school principal definitely. I go to a counselor, so her for sure, definitely my friends, my closer friends and my family, my mom and dad.
>
> - Adolescent participant

> So yeah, we do talk about mental health. We hadn't necessarily before COVID but during COVID basically everyone in the family had a mini mental breakdown and we just had a big family discussion.
>
> - Adolescent participant

Adolescents reported limited experience talking about mental health with their friends. Conversations with friends were limited to being supportive in nature or just sharing their feelings. Regarding healthcare providers, adolescents shared that they have had conversations with their PCP about mental health. They described that the conversations did not go into depth but were based more on being supportive and encouraging adolescents to avoid holding their feelings in if there is a problem.

> I think they have asked questions about it, but I don't think we have had a deep conversation about it.
>
> - Adolescent participant

> Yes, my healthcare provider has. They've talked about if I've had any anxiety or depression and then they've talked about some options I have to help with that, like certain medicines or a therapist.
>
> - Adolescent participant

When asked about teachers discussing mental health, adolescent's responses were varied. Some of the participants reported teachers have talked with them about how to cope with mental health problems and offered support for other adolescents who may be struggling with mental health. On the other hand, one adolescent did not remember discussing mental health with teachers.

> I would say not necessarily with my teachers, my (school) counselor has talked about mental health. She just brought more awareness to it, and she has posters hung up all over the school about how to help deal with it.
>
> - Adolescent participant

> Yeah, they've talked about how to deal with it. We've had people come and talk about mental health.
>
> - Adolescent participant

Based on the responses from the adolescent participants, there is a wide variety of experiences regarding talking about mental health. Most of the adolescents identified parents and healthcare providers as potential individuals to further discuss mental health needs. On the other hand, friends and educators were cited less frequently as individuals that they can discuss their mental health needs with.

Facilitators to Discussing Mental Health

Adolescents also identified some facilitators to discussing mental health including more awareness from the school and supportive friends and family. Adolescents stated that parents and friends expressing support helped them feel safe to discuss their emotions. Additionally, adolescents expressed interventions at the school level have been helpful. One participant stated the school had a guest speaker in the past that was helpful in creating awareness about mental health.

Resources Available

Adolescents provided similar responses when questioned about resources for mental health. Common responses among the participants included the school counselor (*n*=3), parents (*n*=3), high school principal (*n*=1), and friends (*n*=1). One of the adolescent participants also stated her PCP would be a good resource.

> You can go to your counselor or a trusted parent or like an adult or even your healthcare provider. They can send you to a therapist who can help you talk things through.
>
> - Adolescent participant

Mental Health Needs

Adolescents identified a healthy diet, adequate sleep, screen time limitations, breaks from social media, and supportive relationships as essential to maintaining a positive mental health outlook. Their answers mirrored each other.

> I think they like, need to be with friends and not playing video games all the time.
>
> - Adolescent participant

> A well-balanced diet, and I think they need some sort of physical activity, and a good strong friend group and family where they can go home and just freely talk about anything they want. They need to get enough sleep, and I think breaks from social media is a really big one.
>
> - Adolescent participant

> I think they probably need someone to talk to, maybe to understand what they're going through. Families would also be really good and to have friends there to help you or talk to you.
>
> - Adolescent participant

Parents

A total of three parents of adolescents participated in the project. All three parents were from the rural ND community and had adolescent(s) that were currently attending the local high school.

Experience Discussing Mental Health

Parents also shared their experiences of talking with their children about mental health issues. All the parents (*n*=3) who participated in the interviews stated they have had conversations with their adolescent children about mental health issues. In each case, the parents described the conversation surrounding an event that occurred or recognizing their adolescent son or daughter was having a bad day. A pattern emerged of conversations being reactive rather than proactive. The parents also stated that they did not follow any guidelines but wanted to express their support for their adolescent children.

> It's just when stuff comes up, whether you're dealing with stuff with my four children at home or whether something happens at school. There have been a few incidents recently at school where some kids spouted off and made some pretty scary claims, you it all comes back to mental health.
>
> - Parent participant

Facilitators to Discussing Mental Health

Parents alluded to some facilitators for discussing mental health including increasing awareness of mental health and establishing trust, rapport, and openness about mental health. Two of the participants provided examples of issues within their family to explain how their children had an awareness of mental health issues and that opened the door for discussions within the family. One participant also talked about keeping trust with their adolescent children by knowing their limits and exercising caution about who is included in discussions and what subjects are discussed with others. Parents also cited having a good rapport with the school and healthcare provider were instrumental in having discussions about mental health. One of the parent participants expressed praise for the school counselor who helped them navigate through some difficult times and made referrals for more professional help. Two of the participants also stated they encourage their adolescents to talk about their feelings. They alluded that offering support was helpful in getting their adolescent children to talk about problems including mental health.

> We have a fantastic school counselor that has gotten me through this. She is the one that referred me to a few places.
>
> - Parent participant

Resources Available

When asked where to find resources, parents had some differences of opinion. One parent felt that ND is very limited in available resources and iterated frustrations with the amount of time it took to find help for an adolescent child with significant mental health concerns. The other two parents felt confident in their ability to get help because of connections to the

healthcare community. One felt the school counselor was "fantastic" with assistance in coping and was also able to make a referral to more professional help.

> In the state of ND there is not very many resources. Been dealing with an issue with my son for a very long time and it took us an extremely long time to get him into a program.
>
> - Parent participant

> I have gone through the school. We have a fantastic school counselor that has gotten me through this, and she is the one that referred me to a few places.
>
> - Parent participant

> I'm a nurse so I'm fully aware of the behavioral health services that are available.
>
> - Parent participant

Mental Health Needs

To understand more about parent's perspective of adolescent mental health needs, parent participants were asked if their PCP has ever discussed mental health with their adolescent children. Two of the participants were not aware if a PCP had ever discussed mental health with their adolescent children, while the third participant answered that their PCP had discussed mental health with their adolescent. Parents identified more routine PCP discussions on mental health with adolescents as a need; however, they also expressed concerns regarding PCP discussions on mental health with adolescents privately. Two of the participants reported they would be hesitant to leave the room during these discussions. The two parent participants stated they would leave the room but would desire to be in the room during that conversation. The third parent participant was confident with the PCP and indicated absolute trust in the PCP to have that discussion privately with adolescents.

> If I had to I would, but as a parent I want to be in there. Sometimes I feel stuff is coaxed and that scares me a bit.
>
> - Parent participant

> I guess if it's not, I mean if it's gonna [sic] help our situation or help somebody else. But I would really want to be in the room.
>
> - Parent participant

Educators

Two educators from the rural ND community participated in the project. The educators included a classroom teacher and a principal in secondary education.

Experience Discussing Mental Health

Educators provided similar answers about experiences discussing mental health with adolescent students. Participants indicated that discussions about mental health occur almost daily. Additionally, educators suggested that being in a small school helped them identify students who may be struggling and may have more frequent check-ins with these students. One educator stated they are always scratching the surface by asking if there is something going on that is affecting their schoolwork. In addition to identifying students who may be struggling, educators also suggested that living in a small community helps them to know the families better, which can be helpful in identifying problems. Educators alluded to education about control with mental health, suggesting that tips on calming or regulating yourself to help in difficult times are a focus of discussions. Both participants stated that school counselors are overwhelmed with their duties and often students talk with the principal or other teachers they may trust in lieu of the school counselor.

> I mean, in some ways we are always scratching the surface of their mental health. If a student is particularly struggling, we might ask "is anything going on? Is anything else bothering you?" Trying like I said to scratch at the surface and see if there is a deeper issue that is affecting their schoolwork.
>
> - Educator participant

Facilitators to Discussing Mental Health

Facilitating discussion for educators starts with establishing rapport, trust, and a safe environment. One educator suggested that if students feel secure in their relationship with educators, they are more willing to talk about mental health problems. Educator participants also alluded to establishing trust is essential prior to approaching adolescents about mental health

problems. Educators also stated part of this trust is taking advantage of situations where the educator can speak one-on-one with a student and avoid bringing up the subject in the middle of class. One of the participants also stated that asking tough questions directly, instead of trying to guess what the problem is, shows respect and helps build that trusting relationship with an adolescent. One participant suggested that building a relationship with adolescents is important, suggesting that before any content can be taught in the classroom, the students need to know that the educator is there for them, and they can rely on that educator for help.

Resources Available

Educator's answers were similar in that they agreed the school counselor was the primary service that was available for adolescents. Educators were also asked how mental health is addressed in school. Their answers were variable but touched on programs for educating adolescents about social emotional learning. They indicated that not every school does the same thing, and one educator stated that mental health might be addressed in health classes but was not sure what extent the curriculum might cover.

> I know that students when they receive health curriculum, like health classes, mental health is touched on. I suppose depending on the school or the teacher, it depends how in-depth they get into that.
>
> - Educator participant

> Last year we started looking at the need, for you know, how is our behavior health? How is our mental health? How do we teach our kids? How do we respond? How do we act? So, we have started with a social emotional learning program.
>
> - Educator participant

Mental Health Needs

To learn more about adolescent needs for mental health from an educator's perspective, educators were asked about services provided, what services educators felt were needed, and how educators addressed mental health issue within the school. One of the participants expressed some frustration over the length of time it takes to get an adolescent to be seen by a

professional when being referred out from the school. Educators were also united when asked about services that are needed for adolescent mental health. They are aware of shortages in the profession but expressed a need for more social workers, counselors, and mental health professionals. One educator participant also mentioned the pandemic causing a problem and limiting the availability of face-to-face counseling with mental health professionals in schools.

> In a perfect world we need counselors, social workers, and mental health professionals on the campus.
>
> - Educator participant

> We need more school counselors, and then we need mental health specialists, and to be able to have that, we know those people don't exist.
>
> - Educator participant

Healthcare Providers

The two participating healthcare providers included a Nurse Practitioner (NP) who works in a rural family practice setting and a Physician Assistant (PA) who also works in a rural family practice clinic. The PA participant is a resident of the community where the project was conducted and provides primary care in another nearby rural community.

Experience Discussing Mental Health

Healthcare providers agreed that discussions with adolescents about mental health are happening more frequently. One provider stated since Covid-19 there have been more frequent visits for mental health concerns, stating that at least weekly they are seeing an adolescent with mental health concerns. The other provider participant suggested they see an adolescent at least three to four times per week with mental health concerns. The most common diagnoses treated among adolescent patients were generalized anxiety disorder, panic disorder, and major depressive disorder.

> Unfortunately, it's been a lot more significant this last year and a half with Covid. I don't if it just stressed kids out, or if it was just that there is way more awareness around mental

> health and getting help, but I would say at least weekly we are seeing an adolescent that has a concern with their mental health.
>
> - Healthcare provider participant

Facilitators to Discussing Mental Health

Healthcare providers had differing views about what facilitates discussions about mental health problems. One provider felt that adolescents are open and honest and that simple questions about why they feel or think a certain way opens the door for them to express their feelings. Additionally, the provider felt that adolescents today have had more exposure to mental health problems and are more accepting and willing to talk about them because of the awareness. In contrast, the other provider felt that adolescents were hesitant to talk about mental health and needed some encouragement to open up about their problems. The provider stated that without naming names, informing the adolescent that many other adolescents are experiencing similar symptoms helps start the conversation. The provider also stated that finding a way to relate to adolescents was beneficial, for example, explaining that the provider also experiences anxiety and has sought treatment has helped establish rapport with adolescents.

> I do discuss the fact that there are multiple students over in the school system that are really struggling and that if they feel they have some of these symptoms, and I start listing off things that I have experienced with other adolescents. And I find that if they can relate to you a little bit or acknowledge the symptoms they're having you can really get them to open up.
>
> - Healthcare provider participant

Resources Available

Healthcare providers were also asked about services they provided for adolescents with mental health problems. Both participants gave similar answers stating they would provide medication management and look to refer their patient for counseling. One provider participant stated that neuro psych testing was a frequent referral due the inability to differentiate between

anxiety or attention deficit issues. Frustration over inability to get patients for immediate treatment was also expressed by one participant stating that it is often as long as eight weeks to get an appointment after a referral is made.

> I have an entire list of places that lists out who takes child and adolescents, but a lot of the time they are full, and it is eight weeks to get these kids in.
>
> - Healthcare provider participant

Mental Health Needs

Both healthcare providers agreed that rapport with adolescents and their parents was crucial to enhancing discussions about mental health issues. Providers, however, gave some different answers about what the biggest needs are for addressing adolescent mental health issues. One provider felt that talking about mental health and increasing awareness to drop the stigma of mental health was the biggest need. The other provider stated that getting back to basics of eating meals together as a family and allowing adolescents to grow without putting added stressors on them were the biggest needs in combating adolescent mental health. Additional needs providers mentioned included social media limits and education for parents about mental health problems.

Summary

Interviewing participants to assess the mental health needs of adolescents in rural ND from the perspective of adolescents, parents, educators, and healthcare providers revealed several areas of concern related to unmet mental health needs. In addition to discussing unmet mental health needs, participants provided information on what they felt adolescents need to maintain adequate mental health.

Table 2

Adolescent Mental Health Needs

Theme	Exemplars
Participants (N=10)	
Unmet mental health needs	• Confidential Services • Adolescent's lack of understanding/denial • Lack of timely access to care • Shortage of mental health professionals • Lack of routine discussions on mental health with PCPs • Lack of standard curriculum/mental health teachings in schools • Time
Facilitators to maintaining mental health	• Strong support of family/friends • Healthy diet • Adequate sleep • Limit social media • Avoid video games • Physical activity • Mental health professionals, including school counselors, social workers, and primary care providers

Objective Two

The second objective was to assess barriers to discussing and accessing mental healthcare from the perspective of adolescents, parents, teachers, and healthcare providers. The results of barriers identified in each target group is described in the following sections.

Adolescents

To evaluate barriers to accessing care for mental health from an adolescent's perspective, the adolescent participants in this project were asked specifically about barriers that would prevent them from seeking help. The adolescents hit on several topics during this discussion with stigma due to judgement emerging as the most common response. In addition to judgement, adolescents also mentioned discomfort, feeling bad, lack of access to help, denial, financial resources, social status, and embarrassment. Their responses are illustrated below.

> Just being uncomfortable. Like feeling bad about what you're feeling. You don't want to reach out to people because you don't want them to judge you.
>
> - Adolescent participant

> Probably just judgement, like you need help and you're unstable and stuff like that.
>
> - Adolescent participant

> Like if you're in denial, or the embarrassment or maybe even something financial. I think it's like some sort of social status like you don't want to appear weak.
>
> - Adolescent participant

Parents

Parent participants were also asked about barriers to discussing mental health and accessing care. Parent participants expressed concern over privacy when dealing with mental health issues to protect their adolescent children. Parents also identified barriers as embarrassment for adolescents when seeking care and adolescents not having a full understanding of the potential implications of untreated mental health problems.

> Privacy is a big issue; my daughter does not like it to be discussed.
>
> - Parent Participant

> I think at times adolescents probably brush things off and don't understand the full aspect of depression and anxiety.
>
> - Parent participant

> I think for adolescents it's an embarrassment because it is not widely talked about.
>
> - Parent participant

Educators

Educators were also asked about barriers to discussing mental health with adolescent students. The participants identified some additional issues that create barriers to discussing mental health including families, rapport with adolescents, privacy, and time. One of the participants discussed frustration over knowing that a student may be struggling but not having adequate time to address issues with the student, stating that there are likely many opportunities missed because school staff simply do not have time. Another participant explained that families

can be a barrier because they are protective and want to deal with mental health issues within the family and maintain privacy. Educators also discussed the possibility that it may be difficult for some educators to breach the issue because of the difficult nature that can accompany mental health problems. In contrast, one educator stated that creating a safe environment and establishing a rapport with adolescent students can facilitate discussions about mental health. They added that sometimes adolescents are hesitant to tell their parents they are having a problem and want the school to talk to their parents.

Healthcare Providers

Healthcare providers in rural settings expressed concern over the frequency with which they are confronted by mental health issues in adolescents. Despite the increased number of adolescents who are experiencing mental health problems, healthcare providers state they are still met with barriers to discussing mental health. Barriers identified included stigma, denial, parents, and adolescents. One provider felt that stigma about mental health continues to be a common barrier and expressed a need for more awareness about mental health to drop the stigma associated with mental health.

Another provider mentioned parents and adolescents may serve as potential barrier to discussing mental health or accessing care. With parents, the healthcare provider explained that parents may have a hard time believing mental health can cause the somatic symptoms like stomachache, headache, or sleep disturbances. According to the healthcare provider, parents want to believe there is a physical ailment that would explain these symptoms and will frequently deny mental health as a problem. The healthcare provider also explained that adolescents may also be in denial about mental health, which may serve as a barrier to seeking care.

> I still feel like there is a stigma around mental health. I think adolescents feel that there is something wrong with them if they have anxiety or depression.
>
> - Healthcare provider participant

Table 3

Barriers to Discussing and Accessing Mental Healthcare among Adolescents

Theme	Exemplars
Participants (N=10)	
Barriers	• Stigma • Denial • Privacy • Financial resources • Parental knowledge and awareness • Adolescent's lack of understanding • Lack of access • Lack of standard curriculum/mental health teachings in schools • Shortage of mental health professionals • Time

Summary

Objective two was to evaluate barriers to discussing mental health and accessing mental healthcare from the perspective of adolescents, teachers, parents, and healthcare providers. When questioned during the interviews, many of the common barriers were mentioned including stigma, embarrassment, financial resources, judgement from others, and denial. In addition to these common barriers, educators and providers also mentioned parents and adolescents as potential barriers. Establishing rapport and having good provider/adolescent/parent relationships is instrumental to breaking through some of these barriers. Educators also stated having rapport with adolescents and providing a safe environment were beneficial for reducing barriers. Additionally, educators alluded to adolescents having trouble talking to parents and stated there was often relief on the part of the parents when educators were able to bridge that gap.

Objective Three

The third objective for this project was to provide information to parents and adolescents on resources available for mental health disorders. Objective three was addressed at the end of each interview with the adolescent and parent participants. Handouts with information, including contact information on locally available resources, were offered to each participant. Adolescent and parent participants were also offered a handout from the SAMHSA that included tips for starting a conversation about mental health problems. Of the six participants, five (83.3%) participants accepted the handouts and indicated they would keep them for reference or share them with someone who may be experiencing problems.

Objective Four

The fourth objective was to disseminate results of interviews to school administrators and healthcare providers and provide two evidence-based recommendations to each in order to better meet adolescent mental health needs. Dissemination of the results occurred March 15, 2022, via PowerPoint presentation that lasted approximately 20 minutes with an additional 15 minutes of discussion following the presentation. Those in attendance included the school superintendent, secondary principal, school counselor, and NP from the rural health clinic. The meeting was held via Zoom in the evening, which allowed time for questions and answers after the presentation was completed.

School Recommendations

Recommendations were made based off evidence from the literature review and needs identified during the interviews. During interviews with school educators, conversations regarding mental health were often reported as reactive rather than proactive. Therefore, a recommendation was made for a universal approach to address mental health issues with the

student body as a whole, such as the Resilient Families Program (RFP). This program was recommended to start with the school and be expanded to include parents and the community, which may help to increase awareness of mental health problems.

During the project, supportive relationships were noted by adolescents as a facilitator for maintaining mental health; however, friends were cited as a less likely source to talk about mental health issues. Therefore, another recommendation made to school administrators was a mentor program. While the school has a universal program called Sources of Strength for elementary grades that focuses on peer networking and leadership, they do not have a universal program in the high school. School administrators expressed interest in expanding this program at the high school level.

Clinic Recommendations

Time, concerns for confidentiality, and lack of timely access were all noted as barriers for adolescents to seek mental healthcare. Therefore, a recommendation was made to implement youth-friendly services to the local clinic. One intervention that was presented as a potential option for youth friendly services included adjusting clinic times to accommodate adolescents such after school hours, evening hours, or weekends. Additional interventions may include installing a cell phone charging station, hanging artwork from local teens in the lobby, and having magazines that interest teens in the lobby. The healthcare provider did express that she intended to bring the recommendations to clinic managers.

Use of telehealth was the second recommendation made to the clinic. Potential benefits of this intervention included cognitive behavioral therapy, medication management, assessment, consultation, and reduction in travel to and from appointments. While telehealth was not

currently being implemented in the clinic, feedback was received that there was a desire to implement this service.

Table 4

School and Clinic Recommendations

	Recommendations
School	1. Develop a universal program for a proactive approach to mental health issues and to increase awareness. 2. Expand a mentorship program to high school students.
Clinic	1. Implement youth-friendly services into the clinic setting. 2. Offer telehealth services to reduce wait times and expand access to care.

CHAPTER 5. DISCUSSION AND RECOMMENDATIONS

Summary

The purpose of this community needs assessment was to understand the mental health needs of the adolescents in rural North Dakota and increase awareness of depression and local resources. In order to determine the mental health needs of adolescents in rural ND, 10 participants in 4 different categories were interviewed with semi-structured interviews that took place in a virtual setting per volunteers' preference. Participants included adolescents (*n*=3), parents *(n*=3), teachers (*n*=2), and healthcare providers (*n*=2).

Adolescents

Two of the three adolescents that were interviewed identified mental health as a top health priority. Adolescents identified healthy behaviors, such as physical activity and appropriate nutrition, as well as screen time limitations, as important needs to maintain good mental health. Additionally, adolescents identified having a support network or someone to talk to as a significant mental health need. All the adolescent participants (*n*=3) indicated that they have had conversations about mental health with family, friends, and/or healthcare providers; however, the depth of the information varied greatly between adolescent experiences. These findings are similar to those found in the literature, as Mizzi et al. (2019) found a wide variety of support systems are often used to discuss mental health.

One adolescent noted talking with parents may be more difficult, which is also consistent with findings. Parents have reported feeling unsure of which strategies are helpful when discussing mental health with adolescents and often feel uncomfortable (Mizzi et al., 2019). Handouts provided to adolescents and parents following their interviews can help with these conversations, as they provide tips for having conversations about mental health and listed

available local resources including contact information for those resources. Overall, strategies that appear to be most helpful included practical assistance and personal interactions that promote positive thoughts and feelings followed by obtaining appropriate treatment (Mizzi et. al., 2019).

Adolescents also described barriers to discussing mental health or seeking help for mental health issues which included judgement, fear of disappointing parents, financial resources, and lack of access. These barriers identified by the adolescents in this project are also in line with current research. According to Berryhill et al. (2021), adolescents in rural areas are less likely to seek help due to accessibility, availability, and acceptability of mental health services. Compared to urban areas, there is a smaller proportion of mental healthcare providers in rural settings with over 90 million people living in a mental health provider shortage area in the United States.

Parents

Parents identified mental health needs of adolescents as understanding the implications of untreated mental health problems, overcoming stigma and embarrassment of mental health problems, and privacy. Parents also expressed some lack in confidence with mental healthcare providers. According to Hurley et al. (2019), a significant barrier among parents in seeking mental healthcare for their adolescents is a lack of trust with mental healthcare providers. Mental health provider shortages have contributed to delays in initiation of services, which could result in intensification of symptoms (Berryhill et al., 2021). Similarly, frustration over the amount of time to receive care was identified by one of the parent participants in this project.

Parents reported having conversations about mental health with adolescents in reaction to an event or situation and did not utilize any guidelines. This is also congruent with current literature that identifies there is little empirical evidence to help parents decide what strategy is

most likely to be helpful (Mizzi et al., 2019). Following the interviews, parent participants were given a handout from SAMHSA that can be used to initiate a conversation about mental health problems, which may be helpful for adolescents seeking treatment. Research shown that participation in treatment is more likely when families are involved in seeking intervention (Mizzi et al., 2019).

Educators

Educators who participated in interviews expressed concerns over lack of time, lack of timely referral resources, privacy, and inadequate availability of mental health providers as barriers for adolescents with mental health concerns. Additional school counselors, social workers, and mental health professionals were identified as needs in the school system to adequately address the mental health needs of adolescents. Additional professionals within the school may be helpful in reducing stigma associated with seeking care, as schools provide a familiar atmosphere and may be viewed as a less threatening environment than a community-based office, such as a clinic (Berryhill et al., 2021).

Despite schools being a potential site for initiating treatment for mental health problems, rural schools face significant obstacles. School budgets may not be sufficient to hire more counselors, social workers, or mental health professionals, and rural counties often have few or no mental health professionals available (Berryhill et al., 2021). For schools to offer programs that address mental health, they must first consider the time needed for training, the cost of training, and the feasibility of initiating a program, which may be difficult for rural schools (Orlando et al., 2017).

Healthcare Providers

The healthcare provider participants reported they are seeing adolescents with mental health problems more frequently. Stressors applied by school, sports, parents, and peers, as well as social media, were identified as contributing factors to mental health concerns among adolescents. Yaşar and Kavak (2021) found that excessive use of social media is associated with depression and loneliness among adolescents. They also found there is a correlation between smartphone addiction and loneliness levels of adolescents. While pressure to succeed in sports may contribute to mental health issues among some adolescents, participation in sports can also contribute to overall psychosocial development in several ways including improved self-esteem, self-perception, and self-confidence, as well as increased motivation and enhanced social competence (Patel & Brown, 2021). Risk for depression with sports is associated more with injuries that may require surgery and lack of preinjury competence on return to sport.

Healthcare providers who participated also included parent knowledge as a possible barrier to accessing care for mental health. Parents' knowledge of mental health can have a direct effect on their willingness to seek help for their adolescent children (Hurley et al., 2019). Healthcare providers reported a lack of parental understanding regarding the manifestation of mental health issues as somatic symptoms, which may require further education among parents, as depression can manifest differently with somatic complaints or subtle and difficult to recognize signs.

Recommendation for School

Schools are a natural place to begin when considering the implementation of programs to address adolescent mental health problems, such as depression and anxiety. Research has shown that supportive relationships along with social connections are an important factor in promoting

adolescent health and development (Austin et al., 2020). Likewise, social isolation during adolescence can have a negative impact well into their adult life. One possible solution that rural schools may be able to implement is a mentoring program with a goal of promoting connectedness. Feelings of connectedness and belonging are important throughout life, but this is especially true in adolescence, as cognitive development positions adolescents to be particularly aware of their social environment (Austin et al., 2020).

Some factors to consider when implementing a mentorship program are age, ethnicity, and gender. There are mixed results when considering age with some reports showing less satisfaction for mentees with older mentors (Kern et al., 2019). However, proponents of this argue that age does not matter, noting that community mentor programs that have matched mentors aged 55+ with youth in grade school yielded positive results. Results related to ethnicity indicate that mentor-mentee relationships had higher satisfaction ratings in same-race versus cross-race dyads. Specifically, mentees in same-race dyads were more likely to talk to mentors about things that were bothering them versus those in cross-race dyads. Mentees in same-race dyads also reported that their mentors gave more unconditional support than did mentees in cross-race dyads. Results related to gender were mixed with mentor mentee relationships. When given a chance, mentees will select a same sex mentor; however, research suggests that gender may not be a factor in ratings of relationship quality or outcomes (Kern et al., 2019). The gender of the mentee may be a consideration, as girls are more likely to seek emotional support from a mentor, while boys are more likely to seek activity.

Implementation of mental health programs is difficult for rural schools due to lack of resources, including necessary staff and time. One program that could be implemented is a universal program targeted at the entire student body. Research has shown that school-based

intervention programs aimed at reducing anxiety and depression are effective but may not have lasting effects (Feiss et al., 2019). Universal programs have the benefit of addressing a larger group at once and eliminates the stigma that may come with targeted programs.

One program that could be considered is the Resilient Families Program (RFP). The RFP intervention involves five components, including a teacher-led student curriculum, a brief parent education evening, extended parent education sessions, school-wide distribution of parenting strategies handbook, and development of a community support system for parents (Singh et al., 2019). The community support system generally includes connecting parents with each other through encouragement and fostering school-to-parent and inter-parent support networks with parent meetings and activities at the school. The parent education evening is designed to be a fun social event for the parents to work together and learn ways to promote healthy adolescent development. The teacher-led curriculum for students is integrated into the school curriculum over ten weeks and requires students to reflect on solutions to common social problems faced by adolescents and to complete homework on relationship problem-solving, emotional awareness, and conflict resolution. There are other curriculums to be considered that address social and emotional learning, and schools should consider a program that is within the capabilities of the school. Once a program is initiated, the program could be enhanced or expanded to reach a greater number of people.

Recommendation for Healthcare Providers

With more and more focus being placed on primary care clinics to provide mental health screening and initiation of treatment, it is important for these clinics to adapt to the changing landscape and mold their services to provide quality care to adolescents that is equitable, accessible, acceptable, appropriate, and effective (Brauer, 2022). One strategy for providing

youth-friendly services includes making services available to youth, which may include after school, evening, or even weekend hours. Additional examples of youth-friendly services include providing access to youth on short notice and providing services that youth can access for free or at low cost, especially for services that youth want to keep confidential. Additionally, healthcare providers can create a youth-friendly environment by including magazines for adolescents, adding cell phone charging stations, and displaying artwork by local teens. Another example is to develop and post a non-discrimination policy so youth of all identities know they are welcome.

In rural communities, clinics are often staffed with NPs as the primary care provider. A useful tool that can be implemented in rural settings is telehealth. Telehealth embraces a wide variety of digital technologies to deliver interventions via computers and other web-based platforms (Grist et al., 2019). Advantages of telehealth include greater reach to geographically isolated populations, flexible access, convenience, greater privacy, enhanced treatment, and low cost. This technology may also be particularly appealing to adolescents who are typically early adopters and users of new technologies. In the U.S., 93% of adolescents between 12 and 17 years old have access to a desktop or laptop computer and 74% have access to the internet. Additionally, telehealth interventions for mental health are developing quickly and have shown encouraging results in the treatment of depression and anxiety (Grist et al., 2019). Current evidence does not support using telehealth as a replacement for face-to-face cognitive behavioral therapy; however, there is still an advantage to use of telehealth when access to face-to-face therapy is limited or delayed.

Recommendations for Parents and Adolescents

Parents who participated in interviews described experiences discussing mental health issues with their adolescent children that were reactive after an adverse event had occurred in the community, school, or at home. Conversations were limited to expressing support or trying to explain events that occurred. Adolescents who participated in interviews also described having conversations about mental health issues that were mostly limited to support from family and friends offered after an adverse event. For both parents and adolescents, increasing awareness and understanding about mental health issues could be beneficial. Research has shown that high levels of parental emotion have resulted in poorer mental health outcomes (Mizzi et al., 2019). In contrast, high levels of parental warmth relate to better mental health outcomes. Adolescents themselves have reported that parents' responses to their mental health issues have affected their behavior, which can also affect outcomes. Psychoeducation programs may be helpful to families, as they assist in developing insight and acceptance, improving communication and problem-solving skills, learning more about symptoms, recovery, medications, relapse prevention, and identifying early warning signs to help cope better with mental health issues (Mizzi et al., 2019).

Recommendations for Future Projects

The purpose of this community needs assessment was to identify the mental health needs of adolescents in a rural ND community. This was accomplished through interviews with target groups ascertaining their understanding of adolescent mental health needs and barriers. For future projects, it may be helpful to have interviews conducted by a third party or neutral observer who is not an acquaintance of the participants. Having a neutral observer conduct interviews may help protect privacy for participants and may lead to more open and honest

answers, which could influence the generalization of the results. Additionally, while conducting interviews use of a transcription software or utilizing Zoom with transcription capabilities would be very helpful and save time transcribing interviews.

The focus of this research was a rural community in northcentral ND and included one school district. Future research may be enhanced by including more than one school district so that comparisons can be made, which may also lead to more generalizable findings. Also future researchers may consider contacting SAMHSA to alter the handout given to participants to be more focused on mental health rather than substance use disorders. Future projects should also consider ranking barriers cited by participants, which may help with allocation of resources. Additionally, future projects should be implemented over a longer period of time to allow for evaluation of recommendations including whether or not recommendations were implemented and if they helped reduce barriers. More research is coming out about the effects of the Covid-19 pandemic on mental health. Future projects should consider how Covid-19 has impacted adolescent mental health.

Limitations

There are limitations associated with the implementation of this project. First, the goal of this project was to conduct 20 semi-structured interviews with 5 individuals from 4 different target groups. Recruitment for the interviews was met with little interest, and the goal of 20 individuals was not met. Increased interest and participation in the project may have been generated by offering larger incentives. A total of ten individuals were interviewed, which makes broad generalizability of the results difficult.

Another limitation may be related to the demographics of the participants. For example, all but one of the individuals interviewed were female, and a more diverse gender group may

produce different results. Additionally, the project took place in a rural setting that consists of a population in which the majority identify as Caucasian and politically conservative. Therefore, the results may not be representative of other rural areas that consist of individuals with varied ethnicities, cultures, and political beliefs. Concerns for privacy are also a potential problem when conducting research in small rural communities, which may have an impact on recruitment.

Participants for this project were self-selected to be in the group. It is possible that people who have experience with mental health issues are more likely to volunteer for this type of project. This could have an influence on the generalizability of the results. A person who does not have a personal or family history of mental health issues may have a different awareness of available resources or how often mental health is actually discussed.

Another limitation is the timeframe for this project. Due to the short implementation period, the co-investigator of the project did not allow for evaluation of recommendations beyond what school and clinic officials indicated they would be willing or interested in implementing. A longer timeframe would have allowed for thorough evaluation of the recommendations and would have also helped direct future projects.

Application to DNP Role

This project has a direct impact on the role of NPs in rural primary care settings. According to Berryhill et al (2021), 90 million people in the United States live in a mental professional shortage area. NPs often fill the gap working in rural communities and must be equipped with the knowledge and skills to address adolescent mental health issues. NPs may often work in collaboration with families, adolescents, and schools to improve awareness and outcomes.

This specific project impacts nursing leadership and contributes to the success of the DNP role by further investigating the mental health needs of adolescents in rural ND. According to Espinet et al. (2019), PCPs continue to report a lack of confidence to handle adolescent mental health concerns. Of 847 rural PCPs interviewed 89% indicated a lack of confidence and skills and desired to have more training to provide mental healthcare to children and adolescents. This project has the potential to impact adolescent mental health by educating healthcare providers about resources and services that can be implemented to enhance mental well-being of adolescents in rural communities. The importance of educating health care providers on how to best meet the mental health needs of adolescents in their area has the potential to create a well-rounded community and potentially reduce barriers and stigmas related to adolescent mental health. NPs working in rural communities must avoid biases and provide evidence-based options to adolescents who experience mental health issues.

Dissemination

This disquisition project was initially disseminated as a PowerPoint presentation to the school administration and clinic personnel in a rural community in north central North Dakota on March 15, 2022. The presentation was completed at the end of the day after classes were dismissed, which allowed time for questions following the presentation. The results will also be presented in a poster presentation at the College of Health Professions in Fargo, ND in the spring of 2022. A three-minute video presentation will also be completed, and the final dissertation will be available on the NDSU Dissertations & Thesis Database. Upon final dissemination of this disquisition project, submission to a suitable journal with specific interest in adolescent mental health will be sought. A copy of the PowerPoint used for the dissemination can be found in Appendix M.

Conclusion

Results of this needs assessment reinforce the concern about the growing trend of adolescent mental health problems, including depression. Factors contributing to the rising incidence may include pressure to succeed, social media, the Covid-19 pandemic, and stigma surrounding mental health issues. If mental health issues are not recognized and treated early, this can have devastating consequences for adolescents including academic failure, violence, self-mutilation, risky sexual behavior, substance abuse, and suicide (Lu, 2019). Therefore, adolescents, parents, educators, and healthcare providers can collaborate to reduce barriers to discussing mental health concerns and improve access to mental health care. Enhancing awareness of mental health problems through needs assessments, clinic interventions, and school-led programs can reduce stigma and lead to more timely recognition and treatment of mental illnesses, which has the potential to improve overall mental well-being and quality of life among adolescents.

REFERENCES

American Psychiatric Association. (2015). Diagnostic and statistical manual of mental disorders: Dsm-5.

Arrojo, M. (2021). Health care improvement depression screening in the pediatric emergency department and linking patients to early diagnosis and early intervention. *Pediatric Nursing*, 47(4), 175–180.

Austin, L. J., Parnes, M. F., Jarjoura, G. R., Keller, T. E., Herrera, C., Tanyu, M., & Schwartz, S. E. O. (2020). Connecting youth: The role of mentoring approach. *Journal of Youth & Adolescence*, 49(12), 2409–2428. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-020-01320-z

Best, O., & Ban, S. (2021). Adolescence: Physical changes and neurological development. *British Journal of Nursing*, 30(5), 272–275. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.12968/bjon.2021.30.5.272

Bevan Jones, R., Thapar, A., Stone, Z., Thapar, A., Jones, I., Smith, D., & Simpson, S. (2018). Psychoeducational interventions in adolescent depression: A systematic review. *Patient Education and Counseling*, *101*(5), 804–816. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1016/j.pec.2017.10.015

Brauer, R. (2022, January 26). Youth-friendly materials. Adolescent health initiative. Retrieved March 8, 2022, from https://umhs-adolescenthealth.org/improving-care/health-center-materials/

Bronfenbrenner, U. “Mental health and well-being ecological model: Leadership education in maternal & child public health.” *Leadership Education in Maternal & Child Public Health*, 22 July 2021, https://mch.umn.edu/resources/mhecomodel/.

Centers for Disease Control and Prevention. (2018, August 27). School health index: A self-assessment and planning guide. *Centers for Disease Control and Prevention*. Retrieved March 13, 2022, from https://www.cdc.gov/healthyschools/professional_development/e-learning/shi.html

Coley, R. L., O'Brien, M., & Spielvogel, B. (2019). Secular trends in adolescent depressive symptoms: Growing disparities between advantaged and disadvantaged schools. *Journal of Youth & Adolescence, 48*(11), 2087-2098. http://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-019-01084-1

Dardas, L. A., Silva, S. G., van de Water, B., Vance, A., Smoski, M. J., Noonan, D., & Simmons, L. A. (2019). Psychosocial correlates of Jordanian adolescents' help-seeking intentions for depression: Findings from a nationally representative school survey. *Journal of School Nursing, 35*(2), 117–127. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1177/1059840517731493

Davis, J. P., Merrin, G. J., Ingram, K. M., Espelage, D. L., Valido, A., & El Sheikh, A. J. (2019). Examining pathways between bully victimization, depression, & school belonging among early adolescents. *Journal of Child & Family Studies*, 28(9), 2365–2378. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10826-019-01340-9

Depression Screening and Treatment. (2019). *Patient Safety Monitor Journal*, 20(4), 1-5.

Espinet, S. D., Gotovac, S., Knight, S., Wissow, L., Zwarenstein, M., Lingard, L., & Steele, M. (2019). Primary care practitioner training in child and adolescent psychiatry (PTCAP): A cluster-randomized trial. *The Canadian Journal of Psychiatry*, 65(5), 319–329. https://doi.org/10.1177/0706743719890161

Feiss, R., Dolinger, S. B., Merritt, M., Reiche, E., Martin, K., Yanes, J. A., Thomas, C. M., & Pangelinan, M. (2019). A systematic review and meta-analysis of school-based stress, anxiety, and depression prevention programs for adolescents. *Journal of Youth & Adolescence*, 48(9), 1668–1685. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-019-01085-0

Gårdvik, K. S., Rygg, M., Torgersen, T., Lydersen, S., & Indredavik, M. S. (2021). Psychiatric morbidity, somatic comorbidity and substance use in an adolescent psychiatric population at 3-year follow-up. *European Child & Adolescent Psychiatry*, 30(7), 1095–1112. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s00787-020-01602-8

Gee, B., Reynolds, S., Carroll, B., Orchard, F., Clarke, T., Martin, D., Wilson, J., & Pass, L. (2020). Practitioner review: Effectiveness of indicated school-based interventions for adolescent depression and anxiety – a meta-analytic review. *Journal of Child Psychology & Psychiatry*, 61(7), 739–756. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1111/jcpp.13209

Georgakakou, K. N., & Williams, J. M. (2017). Children and young people's conceptualizations of depression: A systematic review and narrative meta-synthesis. *Child: Care, Health & Development*, 43(2), 161–181. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1111/cch.12439

Golden, S. D., & Earp, J. A. (2012). Social ecological approaches to individuals and their contexts. *Health Education & Behavior*, 39(3), 364–372. https://doi.org/10.1177/1090198111418634

Golden, S. D., McLeroy, K. R., Green, L. W., Earp, J. A., & Lieberman, L. D. (2015). Upending the social ecological model to guide health promotion efforts toward policy and

environmental change. *Health Education & Behavior*, 42(1_suppl). https://doi.org/10.1177/1090198115575098

Grist, R., Stallard, P., Croker, A., & Denne, M. (2019). Technology delivered interventions for depression and anxiety in children and adolescents: A systematic review and meta-analysis. *Clinical Child & Family Psychology Review*, 22(2), 147–171. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10567-018-0271-8

Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020). Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. *Psychiatry research*, 291, 113264. https://doi-g.ezproxy.lib.ndsu.nodak.edu/10.1016/j.psychres.2020.113264

Guidelines for adolescent depression in primary care. The Reach Institute. (2021, September 10). Retrieved October 28, 2021, from https://thereachinstitute.org/guidelines-for-adolescent-depression-primary-care/

Hill, L. M., Maman, S., Kilonzo, M. N., & Kajula, L. J. (2017). Anxiety and depression strongly associated with sexual risk behaviors among networks of young men in Dar es Salaam, Tanzania. *AIDS Care*, 29(2), 252–258. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1080/09540121.2016.1210075

Hurley, D., Swann, C., Allen, M. S., Ferguson, H. L., & Vella, S. A. (2020). A systematic review of parent and caregiver mental health literacy. *Community Mental Health Journal*, 56(1), 2–21. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10597-019-00454-0

Ioffe, M., Pittman, L. D., Kochanova, K., & Pabis, J. M. (2020). Parent-adolescent communication influences on anxious and depressive symptoms in early adolescence.

Journal of Youth & Adolescence, 49(8), 1716–1730. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-020-01259-1

Jaakkola, J., Rantanen, A., Luopa, P., Koivisto, A., & Joronen, K. (2019). Self-rated health symptoms and health behaviour of upper secondary vocational students by field of study. *Scandinavian Journal of Caring Sciences*, 33(1), 144–155. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1111/scs.12613

Jolstedt, M., Vigerland, S., Mataix-Cols, D., Ljótsson, B., Wahlund, T., Nord, M., Högström, J., Öst, L.-G., & Serlachius, E. (2021). Long-term outcomes of internet-delivered cognitive behaviour therapy for paediatric anxiety disorders: towards a stepped care model of health care delivery. *European Child & Adolescent Psychiatry*, 30(11), 1723–1732. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s00787-020-01645-x

Kern, L., Harrison, J. R., Custer, B. E., & Mehta, P. D. (2019). Factors that enhance the quality of relationships between mentors and mentees during check & connect. *Behavioral Disorders*, 44(3), 148–161. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1177/0198742918779791

Krendl, A. C., & Freeman, J. B. (2019). Are mental illnesses stigmatized for the same reasons? Identifying the stigma-related beliefs underlying common mental illnesses. *Journal of Mental Health*, 28(3), 267–275. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1080/09638237.2017.1385734

Kuperminc, G. P., Chan, W. Y., Hale, K. E., Joseph, H. L., & Delbasso, C. A. (2020). The role of school-based group mentoring in promoting resilience among vulnerable high school students. *American Journal of Community Psychology*, 65(1/2), 136–148. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1002/ajcp.12347

Lerner, R. M., & Lerner, J. V. (2013, December). The positive development of youth: Comprehensive findings from the 4-H study of positive youth development. https://4-h.org/wp-content/uploads/2016/02/4-H-Study-of-Positive-Youth-Development-Full-Report.pdf. Retrieved March 13, 2022, from https://4-h.org/wp-content/uploads/2016/02/4-H-Study-of-Positive-Youth-Development-Full-Report.pdf

Lu, W. (2019). Adolescent depression: National trends, risk factors, and healthcare disparities. *American Journal of Health Behavior*, 43(1), 181-194. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.5993/AJHB.43.1.15

Mahoney, N., Gladstone, T., DeFrino, D., Stinson, A., Nidetz, J., Canel, J., Ching, E., Berry, A., Cantorna, J., Fogel, J., Eder, M., Bolotin, M., & Van Voorhees, B. W. (2017). Prevention of adolescent depression in primary care: Barriers and relational work solutions. *Californian Journal of Health Promotion,* 15(2), 1–12. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.32398/cjhp.v15i2.1895

Maslowsky, J., Owotomo, O., Huntley, E. D., & Keating, D. (2019). Adolescent risk behavior: Differentiating reasoned and reactive risk-taking. *Journal of Youth & Adolescence*, 48(2), 243–255. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-018-0978-3

Midgley, N., Parkinson, S., Holmes, J., Stapley, E., Eatough, V., & Target, M. (2017). "Did I bring it on myself?" An exploratory study of the beliefs that adolescents referred to mental health services have about the causes of their depression. *European Child & Adolescent Psychiatry*, 26(1), 25-34. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s00787-016-0868-8

Mizzi, A., Honey, A., Scanlan, J. N., & Hancock, N. (2020). Parent strategies to support young people experiencing mental health problems in Australia: What is most helpful? *Health &*

Social Care in the Community, 28(6), 2299–2311. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1111/hsc.13051

Mueller, J., Callanan, M. M., & Greenwood, K. (2016). Communications to children about mental illness and their role in stigma development: An integrative review. *Journal of Mental Health*, 25(1), 62–70. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.3109/09638237.2015.1021899

Mulugeta, B., Girma, M., Kejela, G., Meskel, F. G., Andarge, E., & Zerihun, E. (2019). Assessment of youth-friendly service quality and associated factors at public health facilities in southern Ethiopia: A facility-based cross-sectional study. *BioMed Research International*, 1–11. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1155/2019/9696278

Nelson E, Barnard M, & Cain S. (2006). Feasibility of telemedicine intervention for childhood depression. *Counselling & Psychotherapy Research*, 6(3), 191–195. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1080/14733140600862303

Patel, D. R., & Brown, K. A. (2017). Sports, athletes, and suicide. *International Journal of Child Health & Human Development*, 10(4), 319–325.

Reardon, T., Harvey, K., Baranowska, M., O'Brien, D., Smith, L., & Creswell, C. (2017). What do parents perceive are the barriers and facilitators to accessing psychological treatment for mental health problems in children and adolescents? A systematic review of qualitative and quantitative studies. *European Child & Adolescent Psychiatry*, 26(6), 623–647. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s00787-016-0930-6

Sekhar, D.L., Pattison, K.L., Confair, A., Molinari, A., Schaefer, E.W., Waxmonsky, J.G., Walker-Harding, L.R., Rosen, P., & Kraschnewski, J.L. (2019). Effectieness of universal

school-based screening vs targeted screening for major depressive disorder among adolescents: A trial protocol for the screening in high schools to identify, evaluate, and lower depression (SHIELD) randomized clinical trial. *JAMA Network Open*, 2(11), doi: 10.1001/jamanetworkopen.2019.14427.

Singh, N., Minaie, M. G., Skvarc, D. R., & Toumbourou, J. W. (2019). Impact of a secondary school depression prevention curriculum on adolescent social-emotional skills: Evaluation of the resilient families program. *Journal of Youth & Adolescence*, 48(6), 1100–1115. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-019-00992-6

Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, 293, 113429. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1016/j.psychres.2020.113429

Starter Guide Youth-Friendly Services. (2016). https://umhs-adolescenthealth.org/wp-content/uploads/2017/08/youth-friendly-services-starter-guide.pdf.

Swartz, K., Musci, R. J., Beaudry, M. B., Heley, K., Miller, L., Alfes, C., Townsend, L., Thornicroft, G., & Wilcox, H. C. (2017). School-based curriculum to improve depression literacy among US secondary school students: A randomized effectiveness trial. *American Journal of Public Health*, 107(12), 1970–1976. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.2105/AJPH.2017.304088

Thrash, C., & Warner, T. (2016). The geography of normative climates: An application to adolescent substance use. *Journal of Youth & Adolescence*, 45(8), 1587–1603. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s10964-016-0444-z

Trinity Hospital and Trinity Hospital - St. Joseph's Minot, North Dakota. (2019, June 28). Community health needs assessment report. Retrieved from https://www.trinityhealth.org/wp-content/uploads/2019/06/2019-CHNA-Minot-Report.pdf

U.S. Department of Health and Human Services. (n.d.). Depression. National Institute of Mental Health. Retrieved July 19, 2021, from https://www.nimh.nih.gov/health/publications/depression

Wannachaiyakul, S., Thapinta, D., Sethabouppha, H., Thungjaroenkul, P., & Likhitsathian, S. (2017). Randomized controlled trial of computerized cognitive behavioral therapy program for adolescent offenders with depression. Pacific Rim International Journal of Nursing Research, 21(1), 32–43.

Werner-Seidler, A., Perry, Y., Calear, A. L., Newby, J. M., & Christensen, H. (2017). School-based depression and anxiety prevention programs for young people: A systematic review and meta-analysis. *Clinical Psychology Review*, 51, 30-47. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1016/j.cpr.2016.10.005

Wold, B., & Mittelmark, M. B. (2018). Health-promotion research over three decades: The social-ecological model and challenges in implementation of interventions. *Scandinavian Journal of Public Health*, 46(20_suppl), 20–26. https://doi.org/10.1177/1403494817743893

World Health Organization. (n.d.). Depression. World Health Organization. Retrieved July 19, 2021, from https://www.who.int/news-room/fact-sheets/detail/depression

Xu, W., Ying, F., Luo, Y., Zhang, X.-Y., & Li, Z. (2021). Cross-sectional exploration of brain functional connectivity in the triadic development model of adolescents. *Brain Imaging*

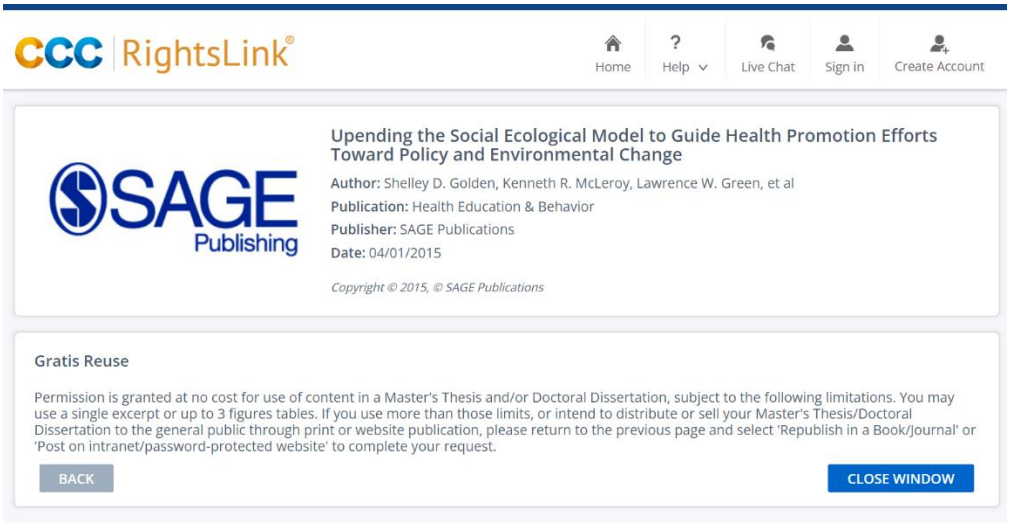
& Behavior, 15(4), 1855–1867. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s11682-020-00379-3

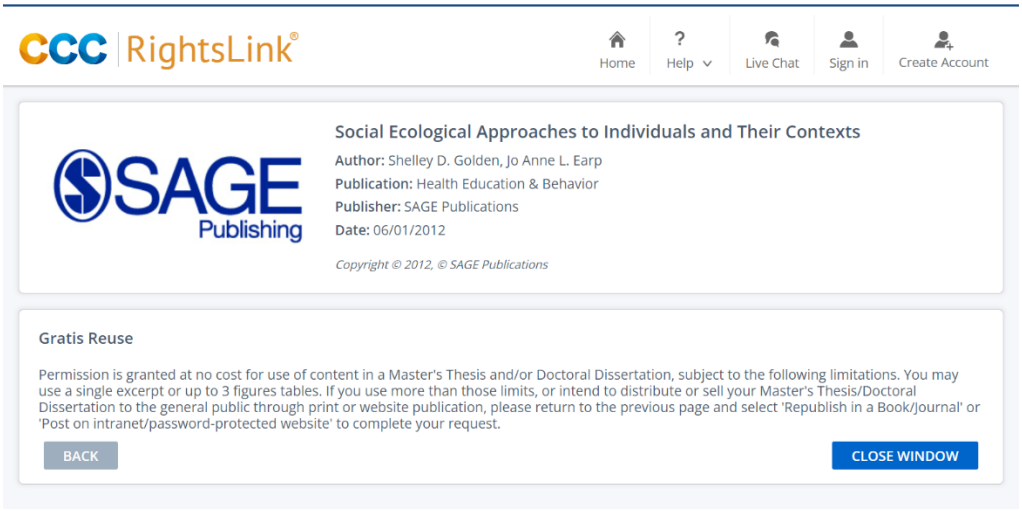
Yang, L., Zhou, X., Zhou, C., Zhang, Y., Pu, J., Liu, L., Gong, X., & Xie, P. (2017). Efficacy and acceptability of cognitive behavioral therapy for depression in children: A systematic review and meta-analysis. Academic Pediatrics, 17(1), 9–16. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1016/j.acap.2016.08.002

Yaşar, C., S., & Kavak, B. F. (2021). The relationship of social media use with depression and loneliness in adolescents: A descriptive study. *Turkiye Klinikleri Journal of Nursing Sciences*, 13(4), 980–986. https://doi.org/10.5336/nurses.2021-82198

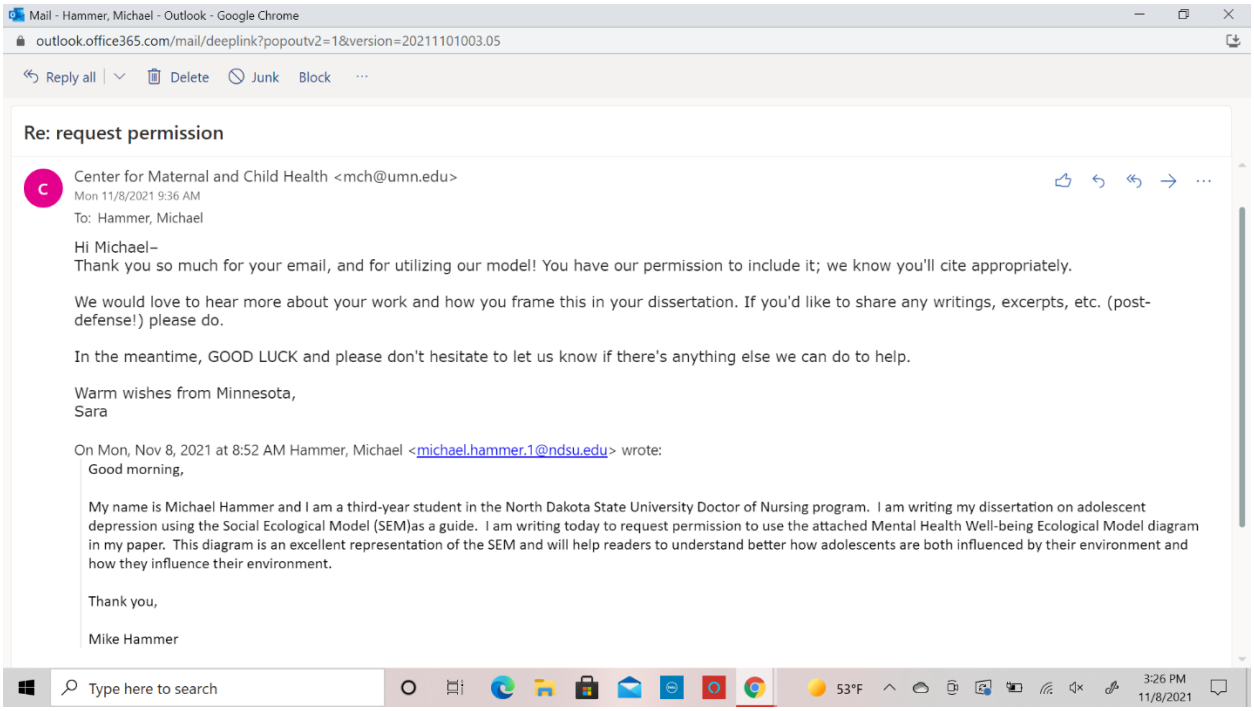
Youth risk behavior survey. North Dakota Department of Public Instruction. (2019). Retrieved October 7, 2021, from https://www.nd.gov/dpi/districtsschools/safety-health/youth-risk-behavior-survey.

APPENDIX A. PERMISSION TO USE SEM THEORETICAL FRAMEWORK





APPENDIX B. APPROVAL FOR USE OF SEM MODEL



APPENDIX C. INTERVIEW QUESTIONS

Adolescents

1. What is your experience talking about health in general?
2. What are important health topics to you?
3. Have your parents ever talked to you about mental health? How old were you and what did they tell you?
4. Has your healthcare provider ever talked to you about mental health? How old were you and what did they tell you?
5. Have your teachers ever talked to you about mental health? How old were you and what did they tell you?
6. Have your friends ever talked to you about mental health? How old were you and what did they tell you?
7. Do you think adolescents in rural ND have trouble with depression?
8. What do you think adolescents need to stay healthy and maintain good mental health?
9. Where can you get help or ask questions if you feel depressed?
10. Are there any adults you feel you can talk to if you feel depressed?
11. Do you have any friends you feel you could talk to about depression?
12. What are some barriers that would prevent you from seeking help for depression?

Educators

1. What is your experience discussing mental health with adolescents?
2. How often do ask adolescents about mental health problems?
3. How do you decide if you need to discuss mental health with an adolescent?
4. What are some barriers to discussing mental health with adolescents?

5. What makes it easier to discuss mental health with adolescents?
6. Are there any guidelines that you follow to discuss mental health? If so, what guidelines do you use?
7. What services are provided for students with mental health problems?
8. What services do you think adolescents would need for mental health?
9. How are mental health and behavioral health addressed with students ie. Targeted intervention or universal programs? What subjects are discussed?

Parents

1. What is your comfort level discussing mental health issues with your children? How often do you discuss mental health with your children?
2. How do you decide when it is appropriate to discuss mental health needs with your children?
3. What barriers are there to discussing mental health needs with your children?
4. Do you follow any guidelines when discussing mental health with your children? If so what guidelines do you follow?
5. Where can you get help or find resources if you feel child has a mental health problem?
6. Has your children's primary care provider ever discussed mental health with your children? If so, how often and at what age did they start discussing mental health with your children?
7. Would you feel comfortable stepping out of an exam room so a healthcare provider could discuss mental health with your children?

Healthcare Provider

1. What is your experience discussing mental health needs with adolescents?
2. How often do ask about depression and mental health care needs with adolescents?
3. How do you decide when and who you need to discuss mental health needs with?

4. What are the barriers to discussing mental health needs with adolescents?
5. What makes it easier to discuss mental health needs with an adolescent?
6. Are there any guidelines you follow for discussing mental health care needs? If so, which guidelines do you follow?
7. What services do you provide for adolescents with depression or mental health care needs?
8. What do you think are the biggest needs for adolescents regarding mental health problems such as depression?

APPENDIX D. PERMISSION TO MODIFY QUESTIONS

Pomonis,Hailey <Hailey.Pomonis@SanfordHealth.org>
Thu 10/28/2021 12:35 PM

To: Hammer, Michael

Hey Mike!

You can absolutely revise my questions and use them.
Let me know if you need anything else.

Good luck with your last year in the program.

Hailey P

From: Hammer, Michael <michael.hammer.1@ndsu.edu>
Sent: Thursday, October 28, 2021 12:38 AM
To: Pomonis,Hailey <Hailey.Pomonis@SanfordHealth.org>
Subject: [EXTERNAL] dissertation questions

Good morning,

My name is Mike Hammer and I am a third-year student in the NDSU DNP program at the Bismarck campus. Allison Peltier is my committee chairperson. My project is a community needs assessment on adolescent depression and I plan to conduct focus group interviews with adolescents, teachers, and parents. In reviewing the questions you used for your project, I believe I can revise them and use them for my project. I would like to have your approval to alter the questions from your project for my focus groups.

Thank you,

APPENDIX E. RECRUITMENT LETTER

NDSU **North Dakota State University**

Department of Nursing

PO Box 6050

Fargo, ND 58108-6050

701.231.7395

Adolescent Mental Health: A Community Assessment

Dear Students, Parents, Teachers, and Healthcare Providers:

My name is Michael Hammer. I am a graduate student in the School of Nursing at North Dakota State University (NDSU), and I am conducting a research project to address the needs of adolescents who experience mental health problems in rural settings.

Because you are a student in grades 9-12, a parent of an adolescent, a teacher in secondary education, or a healthcare provider NP, PA, or MD you are invited to participate in this research project. You will be one of approximately 20 people being interviewed for this study.

You may find it interesting and thought provoking to participate in the interview. If, however, you feel uncomfortable in any way during the interview session, you have the right to decline to answer any question(s), or to end the interview.

It should take about 30minutes to complete the interview. We will ask you about barriers to mental health, and what you feel may be needed to better meet the needs of adolescents who experience mental health problems. The interview will be audio recorded. We will keep private all research records that identify you. When the interview is transcribed, you will be given a pseudonym, and other potentially identifying information will be left out of the transcripts. In any written documents (including publications) regarding the study, only the pseudonym will be used.

Audio files will be stored in a password protected file on a computer that is only accessible to the principal investigator and co-investigators. Electronic copies of the

interview transcripts will be saved and protected in the same fashion. After the data has been analyzed, the audio recordings will be deleted.

If you have any questions about the study, please contact me at 701.537.4035 or Michael.hammer.1@ndus.edu, or contact my advisor Allison Peltier at 701.224.3820 or Allison.peltier@ndsu.edu.

You have rights as a research participant. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program at 701.231.8995, toll-free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108-6050.

Thank you for your taking part in this research. If you wish to receive a copy of the results, please contact Michael Hammer at 701.537.4035 or Michael.hammer.1@ndus.edu.

APPENDIX F. AVAILABLE RESOURCES AND TALKING TIPS

Counseling/Therapy:

The Burckhard Clinic
(701) 852-5876
315 Main Street South
Therapy services

Catholic Family Services
(701) 838-2854
216 S Broadway, Suite 103
Child & Adolescent Psychological Services
(701) 721-0480
1809 South Broadway

Tom Clark, PhD, MFT
(701) 838-2442
2116 4th Ave N.W.
Therapy, Psychological Evaluations

Virginia Dohms, MA LPCC
(701) 240-3200
Mental Health Counselor
*Call for an appointment

Harmony Center
(701) 852-3263
Peer Support group to help focus on Recovery

Heather Klippen, LICSW
(701) 839-3909
24 North Main Street Suite G
Therapy services
(701) 852-8798

Tammy Ness, LICSW
(701) 839-0151
24 North Main Street
Therapy services

Northland Health Center
(701) 852-4600
1600 2nd Ave S.W., Suite 19
Therapy, Medication, Sliding Fee Scale

Posphishil and Associates
(701) 858-0888
1425 21st Ave N.W., Suite C & Suite 2
Therapy

Serenity Health Solutions
(701) 838-7558
2010 4th Ave N.W., Ste. 106
Therapy, Medication, Family Therapy

Trinity Riverside Therapists
(701) 857-5998
1900 8th Ave S.E.
Therapy, Psychological Evaluations, Parenting Classes, Social Skills Groups

Village Family Service Center
(701) 852-3328
20 1st Street S.W., Suite 250
In-home Family Therapy, Counseling, Family Group Decision Making

Dr. L Mark Bell
(701) 852-8798
601 18th Ave S.E.

SUPPORTING A LOVED ONE DEALING WITH MENTAL AND/OR SUBSTANCE USE DISORDERS

STARTING THE CONVERSATION

When a family member is drinking too much, using drugs, or struggling with a mental disorder, your support can be key to getting them the treatment they need. Starting the conversation is the first step to getting help.

How You Can Help

1. **IDENTIFY AN APPROPRIATE TIME AND PLACE.** Consider a private setting with limited distractions, such as at home or on a walk.

2. **EXPRESS CONCERNS AND BE DIRECT.** Ask how they are feeling and describe the reasons for your concern.

3. **ACKNOWLEDGE THEIR FEELINGS AND LISTEN.** Listen openly, actively, and without judgement.

4. **OFFER TO HELP.** Provide reassurance that mental and/or substance use disorders are treatable. Help them locate and connect to treatment services.

5. **BE PATIENT.** Recognize that helping your loved one doesn't happen overnight. Continue reaching out with offers to listen and help.

What to Say

"I've been worried about you. Can we talk? If not, who are you comfortable talking to?"

"I see you're going through something. How can I best support you?"

"I care about you and am here to listen. Do you want to talk about what's been going on?"

"I've noticed you haven't seemed like yourself lately. How can I help?"

For more resources, visit **www.SAMHSA.gov/families.**

If you or someone you know needs help, call **1-800-662-HELP (4357)** for free and confidential information and treatment referral.

SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities. 1-877-SAMHSA-7 (1-877-726-4727) • 1-800-487-4889 (TDD) • www.samhsa.gov

SAMHSA
Substance Abuse and Mental Health Services Administration

APPENDIX G. ADULT CONSENT FORM

Department of Nursing
P.O. Box 6050
Fargo, ND 58108-6050
(701)231-7395

Adolescent Mental Health: A Community Needs Assessment

This study is being conducted by: Michael Hammer (701)537-4035 michael.hammer.1@ndus.edu and Allison Peltier (701)224-3820 allison.peltier@ndsu.edu.

Key Information about this study:

This research is being conducted to learn more about the needs of adolescents in rural areas who experience mental health problems. To learn more about the needs of adolescents who experience mental health problems interviews with adolescents, parents, teachers, and healthcare providers will be conducted to ask about barriers and available resources.

- There are no questions about personal health or mental health history. You will also not be asked to provide any personal identifying information and your participation in this research will be kept confidential.
- Following are some of the requirements for participation in this research:
    - Parents of adolescents, with student currently in grades 9-12
    - Teacher in secondary education
    - Healthcare provider including NP, PA or MD
    - Time commitment of approximately 30 minutes
    - Interviews will be tape recorded for accuracy
    - No questions asked about personal or mental health history
- The purpose of this research is to learn more about the needs of adolescents in rural areas who experience mental health problems from the perspective of parents, teachers, adolescents, and healthcare providers.

Why am I being asked to take part in this study?

To understand the needs of adolescents it is important to not only interview adolescents but also parents, teachers, and healthcare providers. This will provide a more diverse response to the questions and help formulate better recommendations to better meet the needs of adolescents living in rural areas who experience mental health problems.

What will I be asked to do?

This research consists of a few simple questions about mental health and some barriers or perceived barriers to seeking help and receiving help. These interviews are necessary to gain the perspective of parents, teachers, and healthcare providers. The answers you provide during the interview will be combined with all the other participants and analyzed for themes. This information will be used as part of the researchers Doctor of Nursing Practice dissertation at NDSU and may be published in a professional journal. Participant information will remain private.

Where is the study going to take place, and how long will it take?

The school has graciously agreed to provide a room for the interviews. If this location does not work or is unavailable at the time of the interview a secondary location such as a local church may be used. If you are not comfortable with a face to face interview a zoom meeting can also be arranged.

What are the risks and discomforts?

Your participation in this research is confidential, however, it is possible during the interview you may reveal some personal identifying information. If that occurs that information will be removed during the transcription process.

It is not possible to identify all potential risks in research; however, reasonable safeguards have been taken to minimize known risks. If new findings develop during the course of the research which may change your willingness to participate, we will tell you about these findings.

What are the expected benefits of this research?

Individual Benefits: For parents participating in this research, they will receive a guide on speaking to someone who experiences mental health problems. They will also receive a list of locally available resources.

Societal Benefits: Although this research may not benefit you directly it may help to reveal some changes or needs that can be recommended and help someone who does experience mental health problems receive he help they need sooner.

Do I have to take part in this study?

Your participation in this research is your choice. If you decide to participate in the study, you may change your mind and stop participating at any time.

Who will have access to my information?

No identifying information will be collected from any adolescent participants. It is possible that some personal identifying information may be inadvertently shared during the interview. This information will be protected and the only people who may have access are the researchers. Once the interviews are completed the answers will be transcribed verbatim with any identifying information removed to protect confidentiality. Consent forms signed for this project will be scanned and stored on the interviewer's personal computer which is password protected. Answers given by each of the participants during the interview will combined with other participants and presented in writing as part of a dissertation project which is required for graduation in the DNP program at NDSU. Results of the interviews evaluated for themes along with other participants and used as part of the researchers Doctor of Nursing Practice dissertation at NDSU and may be published in a professional journal.

Results of the research may be available for the participants if desired. Participants may contact Michael Hammer at (701)537-4035 or Michael.hammer.1@ndus.edu to request a copy of the final research results

How will my information be used?

- Collected data may be given to another investigator for future research without additional consent.

Can my participation in the study end early?
There are rare occasions where the interview may end early including if the participant is not following the rules of the interview or if it becomes apparent that the participant may be harmed in some way by continuing the interview.

What happens if I am injured because of the study? [include if applicable]
If you are injured during the course of this study, you should contact Allison Peltier at 701.224.3820. Treatment for the injury will be available including first aid, emergency treatment, and follow-up care as needed. Payment for this treatment must be provided by you and your third party payer (such as health insurance or Medicaid). This does not mean that you are releasing or waiving any legal right you might have against the researcher or NDSU as a result of you participation in this research.

What if I have questions?
Before you decide whether you'd like to participate in this study, please ask any questions that come to mind now. Later, if you have questions about the study, you can contact Michael Hammer at (701)537-4035 or Michael.hammer.1@ndus.edu or Allison Peltier at (701)224-3820 or Allison.peltier@ndsu.edu

What are my rights as a research participant?
You have rights as a research participant. All research with human participants is reviewed by a committee called the *Institutional Review Board (IRB)* which works to protect your rights and welfare. If you have questions about your rights, an unresolved question, a concern or complaint about this research you may contact the IRB office at 701.231.8995, toll-free at 855-800-6717 or via email (ndsu.irb@ndsu.edu).

Documentation of Informed Consent:
You are freely making a decision whether to be in this research study. Signing this form means that

1. you have read and understood this consent form
2. you have had your questions answered, and
3. you have decided to be in the study.

You will be given a copy of this consent form to keep.

Your signature	Date
Your printed name	Date
Signature of researcher explaining study	Date
Printed name of researcher explaining study	

APPENDIX H. YOUTH ASSENT FORM

NDSU North Dakota State University
School of Nursing
PO Box 6050
Fargo, ND 58108-6050
(701)231-7395

YOUTH ASSENT FORM
Adolescent Mental Health: A Community Needs Assessment

Invitation: ○ You are invited to take part in a research study to learn more about the needs of adolescents with mental health problems in rural North Dakota.

○ The study is being done by Michael Hammer and Allison Peltier.

What will the research involve? If you agree to participate, you will be asked to participate in an interview about the needs of adolescents who experience mental health problems in rural North Dakota.

- *The interview will last approximately 15-30 minutes.*
- *The interview will be tape recorded for accuracy.*
- *Your participation will be confidential.*
- *You will be asked to provide your age, current grade, and gender. No other identifying information will be asked.*
- *You will not be asked about your personal health or mental health.*

The interviews will be conducted on a one-to-one basis with the researcher and will take place at the school. If you are not comfortable with a one-to-one interview a zoom meeting via the internet can also be arranged. The zoom meeting will also be recorded for accuracy. Answers given during the interview will transcribed verbatim on paper with any identifying information removed. After the transcription is complete the tape recordings will be deleted.

What are any risks or benefits for me? This research may involve some risks or be uncomfortable for you; it's possible you might inadvertently provide more identifiable information than you wanted.

It may be beneficial for you to take part in this research because information will be provided for initiating a conversation for someone who experiences mental health problems. A list of local resources will also be provided. The study may help others by Identifying the needs of adolescents in rural North Dakota who experience mental health problems and make it easier for them to receive the help they need.

Do I have to take part in the research? ○ Your parent(s) or legal guardian(s) have given their permission for you to be in the research, but it is still your choice whether or not to take part.

- Even if you say yes now, you can change your mind later, and stop participating.

When appropriate, include: "There are some situations where we may decide that you should leave the study; like when you are not following instructions, or if you are being harmed."

Who will see my answers and information? ○ We will make every effort to keep your information private; only the people helping us with the research will know your answers or see your information.

- Your information will be combined with information from other people in the study. When we write about the study, we will write only about this combined information, and no one will be able to know what your information is. ○ If you want to look at the information we collect from you, just let us know, and we will provide it to you. But, you cannot look at information from others in the research.

Sometimes we need to show your information to other people. If you tell us that you have been abused, or if we think that you might be a danger to yourself or other people, we will tell someone who can help, like the police or a doctor.

What will I get if I agree to be in the research?

For your time and effort in this project, you will receive a Scheels gift card worth $10.

Is there anything else I should know?

If you are injured or hurt because of this research, you should tell your

parent(s)/guardian(s) to contact (Michael Hammer) at the following phone number (701)537-4035 or Allison Peltier at (701)224-3820

What if I have questions?

- You should ask any questions you have right now, before deciding whether or not to be a part of the research.
- If you or your parent(s) or guardian(s) have questions later, contact us at: Michael Hammer (701)537-4035 or Michael.hammer.1@ndus.edu *or Allison Peltier (701)224-3820 or Allison.peltier@ndsu.edu* ○ Your parent(s) or legal guardian will receive a copy of this form to keep.

What are my rights? ○ You have rights as a research participant. ○ If you have questions about your rights, or would like to talk to someone about this research, you can contact the NDSU Institutional Review Board (IRB) at:

- ✦ 701-231-8995
- ✦ Toll-free at 1-855-800-6717 ✦ ndsu.irb@ndsu.edu . ○ The IRB is responsible to make sure that your rights and safety are protected in this research.

○

Sign this form only if you:

- have understood what the research is about and why it's being done,
- have had all your questions answered,
- have talked to your parent(s)/legal guardian about this project, and • agree to take part in this research

_____

Your Signature Printed Name Date

_____

Name of Parent(s) or Legal Guardian(s)

_____

Signature Printed Name Date Researcher explaining study

APPENDIX I. LEGALLY AUTHORIZED REPRESENTATIVE CONSENT FORM

Department of Nursing
P.O. Box 6050
Fargo, ND 58108-6050
(701)231-7395

Adolescent Mental Health: A Community Assessment

Legally Authorized Representative Consent Form

This study is being conducted by: Michael Hammer (701)537-4035 and Allison Peltier (701)224-3820

Key Information about this study:

This consent form is designed to inform you about the study you are being asked to participate in. Here you will find a brief summary about the study; however, you can find more detailed information later on in the form.

- Adolescent mental health is a major health concern across the United States, especially in rural areas of the country. This research is being conducted to learn more about the needs of adolescents in rural areas who experience mental health problems.
- Following are some of the requirements for participation in this research
    - Parents of adolescents, with student currently in grades 9-12
    - Teacher in secondary education
    - Healthcare provider
    - Time commitment, approximately 30 minutes
    - Your participation will be kept confidential
    - Interview will be tape recorded for accuracy
    - No questions will be asked about personal health or mental health history
- The purpose of this research is to learn more about the needs of adolescents in rural areas who experience mental health problems from the perspective of parents, teachers, adolescents, and healthcare providers.

Why is my child being asked to take part in this study?

To understand how adolescents feel about mental health and what they believe is needed to maintain adequate mental health it is necessary to interview them to gain their perspective. They will be asked simple questions about health in general and mental health. They will not be asked

to provide any personal information regarding their own health history. Adolescents will be asked to provide their age, current grade, and gender; no other personal identifying information will be asked of them.

What will my child be asked to do?

To gain their perspective adolescents are being asked to sit down for a short interview, approximately 30 minutes. The questions are simple and open ended and they are encouraged to offer their opinion freely. The interview with them will be tape recorded for accuracy. Participation in this research is confidential and their answers to the questions will not be revealed anybody but the researchers. Their answers will be compiled with other responses and analyzed for themes and documented with other responses in the research project.

Where is the study going to take place, and how long will it take?

The interviews will take at the high school with permission from the school. If the school is unavailable at the time of the interview arrangements can be made between the researcher and the participant. Other possible locations might include the local churches, or if necessary, the interviews can be completed via a zoom meeting over the internet. If a zoom meeting is desired the meeting will set up by the researcher and will be password protected. Zoom meetings will also be recorded for accuracy. Interviews for all participants will last approximately 30 minutes. Adolescents will also be offered a Scheels gift card worth $10 for their participation.

What are the risks and discomforts?

While participation in this research is confidential the researcher cannot guarantee 100% confidentiality, the researcher will take all possible precautions to maintain confidentiality. The researcher in this project is a mandated reporter so if at any time an adolescent reports potential abuse or is found to be a danger to themselves or others their identification may be used to report to the appropriate authority such as police or social services who can help.

It is also possible through the interview process that identifiable information may be inadvertently shared. At the completion of the interviews the recording will be transcribed and identifying information will be removed and the recording deleted to protect confidentiality.

It is not possible to identify all potential risks in research; however, reasonable safeguards have been taken to minimize known risks. If new findings develop during the course of the research which may change your willingness to participate, we will tell you about these findings.

What are the expected benefits of this research?

Individual Benefits: For all parents and adolescents who participate in this research project they will be given a handout that provides tips for talking to an individual who experiences mental health problems. They will also receive a list of locally available resources. Although participation may not directly benefit the participants it may help

someone else who experiences mental health problems by identifying needs that can be addressed and get them the help they need sooner. Adolescent participants in this project will receive a Scheels gift card worth $10 for their participation.

Societal Benefits: Mental health is a serious health problem and needs to be addressed early as it can have lasting implications including decreased performance in school or work, social problems, and suicide. By learning more about the mental health needs of adolescents in rural areas changes can be made to better meat the needs of adolescents with mental health problems.

Does my child have to take part in this study?

Your participation in this research is your choice. If you decide to participate in the study, you may change your mind and stop participating at any time.

Will it cost anything to participate?

There is no cost to participate in this research project, just a small amount of your time.

Who will have access to my child's information?

No identifying information will be collected from any adolescent participants. It is possible that some personal identifying information may be inadvertently shared during the interview. This information will be protected and the only people who may have access are the researchers. Once the interviews are completed the answers will be transcribed verbatim with any identifying information removed to protect confidentiality. Consent forms signed for this project will be scanned and stored on the interviewer's personal computer which is password protected. Answers given by each of the participants during the interview will combined with other participants and presented in writing as part of a dissertation project which is required for graduation in the DNP program at NDSU. Results of the interviews evaluated for themes along with other participants and used as part of the researchers Doctor of Nursing Practice dissertation at NDSU and may be published in a professional journal.

How will my child's [information/biospecimens] be used?

- Collected data may be given to another investigator for future research without additional consent.

Results of the research may be available for the participants if desired. Participants may contact Michael Hammer at (701)537-4035 or Michael.hammer.1@ndus.edu to request a copy of the final research results.

Can my child's participation in the study end early?

Any adolescent who participates in this research may be excused from the interview if they are not following the rules of the interview or if it becomes apparent that continuing the interview is causing them harm in any way.

Is any compensation available for participating in the study?
Adolescents who participate in this research will be given a Scheels gift card worth $10 for their participation.

What happens if my child is injured because of the study? [include when applicable]
If your child is injured during the course of this study, you should contact Allison Peltier at 701.224.3820. Treatment for the injury will be available including first aid, emergency treatment, and follow-up care as needed. Payment for this treatment must be provided by you and your third party payer (such as health insurance or Medicaid). This does not mean that you are releasing or waiving any legal right you might have against the researcher or NDSU as a results of you participation in this research.

What if we have questions?
Before you decide whether your child may participate in this study, please ask any questions that come to mind now. Later, if you or your child has questions about the study, you can contact Allison Peltier at 701.224.3820 or Allison.peltier@ndsu.edu or Michael Hammer at 701.537.4035 or Michael.hammer.1@ndus.edu

What are my child's rights as a research participant?
Your child has rights as a research participant. All research with human participants is reviewed by a committee called the *Institutional Review Board (IRB)* which works to protect participant's rights and welfare. If you have questions about your child's rights, an unresolved question, a concern or complaint about this research you may contact the IRB office at 701.231.8995, toll-free at 855-800-6717 or via email (ndsu.irb@ndsu.edu).

Documentation of Informed Consent:
You are freely making a decision whether to be in this research study. Signing this form means that
1. you have read and understood this consent form
2. you have had your questions answered, and
3. you have granted permission for your child to be in the study.

You will be given a copy of this permission form to keep.

Your signature	Date
Your printed name	Date

Signature of researcher explaining study Date

_____

Printed name of researcher explaining study

APPENIDX J. PERMISSION FROM SCHOOL

Re: Dissertation Adolescent Depression

DS

Dave Schoch <Dave.Schoch@k12.nd.us>
Thu 11/4/2021 3:05 PM
To: Hammer, Michael

Good afternoon Mike,

Our offer stills stands for you to have access to a room and students and staff for your interviews.

We can do a mass email to students, staff, and parents. We would only need to know the email address you want the forms returned to.

Good Luck with your venture,

Dave

On Nov 2, 2021, at 9:11 PM, Hammer, Michael <michael.hammer.1@ndsu.edu> wrote:

Good evening,

We spoke a couple weeks ago my dissertation project on adolescent depression. As a refresher I am proposing to do a project to increase awareness of adolescent depression by conducting focus groups with adolescents, teachers, parents, and healthcare providers. At the time we spoke on the phone you had indicated that the school would be willing to help with the project by providing a classroom to conduct the focus group interviews. For my project I will need a written confirmation of that offer that I can place in the appendices of my paper. An email reply will suffice.

I need some additional help from the school if that is possible. I need to draft a letter explaining my project and asking for volunteers for the focus groups. For adolescents, I will need to obtain parental consent. For teachers, and parents I will need written consent. I will provide all the forms, what I am asking for is if the school would be able to send letters to students and parents through email via listserv or other mass email software. If the school is not able to send the letters, that is understandable, and I will need to find another way of recruiting participants for my project.

Thank you for your time and consideration of this request.

Sincerely,

Mike Hammer

APPENDIX K. OPENING STATEMENT

Thank you for participating in this discussion today. You have had a chance to read the consent which explains the reason for this discussion. Your participation in this discussion today is voluntary, if at any time you are uncomfortable with the questions you can choose not to answer or you can end the discussion. I have prepared questions for this discussion, which should last approximately 15 minutes. I want you to feel free to express your opinion and talk freely about the subject, there are no wrong answers. Your participation today is confidential, and I will not disclose to any other person that you participated in this discussion.

APPENDIX L. EXPEDITED APPROVAL LETTER

NDSU NORTH DAKOTA STATE UNIVERSITY

12/28/2021

Dr. Allison Evelyn Peltier
Nursing, Sanford Bismarck

IRB Approval of Protocol #IRB0004023, "Adolescent Mental Health: A Community Needs Assessment"

Co-investigator(s) and research team:

- Allison Evelyn Peltier
- Michael Hammer

Approval Date: 12/28/2021
Expiration Date: 12/27/2024
Research site(s): This research project will take place in a rural community in north central North Dakota. The local school has agreed to work with the co-principal investigator and has offered the use of a room for the interviews.
Funding Agency:
Review Type: Expedited category # 6,7

The above referenced protocol has been reviewed in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, *Protection of Human Subjects*).

Additional approval from the IRB is required:

- Prior to implementation of any changes to the protocol.
- For continuation of the project beyond the approval period. A task will automatically generate for the PI and Co-PI 8 weeks prior to the expiration date. To avoid a lapse in approval, suspension of recruitment, and/or data collection, a report must be received, and the protocol reviewed and approved for continuation prior to the expiration date.

Other institutional approvals:

- Research projects may be subject to further review and approval processes.

A report is required for:

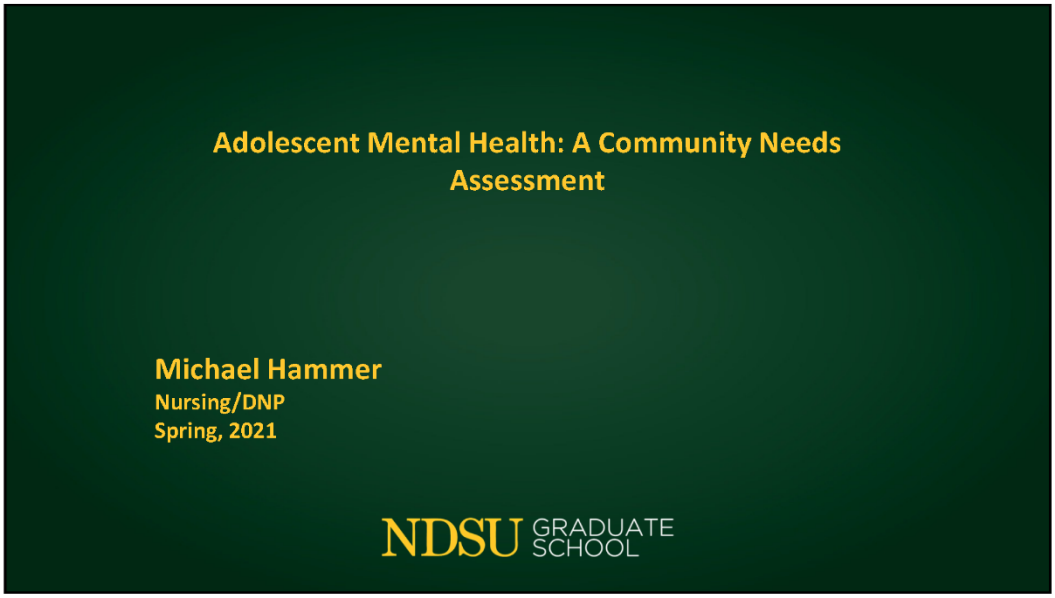
- Any research-related injuries, adverse events, or other unanticipated problems involving risks to participants or others within 72 hours of known occurrence.
- Protocol Deviations
- Any significant new findings that may affect risks to participants.

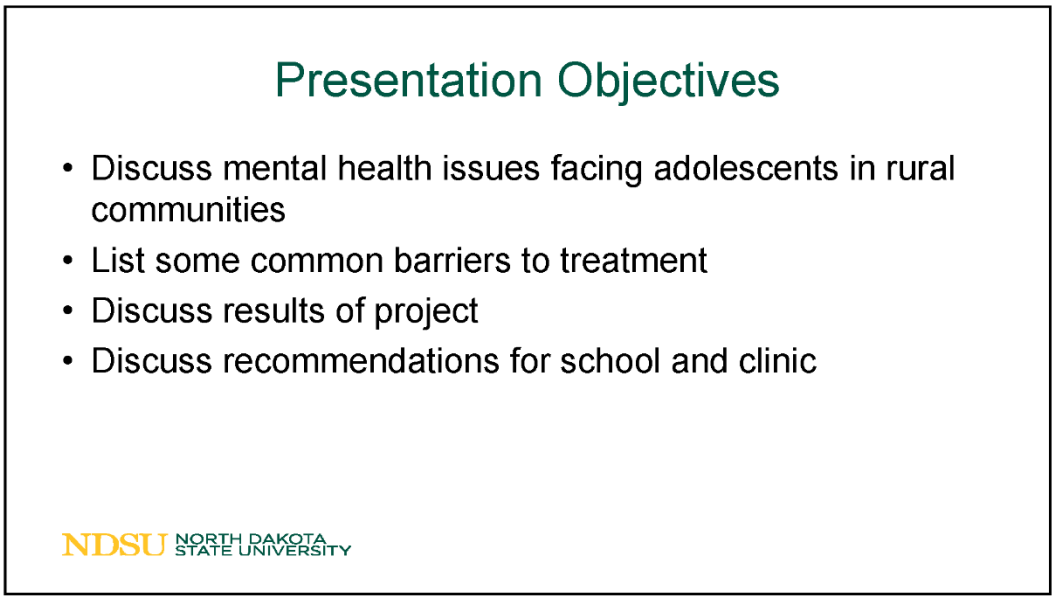
Thank you for cooperating with NDSU IRB procedures, and best wishes for a successful study.

NDSU has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

RESEARCH INTEGRITY AND COMPLIANCE
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | ndsu.research@ndsu.edu
Shipping Address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

APPENDIX M. POWERPOINT PRESENTATION





Professional Introduction

- Education

  Started in nursing in 1994, Graduated with BSN in 2016 from NDSU
- Work experience

  Currently working in a critical access hospital as an ER nurse.
- North Dakota State University

  Graduate with DNP in 2022

NDSU NORTH DAKOTA STATE UNIVERSITY

Background and Significance

- Background - Adolescent mental health is a critical health problem that needs to be addressed at multiple levels from the individual to policy decisions that can affect access care.
  - Only 50% of depression cases in adolescents are identified and of the two million adolescents diagnosed annually only 38% receive treatment.
  - Between 2007 and 2016 the suicide rate among adolescents has increased by 57.4%.
  - In 2019 as many as 3.8 million or 15.7% of the US population aged 12-17 experienced at least one major depressive episode.
- Significance
  - If left untreated depression can have lasting implications for the individual. Some common problems associated with depression include poor school and work performance, increased absenteeism, increased risk-taking behavior, social isolation, drug and alcohol abuse, and suicide.

NDSU NORTH DAKOTA STATE UNIVERSITY

Statement of the Problem

- Problem Statement The prevalence of depression among adolescents has increased steadily over the last several years with higher rates in females, older adolescents, and adolescents who live in rural areas. Meanwhile, the use of mental health services has remained stable.
- Purpose – Assess the mental health needs of adolescents in rural North Dakota through the perspective of adolescents, teachers, parents, and healthcare providers.

NDSU NORTH DAKOTA STATE UNIVERSITY

Literature Review

- Berryhill et al., 2021
  - Rates of suicide among adolescents in rural areas are as much as 84% higher than their urban counterparts.
  - Adolescents in rural areas face more significant barriers and are less likely to seek help.
  - 90 million people in the US live in a mental healthcare shortage area
  - Very few studies on adolescent depression in rural settings and none on anxiety.

NDSU NORTH DAKOTA STATE UNIVERSITY

Literature Review

- Espinet et al., 2019
  - PCPs lack confidence and report inadequate training to manage adolescent depression
  - PCPs also cite lack of time, lack of interest, poor reimbursement, and lack of adequate referral systems
  - Families who turn to PCPs for help are often left with more questions than answers and feel unheard or dismissed.

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Objectives

- Describe the mental health needs of adolescents in rural ND through the perspective of adolescents, teachers, parents, and healthcare providers.
- Identify barriers to accessing mental healthcare from the perspective of adolescents, teachers, parents, and healthcare providers.
- Provide information to parents and adolescents on resources available for mental health disorders.
- Disseminate results to school administrators and healthcare providers and provide two evidence-based recommendations to each to better meet adolescent mental health needs.

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Protection of Human Subjects

Protection of human subjects is important and all volunteer participation for this project has remained confidential.

- Consent forms were scanned and stored on the interviewer's personal password protected computer.
- No personal identifying information was collected. Adolescent participants were asked to identify current grade, age, and gender.
- IRB approval was received on December 29, 2021

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Results

Barriers to Discussing Mental Health

Stigma

Privacy

Financial Resources

Parents

Adolescents

Adolescents lack of Understanding

Lack of Access

Time

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Maintaining Mental Health

- Strong Support from Family/Friends
- Healthy Diet
- Adequate Sleep
- Avoid Social Media
- Avoid Video Games
- Physical Activity

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Where to Find Help

- Adolescents and educators most frequently stated school counselor would be the place to get help.
- Parents felt confidence in ability to find help, one parent felt there were few resources.
- Healthcare providers expressed frustration over ability to have adolescents seen in a timely manner.

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Discussions

Discussing Mental Health

Adolescents described experience discussing mental health is limited to offering support or encouraging them to express their feelings.

Parents were more likely to address mental health issues following an adverse event or if their child is having a tough day.

Educators expressed a lack of time to address all the needs that arise.

Healthcare providers talked about screening for depression and relying on their instinct to have discussions about mental health.

None of the target groups used a guideline for discussing mental health issues. It was also clear that nearly all discussions were reactive rather than proactive.

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Recommendations

School Interventions

Address mental health (Depression & Anxiety) in a universal approach.

Research has shown that school-based intervention programs aimed at reducing anxiety and depression are effective but do not having lasting effects (Feiss et. al., 2019). Universal programs have the benefit of addressing a larger group at once and eliminates the stigma that may come with targeted programs (Feiss et. al., 2019).

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Recommendations

Mentor Program

Research has shown that supportive relationships along with social connections are an important factor in promoting adolescent health and development (Austin et. al., 2020).

Factors to Consider

Age

Gender

Ethnicity

girls are more likely to seek emotional support from a mentor while boys were more likely to seek activity (Kern et. al., 2019).

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Recommendations

Clinic Interventions

Young people may avoid seeking help for different reasons including concerns about confidentiality, fear of judgement, inconvenient hours, and location (Brauer, 2022)

Youth Friendly Services

Adjust office hours to times that adolescents are available for appointments

After school

Evenings

weekends

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Recommendations

Youth Friendly Services

Create youth friendly environment including:

Magazines for youth

Cell phone charging stations

Display artwork from local teens

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Recommendations

Telehealth

Cognitive Behavioral Health therapy via the internet is both efficacious and cost-effective for young people with depression and anxiety (Jolstedt et. al., 2019)

USES

Consultation

Medication management

CBT

Reduces travel to and from appointments

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Supervisory Committee:

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Committee Member Two: Heidi Saarinen DNP, FNP-C
Committee Member Three: Mykell Barnacle DNP, FNP-BC
Committee Member Four: Mary Larson PhD, MPH, RD, CDE, CHES

References

Berryhill, B., Carlson, C., Hopson, L., Culmer, N., & Williams, N. (2021). Adolescent depression and anxiety treatment in rural schools: A systematic review. Journal of Rural Mental Health. Advance online publication. https://doi.org/10.1037/rmh0000183

Curtin, S.C. (2020). State Suicide Rates Among Adolescents and Young Adults Aged 10-24: United States, 2000 – 2018. *National Vital Statistics Reports*. 69(11). P.1-10.

Espinet, S. D., Gotovac, S., Knight, S., Wissow, L., Zwarenstein, M., Lingard, L., & Steele, M. (2020). Primary Care Practitioner Training in Child and Adolescent Psychiatry (PTCAP): A Cluster-Randomized Trial. Canadian Journal of Psychiatry, 65(5), 319–329. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1177/0706743719890161

Golden, S.D., & Earp, J.L. (2012). Social Ecological Approaches to Individuals and Their Contexts: Twenty Years of Health Education & Behavior Health Promotion Interventions. Health Education & Behavior. 39(3) 364-372.

References

Brauer, R. (2022, January 26). Youth-friendly materials. Adolescent Health Initiative. Retrieved March 8, 2022, from https://umhs-adolescenthealth.org/improving-care/health-center-materials/

Jolstedt, M., Vigerland, S., Mataix-Cols, D., Ljótsson, B., Wahlund, T., Nord, M., Högström, J., Öst, L.-G., & Serlachius, E. (2021). Long-term outcomes of internet-delivered cognitive behaviour therapy for paediatric anxiety disorders: towards a stepped care model of health care delivery. European Child & Adolescent Psychiatry, 30(11), 1723–1732. https://doi-org.ezproxy.lib.ndsu.nodak.edu/10.1007/s00787-020-01645-x

National Institutes of Mental Health (2019). US Department of Health and Human Services. Major Depression. Retrieved from https://www.nimh.nih.gov/health/statistics/major-depression

Wuhau, L. (2019). Adolescent Depression: National Trends, Risk Factors, and Health Care Disparities. American Journal of Health Behavior. 43(1). P. 181-194

EXECUTIVE SUMMARY

Adolescent Mental Health: A Community Needs Assessment

Introduction

Adolescent mental health has become a healthcare crisis United States. Considerable consequences are linked to untreated depression including poor school and work performance, violence, self-mutilation, risky sexual behavior, substance abuse, and suicide. Such health and social problems are occurring at young ages, making early recognition and treatment a necessity. Unfortunately, there is a shortage of mental healthcare professionals in the United States and especially in rural areas. Therefore, intervention at home, school, and primary care clinics must be the primary focus. Parental involvement and strong friend support have a significant impact on adolescent depression and willingness to seek treatment. Therefore, targeting interventions that increase awareness of adolescent mental health needs may lead to early recognition and treatment of depression, resulting in improved outcomes. Schools and primary care clinics are primary locations to initiate interventions addressing adolescent mental health issues.

Purpose

The purpose of this project was to improve resources availability through understanding the mental health needs of the population and increasing awareness of depression and local resources. This project aimed to provide insight to primary care providers, parents, and schools regarding methods for improving mental healthcare access.

Project Design

Interviews were conducted with four different target groups to evaluate the mental health needs of adolescents in rural ND from the perspective of adolescents, parents, educators, and healthcare providers.

Results

Facilitators to maintaining mental health were identified as support from family/friends, healthy diet, adequate sleep, limiting social media, avoiding video games, and physical activity. Barriers to discussing and accessing mental healthcare included stigma, confidentiality/privacy, shortage of mental health professionals, lack of routine discussion, lack of a standardized curriculum in schools, time, lack of understanding by adolescents, and healthcare provider/parent relationship.

Recommendations

Recommendations were made to school administrators and clinic personnel based off of results from the project. Recommendations for the school included a universal approach to addressing students about mental health and implementing a mentor program with a focus on connectedness. The clinic also received two recommendations which included implementation of telehealth services to assist with diagnosis, medication management, and therapy services. Additionally, implementation of youth-friendly services was recommended to create a more welcome environment for adolescents.

Conclusion

Findings from this study have the potential to improve understanding of adolescent mental health and enhance awareness of mental health problems. Recommendations for clinic interventions, and school-led programs can reduce stigma and lead to more timely recognition and treatment of mental illnesses, which has the potential to improve overall mental well-being and quality of life among adolescents.